



Annual Registration Statement / Annual Report 2023

(Form 56-1 One Report)

Harn Engineering Solutions Public Company Limited

QUALITY
LIVING THROUGH
SUSTAINABLE
ENGINEERING





Quality Living Through Sustainable Engineering



Fire Protection & Safety



Air Conditioning & Sanitary



Refrigeration



Digital Printing



Harn 3DMed



Internet of Things

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In case this Annual Registration Statement / Annual Report (Form 56-1 One Report) references information disclosed on HARN's website, the disclosed information shall be deemed to be part of Form 56-1 One Report. The Board of Directors certifies the correctness and completeness of disclosed information and annual information disclosure in Form 56-1 One Report.

Vision, Mission, Values and Strategy

HARN committed to maintaining a potential organization that provides comprehensive sustainable engineering services, while improving the quality of sustainable life for stakeholders and embracing the trend of zero greenhouse gas emissions, and the ever-changing social and consumer behaviors. In 2023, the Board of Directors reviewed and approved the new vision, mission and business operation strategy to achieve the goal of sustainable growth.

Vision

 We are committed to be
a leading provider of
sustainable total engineering solutions
that meet customer needs to improve quality
of life, society, and environment 

Mission



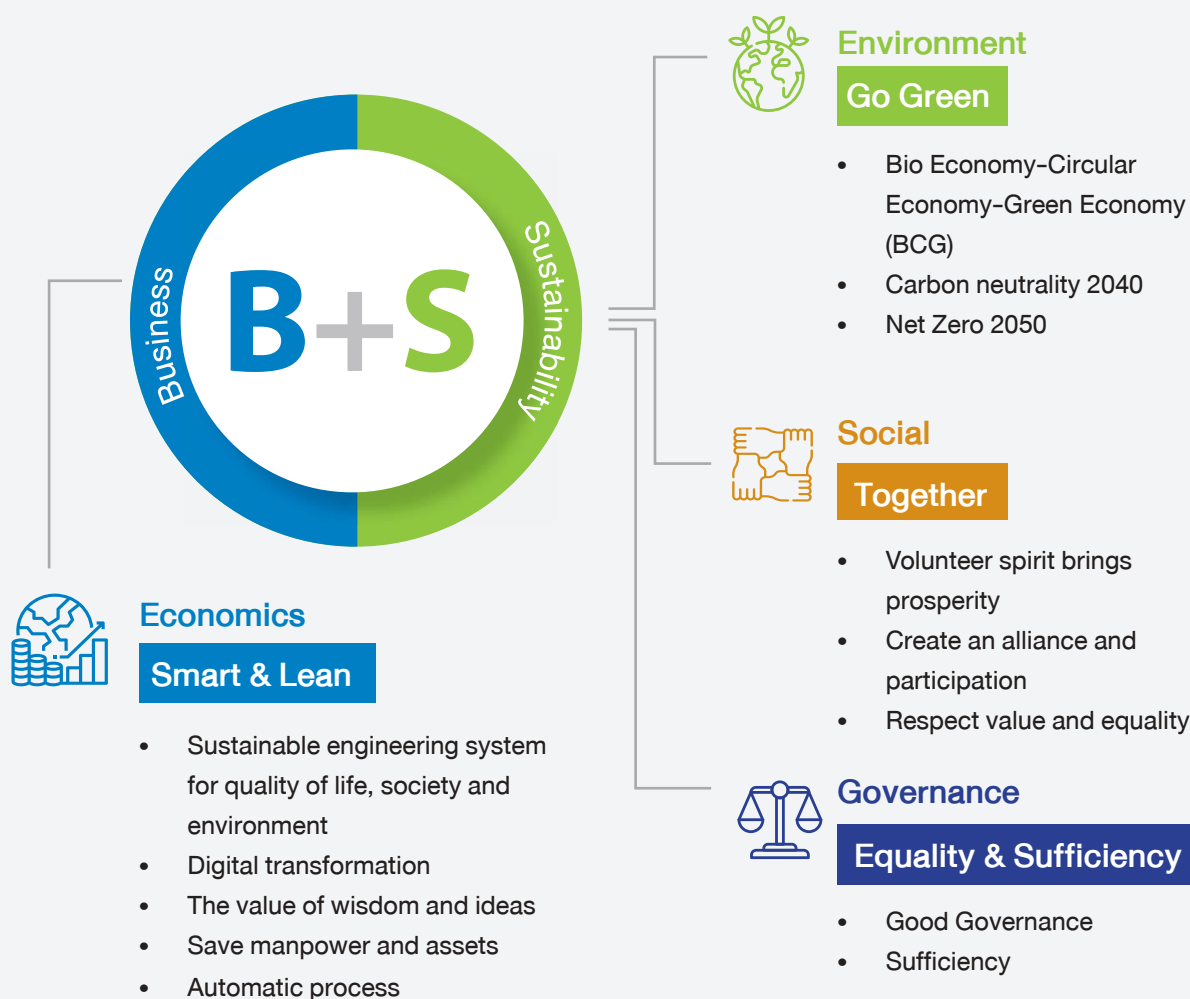
Values



Strategic Directions

In 2023, HARN continued to focus on its operations to achieve the set vision and mission, have set strategic goals while providing sustainable returns and an improved quality of life to all stakeholders through two key business strategies areas are: In terms of business and sustainability, or B+S aims to respond and balance four dimensions: economy, environment, society and governance. It is considered as a tool to provide direction and long-term goals for the next 3-5 years according to the framework of sustainable action.

It also uses the existing knowledge and business foundation to improve its competitiveness according to the B+S method, so as to establish a sustainable engineering system for the quality of life, society and environment, digital transformation, the value of wisdom and ideas, save manpower and assets, automatic processes, achieve a balanced bio-recycling-green economy (BCG), achieve carbon neutrality by 2040, achieve zero emission by 2050, volunteer spirit brings prosperity, volunteerism flourishes, create an alliances and participation, values and equality are respected, good governance, and self-sufficient economy are achieved. In order to achieve truly sustainable organizational goals, the top management communicates to managers and employees at all levels, so that they can understand and monitor the implementation of business strategies to achieve the set goals, and progress reports to the board of directors every quarter.



Long-Term Targets



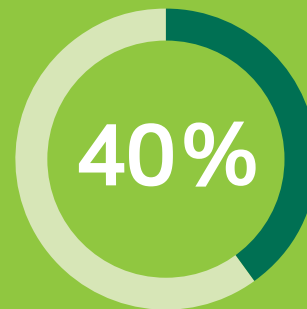
Realized
market capitalization

5,000

MB



Payment dividends
of no less than



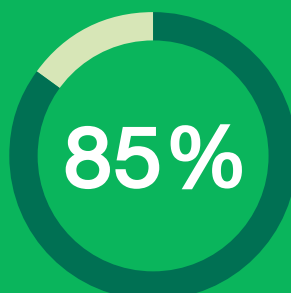
of net profit after income tax
and legally required reserves.



Maintain customer
satisfaction more
than



maintain employee
satisfaction more
than



Taking of the
environment, society,
and governance in
made business

100%



Financial Highlights Information

		2023	2022	2021
Operating Results				
Sales and Services Revenues	MB.	1,299.62	1,219.66	1,025.98
Total Revenues	MB.	1,326.23	1,242.29	1,046.13
Costs of Sales and Services	MB.	908.61	873.26	713.71
Gross Profit	MB.	391.01	346.40	312.27
Net Profit/(Loss) (NCI Excluded)	MB.	114.04	88.78	72.27
Total Comprehensive Income (NCI Excluded)	MB.	112.44	88.84	73.52
Financial Position				
Total Assets	MB.	1,754.03	1,783.10	1,685.72
Total Liabilities	MB.	370.85	434.48	367.19
Total Equity Attributable to Owners of the Parent	MB.	1,383.42	1,347.99	1,317.97
Financial Ratios				
Return on Equity ^{1/}	%	8.35	6.66	5.49
Return on Assets ^{2/}	%	8.20	6.58	5.52
Gross Profit Margin	%	30.09	28.40	30.44
Net Profit Margin ^{1/}	%	8.53	7.15	6.90
Debt to Equity Ratio	Times	0.27	0.32	0.28
Total Assets Turnover Ratio	Times	0.75	0.72	0.63
Stock Data Annual Average				
Par Value per Share	Baht	0.50	0.50	0.50
Book Value	Baht/Share	2.37	2.31	2.25
Dividend per Share ^{3/}	Baht/Share	0.15	0.13	0.10
Dividend Payout Ratio	%	75.00	86.67	83.33
Basic Earnings/(Loss) per Share	Baht/Share	0.20	0.15	0.12

Note : Referring to consolidated financial statement of Harn Engineering Solutions Pcl.

^{1/} Net profit/ (Loss) used in calculation.

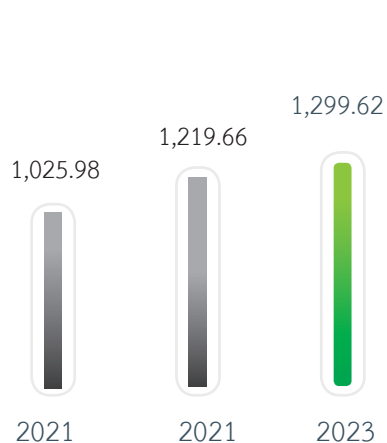
^{2/} Earnings before interest and tax used in calculation

^{3/} Not confirmed until the approved by the 2024 Annual General Meeting of Shareholders.



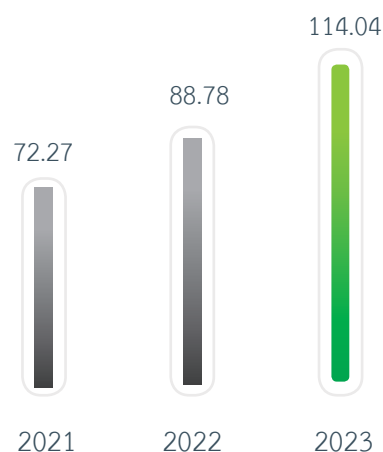
Sales and Services Revenues

1,299.62 MB



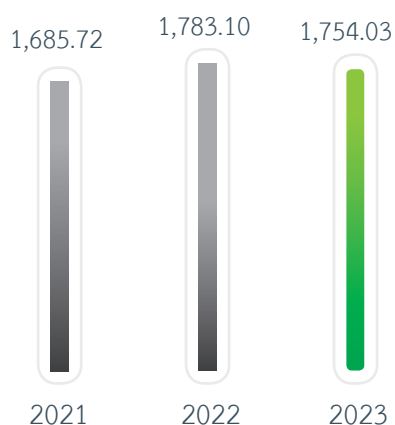
Net Profit/(Loss) (NCI Excluded)

114.04 MB



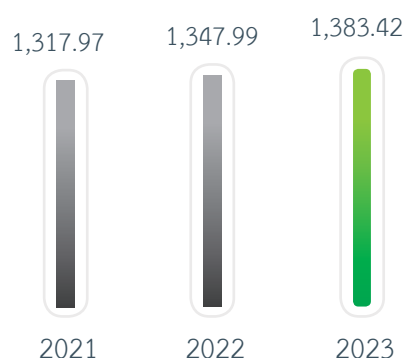
Total Assets

1,754.03 MB



Total Equity Attributable to Owners of the Parent

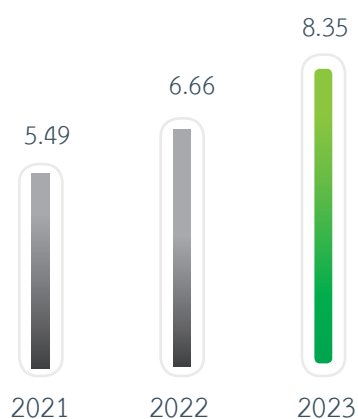
1,383.42 MB



Return on Equity

(Net profit/ (Loss) used in calculation)

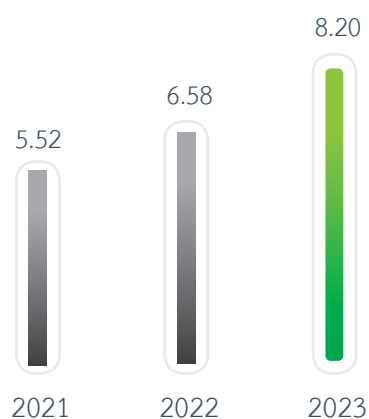
8.35%



Return on Assets

(Earnings before interest and tax used in calculation)

8.20%



Major Events and Activities

1960

Harn Watthana
Limited Partnership

1965

Registration Harn Engineering Co., Ltd.

1988

established
Chillmatch Co., Ltd.

2001

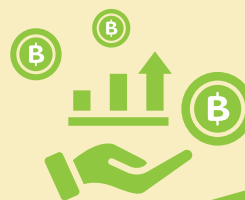
established
Fire Victor Co., Ltd.

2002

established
QIIS Co., Ltd.

2014

FIRE, Entered
the mai
stock exchange



2016

Changed the name
from FIRE to HARN
and increased capital
from 175 MB. as
292.25 MB.



2017

Join the announcement
of intention to be the
Private Sector
Collective Action
Coalition against
Corruption
(CAC)

2018

Certified as a member
of the Private Sector
Collective Action
Coalition against
Corruption
(CAC)



2023

Received a Green Certificate for its Product:
Printing Machine

Received CG rating of
“Excellent 5 stars” for 5th year



Received a “Certificate of Excellence in
the Management of Drug Problems”

Signed a memorandum of understanding
on academic between SANYO
and King Mongkut’s University
of Technology North Bangkok



2022

Join the announced and took
part in the Energy Conservation
Network under

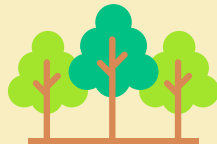
“Energy Beyond
Standards” project



Received CG rating of
“Excellent 5 stars” for 4th year



HARN new building
accredited by DGNB
GmbH the “Gold Certificate”
for Energy Conservation Building
organised by the German-Thai Chamber
of Commerce and DGNB GmbH



2021

Open Showroom
“Digital Centre of Excellence”



Received CG rating of
“Excellent 5 stars”
for 3rd year



2020

Joint venture registered
“Aiyaraharn”

Received CG rating of
“Excellent 5 stars”
for 2nd year



2019

expand subsidiary
“HarnVietnam”
in Vietnam

Received CG rating
“Excellent 5 stars”



HARN has formulated the policy of using electric vehicles (BEV) for operation in order to gradually replace the service life of each used vehicle in operation, or to be more cost-effective, and has now switched to four electric vehicles.



On December 19, 2023, HARN installed the second batch of solar panels. Combined with the production capacity of the first batch of solar panels, the office building HARN is a green energy building with a total power generation of 307 kW/h, accounting for 25% of energy consumption. Therefore, HARN office building belongs to ZEB (zero energy building), which is in line with the direction of national sustainable development.



On November 31, 2023, SCG Chemicals Public Company Limited held an event to award Green Certificates to product and service groups that are environmentally friendly. The digital printing system business, Harn Engineering Solutions Public Company Limited, received a Green Certificate for its Product: Printing Machine at the SCGC Go Green Together 2023 event.



October 31, 2023 was certified with CG Score as having good corporate governance principles for listed companies at a 5-star "Excellent" for the 5th consecutive year



HARN passed the criteria for an outstanding establishment in drug prevention on August 16, 2022 and received a "Certificate of Excellence in the Management of Drug Problems" on June 26, 2023.



Mr. Wirat Sukchai, Chairman of the Executive Committee of Harn Engineering Solutions Public Company Limited and the president of the association of Listed Companies in the Market for Alternative Investment (mai) led the executive team of the association. “Volunteer Coach” who takes care of social businesses in the SET Social Impact GYM project, visits Yaring, Pattani to visit social entrepreneur businesses to monitor business operations and increase business potential foster future business cooperation.



HARN participated in the SET Social Impact Gym 2023 project. Under the idea of “Idea to I-done”, the social entrepreneur capacity development project carried out business in a powerful and effective way, aiming at involving social entrepreneurs in caring for and solving social problems at all levels, including agriculture, vulnerable groups, community development, health, education and environment, and expanding business and social achievements in a sustainable way.



May 23, 2023, HARN signed a memorandum of understanding on academic between SANYO and King Mongkut’s University of Technology North Bangkok. To develop a prototype of a commercial refrigeration system in Thailand. Intended for carry out academic work research and development of commercial refrigeration system prototypes consulting, training, design, maintenance, knowledge exchange, transfer and operations related to commercial refrigeration systems in order to maximize the benefits in the country’s refrigeration industry



On December 6, 2022, it was certified as an organization that has shown intention to conserve energy and cooperate in the network of energy conservation, “Energy Beyond Standards.” Harn is focused on and determined to be an important mechanism to help Thailand overcome the energy crisis by conducting energy conservation within the organization and being an important force in promoting sustainable energy conservation.



On November 22, 2022, Mr. Thammanoon Tripetch, Chief Executive Officer, participated in a discussion on the topic “2D Barcode Printing Techniques on Products” at the 2022 Annual General Meeting of Code Institute, GS1Thailand Annual Meeting 2022, on the topic of “Next Generation of Retail Business for Consumer Safety & Protection, the new dimension of retailers joining to care for consumers.” Mr. Thammanoon also brought the printer to display at the event, as well as giving advice to enhance and develop the use of product barcodes to see the benefits of use.



October 30, 2022 was certified with CG Score as having good corporate governance principles for listed companies at a 5-star “Excellent” for the 4th consecutive year



Since July 4, 2022, HARN has facilitated the installation location of the “Tao Bin” vending machine, one of the projects for the disabled, to support the employment of the socially disabled for the year 2022. This project encourages people with disabilities to have access to jobs and career opportunities in their hometowns to be able to earn income and become self-resilience as well as a valuable member of the community.



On August 22, 2022, HARN received the Green Building Award, DGNB Standard Gold Certificate, organized by the German-Thai Chamber of Commerce and DGNB GmbH. The design concept of HARN building started from foreseeing the direction and future trends in creating sustainability for employees, companies, people, society, environment, and the world in the future, thus originating the idea of constructing buildings under the “Green Building” concept. In addition, it is also a space to learn about sustainable engineering in line with HARN’s vision of providing sustainable engineering solutions, believing that quality of work life is important.



On June 11, 2022, HARN took part in supporting the “Plant & Protect” project by Care the Wild, which aimed to plant and restore forests in Ban Oi, Moo 11, and Ban Bunreng, Moo 4, located in Ban Vieng Subdistrict, Rong Kwang District, Phrae Province. The project covered an area of one rai (400 sq m) and was in collaboration with the MAI association of registered companies in the Stock Exchange of Thailand.



Year 2021

October 30, 2021 was certified with CG Score as having good corporate governance principles for listed companies at a 5-star “Excellent” for the 3rd consecutive year



June 16, 2021 HARN and Domino jointly launched an online showroom “Digital Center of Excellence” has press releases in international media, making it 1 of Domino’s 3 Centers of Excellence together with Europe and America.



Year 2020

November 19, 2020 was certified with CG Score as having good corporate governance principles for listed companies at a 5-star “Excellent” rating for the second consecutive year.



June 24, 2020 HARN joins hands with Aiyarafun Group signed a joint venture for digital business development to build IoT Products and Solutions system to operate smart building development service under the name “Aiyaraharn”.



HARN has been listed as one of the 20 companies that Thaipat Institute has selected as the ESG Emerging List of Sustainable Way Companies, based on the environmental, social and governance (ESG) trends of start-up companies or in the process of working that has the opportunity to generate more long-term returns for investors.



Harn Vietnam (“Subsidiary”) has successfully sold 1UV Digital Inkjet label printer and can be installed successfully by a team of Vietnamese engineers without requiring engineers from abroad to support due to the COVID-19 situation that does not allow foreigners to enter the country during that time.



HARN has expanded cooperation with Domino UK Ltd., a manufacturer and distributor of UV Digital Inkjet label printer system, to establish a 120 square meter showroom, set up the printer on the first floor of a new office building. It is expected to be completed in Q1/2021, which will be used to support sales, training, and customer visits to the showroom, including online visitation by customers in Thailand and Asean countries. Domino agrees to pay the rental fee and sells machines to HARN at a special discount price along



July 30, 2019 registered the establishment of Harn Vietnam Company Limited (“subsidiary company”) in Vietnam with a registered capital of 800,000,000 Vietnamese dong or about Baht 1,057,444. HARN held shares in the affiliated HARN amounted to 100% of a registered capital



January 8, 2019 received the honor from Prof. Dr. Bundhit Eua-arporn, the president of Chulalongkorn University, to join the opening of ‘3D printing service Harn - Chula’ at Chulalongkorn University as a part of project for community and society. HARN was pleased to facilitate faculty and students to access to the 3D printing technology at a price below the market cost.



Message from the Board of Directors



Mr. Pichet Sithi-amnuai

Chairman of the Board

Mr. Thammanoon Tripetchr

Chief Executive Officer

In 2023 by year-round business volatility, HARN Engineering Solutions Public Company Limited, “abbreviation as HARN”, which operated an Import, distribution of products and services used in engineering system, Fire suppression system products, Air-conditioning system products, Sanitary system products, Refrigeration system products, Digital printing system products, 3D for medical application system, and Internet of things (IoT) system demonstrated its business management competency and caliber in pursuit corporate goals. This required knowledge, capability and experience of the personnel as well as proactive work plans, in parallel with our commitment to the pursuit of sustainable growth in the future.

The year 2023 witnessed the recovery from the COVID-19 pandemic it is still faced geopolitical conflicts between Russia and Ukraine, the import cost increased, which led HARN to raise products prices at the beginning of the year to adapt to the further increase in costs, and also had to make plans to deal with the fierce Israeli-Hamas war. However, under a dedicated operation amid the crisis, HARN’s total revenue was Baht 1,326.23 million in 2023 an increase of 6.76% compared with 2022 and with a net profit of Baht 114.04 million, or 8.60% of total revenue.

HARN has focused on operating according to strategic directions to generate business results to create growth by conducting business while also improving the quality of life of people, culture, way of life, society, and environment and strategic positioning. Therefore, to conform to the context of the trend of lowering greenhouse gas emissions to zero, and the leaping technological advancement including changing social and consumer behaviors, HARN’s vision has been transformed from “Lead to be a leading sustainable solution provider of engineering systems in fire suppression and safety, refrigeration and digital printing in Thailand and neighbor countries.” to “Committed to be a leading provider of sustainable total engineering solutions that meet customer needs to improve quality of life, society, and environment.” at the same time, it adjusted the mission to adapt to new vision. HARN has set long-term goals for 2027, according Business + Sustainability or B+S farmwork consisting of four main strategic as Economics - expanding growth in the engineering system, Environment - driving the reduction of greenhouse gas emissions, Social - strengthens respect for values, equality, and Governance - conducts business in a transparent and verifiable manner.

At the same time, in the digital age with challenging and full of new innovations that change everything, HARN need to adjust business management in several aspects. By utilizing Digital Transformation to promote business in products offering, services and brand building, in order to support changing customer demands. Also, to enhance skills and attitudes for employees to grow together with the organization and work efficiently, by adjusting the operating model to be flexible, reduce the usage of consumable resources, online working, create the “TOP Culture” culture with cyber security to protect important operational data, personal information of employees, customers, and stakeholders throughout the supply chain to achieve economic goals that is driven by Smart & Lean. In the past, HARN has been committed to continuously developing innovations in the products from HARN, i.e. Quick Installation Products, a set of products that reduce the installation time for fire extinguishing system projects and reduce the problem of expensive labor costs. This causes a shortage of skilled labor and 2D Barcodes products: Solution for Consumer Safety is about improving safety for consumers. By applying 2D barcodes instead of 1D barcodes for checking and alerting product expiration dates at the point of sale. Additionally, HARN and AIYARAHARN CO., LTD. (“subsidiary”) have also developed innovations in refrigeration system products named Telechill Smart Solutions (S2) is a new product launched in the refrigeration system market. which is expected to create more competitive differences as well

Moreover, HARN focuses to drive towards a low carbon society with the goal to reach carbon neutrality by 2040 and achieve Net Zero Emissions by 2050, which is a faster target than Thailand where the target sets to the Net Zero Emissions at 2065 by HARN, setting guidelines for operations to achieve environmental goals driven by Go Green according to the economic model BCG (Bio-Circular-Green) or the bio-economy - circular economy - green economy. In addition, HARN continues to bring benefits and help society. In the project to reduce forest fires and preserve and restore green areas by Dr. Jain Charnnarong, Company Director As president of the Anandamahidol Foundation Scholarship Recipients Club, be aware of environmental problems related to PM2.5. Therefore, we joined with the government and private sectors to study ways to reduce forest fires by solving the problems of the villagers, called “Ban Ko Sandbox”, Ko Village, Ko Subdistrict, Li District, Lamphun Province, which is one village that is facing problems. Most forest fires in Thailand. Until the villagers received the right to farm in the park area according to Section 64. The villagers resolved to help Mae Ping Park prevent forest fires, conserve, restore and learn to ensure sustainability. Make the villagers have income has better stability and reduce forest burning according to the objective There is a plan to expand the area to find a way to protect it in the long term.

Additionally, in order to strengthen partnerships and participation according to social goals powered by Together HARN, the Memorandum of Understanding for an academic cooperation (MOU) has been signed with Sanyo Company Limited and King Mongkut’s University of Technology North Bangkok to support learning, increase the potential to produce quality graduates according to international standards, and promote the brand’s marketing process in building relationships with target groups, including hiring new graduates to help stimulate the economy by helping create jobs, create income, enhance skills, and create career stability for the new generation, as well as improve the quality of life of Thai people.

HARN strategic implementation within the sustainability framework, transparent operations with corporate governance and auditability, with elevated corporate governance efficiency, risk management; internal control; preventing corruption; abide by laws, rules and regulations; according governance goals through Integrated driven by Equality & Sufficiency made HARN received the Excellent CG Scoring of the Corporate Governance Report of Thai Listed Company (CGR) for the 5th consecutive year.

On behalf of the Board of Directors and management, we would like to thank all stakeholders for their continued trust and excellent support to our businesses.

Please be assured with strong foundation knowledge and experience, and proficiency of all in employees are poised to implementation of the plan to attain our goals and vision, in the best and sustainable interests of shareholders and all stakeholders.

Section

1



**Business
and Performance**

1. Structure and Business Operation

1.1 Business Policy and Overview

Background

Harn Engineering Solutions Public Company Limited (“HARN”) previously known as Fire Victor Public Company Limited was set up as a section of Harn Engineering Company Limited (“Harn Company”). Later on, May 9, 2001, HARN was incorporated as a juristic entity named “Fire Victor Company Limited” by Charnnarong Group^{1/} and Mr. Wirat Sukchai, former executive of Harn Company overseeing sales of valves and equipment for firefighting system, following a corporate restructuring from family business management to professional management. With an initial registered capital of Baht 1 million, HARN was established to engage in import and distribution of valves and equipment for fire protection system and valves and equipment for sanitary system and air-conditioning system, including fire protection system installation services. On February 21, 2003, July 24, 2006 and October 10, 2012 HARN increased its registered capital to Baht 3 million, Baht 4 million and Baht 65 million respectively, for use as working capital in its business operation.

In November 2016, has changed name from Fire Victor Public Company Limited after entering in a joint venture with Chillmatch Company Limited and Q II S Company Limited. The three companies were originally business units of Harn Company, with a long history of being a distributor and consulting, designing engineering systems since 1965, with more than 60 years of experience and reputation. This time, HARN is ready to focus on being the leading provider of sustainable solutions of safety engineering systems, cooling system, air conditioning system, and digital printing systems in Thailand and neighboring countries.

For safety engineering system solutions in 2001, started the business of importing and distributing valves, fire extinguishing systems, sanitary equipment, and air conditioning, along with providing fire extinguishing system installation services for projects. Later In 2003, expanded its business by adding Project Sales Division to provide consultation services, designing and installation services of all types of fire protection system such as Automatic sprinkler system, Foam fire protection, Fire alarm systems and Close circuit television system , all of which are to be carried out by a skillful, specialized engineering team, with focus on not so large projects, i.e. small- and medium-sized factories, and in 2005, added carbon dioxide (CO₂) system and extinguishing system FM200^{2/}. Until now, has been added product NOVEC 1230 Fire Suppression System, Inert Gas System, Wet Chemical Fire Suppression System.

In 2007, received an Outstanding Distributor Award presented by NIBCO Inc., USA. Currently HARN expanded into fire suppression systems for petrochemical industry with security systems.

For more than 60 years, HARN has experience in providing high quality refrigeration solutions for industrial and agricultural products by a team of engineers with expertise in designing a cooling system that is suitable for product preservation in order to maintain the highest quality, weight and freshness. Since 2002, there have been many energy crises, leading HARN to develop its expertise in developing energy-efficient solutions that have been widely accepted. Currently HARN is the leader in refrigeration technology in Thailand and continue to grow progressively.

In terms of digital printing systems, HARN started a business about printers and printing equipment, date of manufacture / expiration since 1965, with a commitment conduct a distribution business and provide after-sales service based on speed and quality in order to ensure highest customer satisfaction. Today, HARN is the leader in digital printing technology for production lines in Thailand and has gained the trust of leading companies nationwide. In 2015, expanded into 3D printing solutions until it was able to drive rapid prototyping and digital manufacturing in education, dentistry, medical and packaging and manufacturing industries.

In addition, in order to strengthen competitiveness and expand business growth. At present, HARN has established HarnVietnam Co., Ltd. (“first subsidiary”) with a registered capital of 800,000,000 VND, which is about 1,057,444 Baht, HARN holds 100% of the shares in the registered capital launched digital printing business in Vietnam on July 30, 2019, and on June 24, 2020, established Aiyaraharn Co., Ltd. (“second subsidiary”) with a registered capital of 2,000,000 Baht, HARN holds 65% of the shares in the registered capital to conduct business. Internet of Things (IoT).

HARN has implemented international quality. Presently has been awarded ISO 9001:2015 by UKAS (United Kingdom Accreditation Service), UK-based world-class certification body with quality inspection and verification conducted by SGS (Thailand) Company Limited. Certified ISO 9001:2004 since 2006 and migrated ISO 9001:2008 since 2009. Presently migrated certified ISO 9001:2015 in 2017.

HARN

has been awarded



ISO 9001:2015
by UKAS (UNITED KINGDOM
ACCREDITATION SERVICE)

ISO 9001:2000

ISO 9001:2015

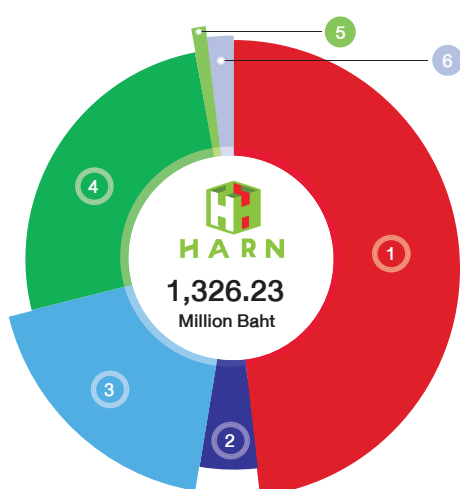
Note :
^{1/} The Charnnarong Group consisting of Mrs.Prayoonsri Charnnarong, Mrs.Sirima Iamsakulrut and Mr. Jain Charnnarong
^{2/} FM 200 firefighting system is a clean agent fire protection system with UL/FM standard certification for using substances that cause no harm to computers, electronics equipment and human beings, hence being safe for installation in server rooms, data centers and UPS rooms.

1.2.1 Revenue Structure

Type of Revenue	% Shareholding	2023		2022		2021	
		MB.	%	MB.	%	MB.	%
Revenues from sales and services							
• Fire suppression products and firefighting system installation services	100.00	643.83	48.55	599.74	45.06	423.94	40.53
• Air-conditioning and sanitary products	100.00	59.88	4.52	55.70	4.49	47.85	4.57
• Refrigeration products	100.00	247.32	18.65	230.34	18.54	197.35	18.86
• Digital printing products	100.00	346.55	26.13	366.65	29.51	351.90	33.64
• Internet of Think products (Aiyaraharn)	65.00	2.04	0.15	7.23	0.58	4.94	0.47
Total revenues from sales and services		1,299.62	98.00	1,219.66	98.18	1,025.98	98.07
Other income ^{1/}		26.61	2.00	22.63	1.82	20.15	1.93
Total revenues		1,326.23	100.00	1,242.29	100.00	1,046.13	100.00

Note : Referring to Harn Engineering Solutions Pcl.'s audited consolidated financial statement

^{1/} Other income included gains/losses on investment in mutual funds and marketable securities, interest income, dividend income, and gains/losses on exchange rate, including rental and service income from investment properties etc.



Revenue Structure Year 2023

1	Fire suppression products and firefighting system installation services	Baht 643.83 million	48.55%
2	Air-conditioning and sanitary products	Baht 59.88 million	4.52%
3	Refrigeration products	Baht 247.32 million	18.65%
4	Digital printing products	Baht 346.55 million	26.13%
5	Internet of Think products (Aiyaraharn)	Baht 2.04 million	0.15%
6	Other income	Baht 26.61 million	2.00%

1.2.2 Description of Products and Services

Products and services are divided into five products: fire protection system products and engineering fire protection system installation projects, air-conditioning and sanitation system products, refrigeration system products, and digital printing system products including biological 3D printing system and Internet of Things (IoT) system products.

Fire Suppression Products and Firefighting System Installation Services

Fire suppression products are part of engineering systems of buildings, small and large factories, power plants, and petrochemical industrial plants, used for prevention, alarming and control of fire and smoke. The products distributed by HARN include valves and fittings that are erected in the fire protection system. Valve is a device used for starting or stopping the flow of water in the fire protection system and is fixed with a pipeline in such system. There is valve for controlling the flow of water, valve for starting or stopping the flow of water during repair and maintenance of the system, valve for preventing reversal of water, and so on. Equipment for fire protection system serves as a component or an auxiliary device applied jointly with the main equipment to allow for complete functioning of the fire protection system, including other firefighting devices such as Fire protection valve, such as Grooved coupling and fitting, Fire hose cabinet including internal equipment, Fire hose, fire extinguisher and sprinkler systems (fire sprinkler head), Flexible sprinkler and fire pump.



Firefighting system installation services; HARN also provides consulting, designing and installation services for all types of firefighting systems such as Foam fire protection system, FM-200, NOVEC 1230, CO₂, Inert Gas and Fire Alarm System in both buildings and factories as well as the petrochemical industry and power plants, in which the demand for fire extinguishing system is likely to increase in order to comply with building and factory control laws that requires a renovation on these facilities to be equipped with a standard fire protection system. It has a skillful engineering team to coordinate with customers, introduce HARN's products, and design and offer products and services to customers according to the international fire protection standards, as well as post-installation system test-run service, including fire extinguishing system inspection service in which the installation of fire extinguishing systems, fire valves and equipment will be used together with the equipment involved in various fire extinguishing systems, including foam fire extinguishing system, gas automatic fire extinguishing system, fire alarm system and video fire detection system (VFDS).

Fire suppression system products

1. Fire Protection Valve

It is installed in the fire protection system. The valve is UL/FM certified for fire protection system and can withstand a working pressure of not less than 175 psi (pound per square inch). Different types of valves are as follows:

OS&Y Gate Valve



Butterfly Valve



Check Valve



Ball Valve



Globe Valve



2. Grooved Coupling and Fitting

It is used for connecting pipes in the fire extinguishing system. It replaces the conventional pipe welding with an electric welding machine and a wire to connect the pipes. Some Grooved Couplings can also support expansion and contraction or the movement of pipes and buildings. It can especially connect the pipes up to 10 times faster than conventional pipe welding.

Coupling



Fitting



3. Sprinkler

It is used with the automatic fire suppression system to protect property and life, which is likely caused by fire. It also possesses an automatic fire extinguishing feature without control. It can immediately control while the fire is still small, so it stops expansion with less smoke and in a limited area. Moreover, the automatic fire suppression system gives people in the building more time to evacuate the fire.



4. Flexible Sprinkler

It is installed for fire sprinklers, which should be up to 10 times faster than welded installation. It can also be promptly moved, modified or leveled up and down to suit the ceiling level. So, working time is reduced and problems are eliminated.



5. Fire Hose Cabinet and Equipment

Fire Hose Cabinet

It is a red cabinet for fire extinguishers, with glass in front that can be opened or broken to bring assistive devices out in case of an emergency.



Hose Valve

It is a valve to supply water from the fire hose system to the outside.



Hose Station

It is used to extinguish fuels that contain carbon compounds, such as wood, paper, cloth, garbage, etc.

It possesses fire extinguishing properties by having the coolness to extract heat from the fuel materials until reaching the point where it can not be ignited.

HARN owns the brand “Spark” for fire hose kits

Fire Hose Rack



Fire Hose Reel



Fire Department Connection

It is a device for receiving water from outside the building or the fire truck to supply into the building's fire suppression system.



Portable Fire Extinguisher

It is a fire extinguisher installed inside or outside the building, along with other fire extinguishing systems. It can be used for primary extinguishing while the fire is starting. There are 6 main types (according to substance types contained in the fire extinguisher). HARN owns the "Guardian" brand of fire extinguishers.

1) Multi-Purpose Dry Chemical

it is filled in a red tank with various types of pressurized chemical powder. It can extinguish fires: Class A, B, C, or perhaps Class D if containing special chemical powder. It is cheap and easy to buy for general areas, such as offices and homes.



2) Carbon Dioxide (CO2)

it is filled in red tanks. The end of the hose is shaped like a cone. The injected gas is a very cold vapor like dry ice to reduce the heat of a fire, without leaving any stains. It can extinguish fires: Class B and C, suitable for machine rooms, production lines of various industries, electrical equipment room, etc.



3) Water

it is filled in a stainless-steel tank. It can extinguish fire: Class A, suitable for outdoor without conductive media.



4) Foam

it is filled in stainless steel tank. When injected, it forms a foam covering the burning fuel surface. Therefore, it can extinguish Class A and B fires, but not Class C because it is conductive. It is suitable for fire extinguishing in the industrial sector or thinner fuel, and flammable, volatile substances.



5) Wet Chemical-Kitchen

it is filled in a stainless-steel tank for extinguishing fire: Class K. It is suitable for kitchens to extinguish fire caused by frying oil.



6) Halotron-1

it is filled in a red or green tank with clean substances or halotron-1 inside. When injected, it can evaporate by itself without leaving any stains. It can extinguish fire: Class A, B, C, suitable for computer rooms, clean rooms, electrical rooms, and electronic equipment storage rooms.



6. Switch

Flow Switch

It is a device in the wet pipe fire suppression system. A signal is sent to the control panel of the fire alarm system when the device detects a flow in the pipe caused by the working of a fire sprinkler or fire hose.



Pressure Switch

It detects pressure in the fire water pipe system. When the pressure changes, it sends a signal to the control room



Alarm Gong

It is a sound alarm notification in case of fire. The sound alarm is featured by using water flow as a mechanical drive.



7. Fire Pump

Firefighting System Installation Services

HARN provides consulting services for design and installation of various fire suppression systems, such as Foam Fire Protection System, Fire Pump System, Fire Water Pipe System, Gas Automatic Fire Suppression Systems (FM-200, NOVEC 1230, CO2, Inert Gas), and Fire Alarm System for projects in both buildings and factories, as well as petrochemical industry and power plants, which tend to require more installation of fire suppression systems in compliance with building and factory control laws and the need of renovation towards a standardized fire protection system. HARN has a team of expert engineers to coordinate with customers, recommend products, including designing and presenting products and services according to the international firefighting standards, along with the testing after fire suppression system installation and the system inspection such as using of valves, fittings, and other related devices in the fire suppression systems (Products in item 1). The details of projects for fire suppression systems are as follows:

1. Foam Fire Protection System

It is a system that mixes water and foam concentrate to extinguish the fire, using the principle of foaming or creating foam on flammable liquids to block oxygen from the fuel. The foam fire protection has important equipment as follows:

Bladder Tank

It is used to fill foam fire extinguishers which can extinguish the fire caused by oil.



Foam Concentrate

1) Aqueous Film Forming Foam

It is a foam solution used for extinguishing fires caused by Hydrocarbon fuels such as crude oil, gasoline, diesel, etc., which are not suitable for extinguishing fires caused by Polar Solvent fuels (a fuel that can combine with water such as thinner, alcohol).

2) Alcohol Resistant Aqueous Film Forming Foam

It is a foaming solution for extinguishing fires caused by hydrocarbon fuels and polar solvents.



Foam and water mixer



Foam injection equipment



2. Gas automatic fire suppression system

It is a fire extinguishing system in which the extinguishing agent is not conductive, with no leaving of stains, and not causing damages to equipment after the injection of a fire extinguishing agent. It is suitable for extinguishing fires: Class A, B, C, especially the electrical/electronic equipment rooms, including:

Automatic fire suppression system

1) Carbon dioxide (CO₂)



2) Inert Gas

such as Nitrogen (N₂), Argon (Ar), Inergen (N₂+Ar+CO₂), Argonite N₂+Ar



- Automatic fire suppression system FM-200



- Automatic fire suppression system NOVEC 1230



3) Fire Alarm System

It is an alarm system in case of a fire for evacuation and firefighting to reduce the loss of life and property.

Main equipment in the system consists of Control Panel, Detectors, sound or light alarm, Manual switch.



4) Video Fire Detection System - VFDS

It applies the principle of image analysis, whether smoke or a flame, in the detection area. This device is connected to the building's control cabinet. If there is smoke or a flame, the device sends a signal to the control cabinet for a notification. Main equipment in the system consists of a Camera, VFDS Sever, Device Alarm box, Monitor.



For the operations of various projects, HARN has insurances with insurance companies to protect against damages that may arise from the installation of the system. It considers the nature of work in each job from time to time, such as insurance against damages to the employer's goods/property in case of installing a fire suppression system in the used areas, such as a warehouse where goods are stored, etc. Also, HARN has added protection for bodily injury to employees or agents of the employer. HARN provides regular service by checking the equipment when it expires. If the products or devices are under warranty or in the service contract. In case the products of customers have problems, HARN will coordinate with distributors abroad and consider the causes of damage together to negotiate on product insurance claims according to the product warranty agreement, under the product warranty period of approximately 1-2 years from the date that the products leave the port of the distributing country

Air-Conditioning and Sanitary Products

Air-conditioning products are devices incorporated to main water-based air-conditioning system of large buildings, used for controlling temperature and air quality at an appropriate level. Meanwhile, sanitary products in the building engineering system include water supply system, water drainage system, ventilation system, etc. HARN distributes products that are devices in air-conditioning and sanitary systems, such as valves which open and close to control and stabilize the flow of cold water to ensure efficient functioning of the air-conditioning system and the sanitary system and are fixed with a pipeline in such system. In the sanitary and air-conditioning system, there are also other major components or auxiliary devices such as Stop valve, Pressure gauge, Thermometer (device to measure the temperature and water pressure in the system), Flow Switch, Aluminum Filter, Grooved Coupling and Fitting, Pump Room Solutions, Copper pipe and Copper fitting And Refrigerant, In addition to importing and distributing well-known international brands.



Air-Conditioning and Sanitary Products

1. Water shut-off valve

It is used to control the flow of water, whether off-on or water flow adjustment, as follows:

Gate Valve

with a lot of weight and space required for installation. It is suitable for use in the water pumping room and fire pump room, outside the building or general area. It is not suitable for water flow control.

Butterfly Valve

It is for on-off water, with lightweight, less space for installation in the buildings or general area. It is not suitable for water flow control.

Ball Valve

Ball Valve, is used for turn on-off the water. It is suitable for small pipes and can turn on-off immediately. There is less leakage because of more valve closed contact.



Globe Valve

It is for controlling the water flow rate to cause the dropping of water pressure between the front and the back of the valve.



Balancing Valve

It is for balancing water in the air conditioning system to adjust the flow rate to the desired value. According to the designed state, the amount of water is adjusted to flow into the cool air of the air conditioning system.



Automatic Pressure Independent Control Valve (PICV)

It controls the on-off of cool water and the amount of water flow being sent to the cool air in the air conditioning system to send the coolness as specified.



2. Pressure Gauge

It is to display pressure values with its units as pound-force per square inch (PSI) and kilograms per square centimeter (kg/cm²)

Liquid Filled Gauge

It is suitable for installation in vibration areas to reduce the impact of pressure and make the life-longer use.

Non-Filled Gauge

it is suitable for general installation.



3. Thermometer

It is used to measure temperature or heat level, which can be divided into main types as follows:

Liquid-in-Glass Thermometer

It is for general temperature measurement, with the property of expanding liquid when heated and contraction when unheated. It is expressed in Fahrenheit (F) and Celsius (C) degrees.

BiMetal Thermometer

There are expansion properties of 2 types of metals. When heated, both types of metals expand unequally. The temperature generally ranges from -75 C to 550 C range



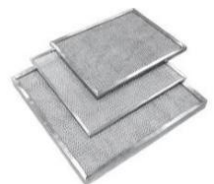
4. Flow Switch

It is used to detect the flow of water, with protective properties of water pump damages due to non-flowing water. It is installed in the same direction as the flowing of water in the pipe.



5. Aluminum Filter

It is washable and can filter dust and dirt in the air and make cleaner ventilation. It also prevents dust and dirt from clogging in the air conditioner, with a water-washable feature.



6. Copper pipes and copper fittings

It is suitable for all types of refrigeration and air-conditioning applications. The copper pipes that HARN distributes come in many types and sizes, including straight pipes (sizes K, L, M), pancake coil, as well as various types of copper fittings. HARN owns the “Koppar” brand for copper pipe products.



COPPER TUBE and PANCAKE



COPPER FITTING



BRAZING ROD

7. Refrigerant

It acts as a medium for transferring heat out of the passenger compartment by absorbing heat into itself under low temperature and pressure, then transfers heat away from itself at high temperature and pressure.

HARN owns the “Yuki” brand for refrigerant products.



8. Refrigeration system: Variable Refrigerant Flow (VRF)

It is an air conditioning system that can change the amount of refrigerant according to the load of cooling and the number of internal units installed. It is also a commercial air-conditioning system suitable for a limited area of installation with hot coil (outdoor unit) because 1 coil can install multiple evaporators (indoor unit). The evaporators can be separated independently, thus controlling the temperature accurately with the view of an orderly-looking building.



Refrigeration Products

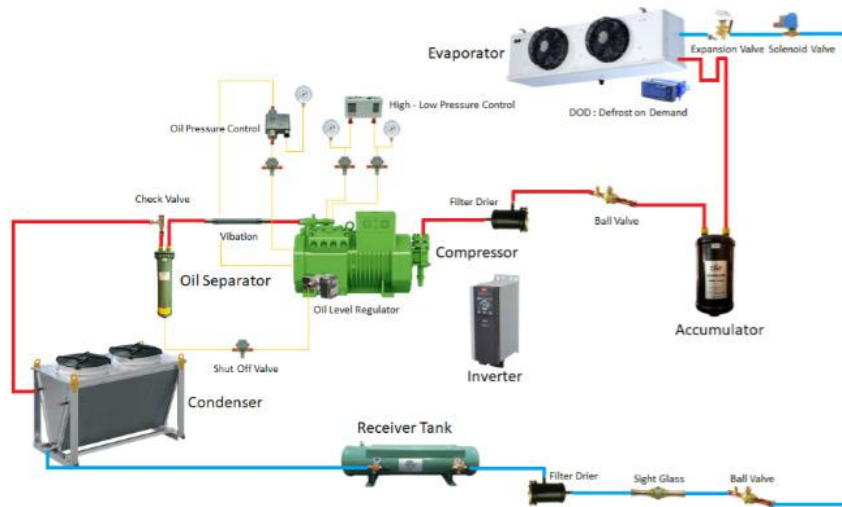
Refrigeration products are equipment used in cold storage system or goods transport system for freezing or lowering the temperature of products that require a stable temperature control. In general, a cooling system can lower the temperature to between -30°C and +25°C., HARN offers a complete range of refrigeration products, consisting of Compressor, Condenser, Evaporator, Customized evaporator, Inverter, Defrost on Demand (DOD) equipment, Inverter for Compressor and valve in the refrigeration system, had available in many types, as Check-Valve, Ball-Valve, Shut off valve, Solenoid valve and Expansion-valve which is an important device used for starting or stopping the liquid flow and the cooling pressure.

HARN has also designed and produced Condensing units, both single and rack forms, by using a piston and screw-type compressor, including design and production of small cooler set for drinks vending machines



Refrigeration Products

by integrating all equipment and cooling concepts into one product unit that can be used for prompt installation of a cold storage system or goods transport system. It also distributes small ready-made condensing kits of “Danfos” brand for small cold rooms or convenience stores.



1. Compressor

Is used for compressing refrigerants in the vaporized state by creating pressure through the reagent copper pipes to the evaporator, hot coil, and expansion valve. The compressor is one of the components in Condensing Unit.



2. Condenser

It is a high-pressure refrigerant condensing device that changes the liquid state from vapor to liquid and takes the heat out of the liquid by Air Cooled Condenser seen from outside of the evaporator and Watercooled-Condenser, using water to cool the liquid.



3. Evaporator

It is a low-pressure refrigerant evaporation device that changes the liquid state from liquid to vapor by bringing the cooling in the evaporator into the room to cool the room temperature with a fan, seen as the installed hanging on the ceiling in the room.



4. Customized Evaporator

It is an evaporator that can be manufactured and designed to match the application very well and support a wide range of applications from the general refrigeration industry to the specific refrigeration industry that requires durable equipment of the highest safety, such as the industry related to chemicals and flammable materials, with a variety of protection, whether it is chemical corrosion resistant, exploding protection (ATEX-Execution), germ protection, etc.



5. Refrigeration control valves include :

HARN owns the “Blue Ice” brand for its refrigeration equipment products, including refrigeration valves, cooling devices, desiccant devices, pressure gauges, etc.

Expansion Valve

It is used to reduce the pressure of the refrigerant in the evaporator to control the evaporation temperature in evaporator valves designed for specific applications for temperature work, Air Condition, Cold Room and Freezer Room.



Electronic Expansion Valve

It is for reducing the pressure of refrigerant in the evaporator, controlled by an electric signal of high accuracy to increase cooling capacity and provide ease of use, with added value for the cooling system that is able to work in all temperature ranges.



Solenoid Valve

It is designed for specific applications in refrigeration plants with all voltages and frequency ranges. Valves are also be designed according to customer requirements.



Shut-off Valve

It is a manual on-off valve designed for installation in the refrigerant pipes on the liquid, suction, and hot gas sides of the refrigeration system. Valves can be connected to copper pipes by welding or screwing.



Ball Valve

It is a manual on-off valve that can be operated in both directions as required. Ball valves are designed for installation in pipes with high gasket density, making less loss of pressure. It has the maximum refrigerant flow when fully opened. Ball Valve is also designed for operations over wide temperature ranges and approved for use with any fluorinated refrigerants. Standard ball valves may be used in high pressure refrigerant applications, including R410A and CO2 work with pressures up to 90 bar (1300 psig).



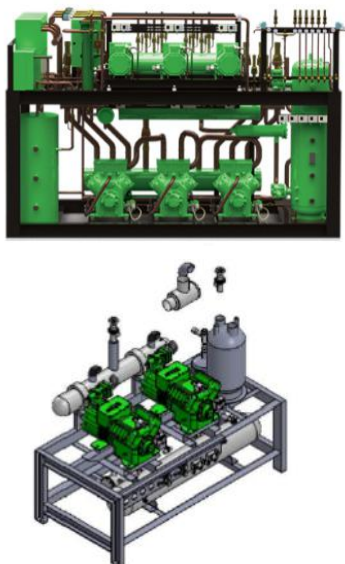
6. Condensing units

HARN designs and manufactures condensing units according to European standards for long-lasting durability, ease of service, and easy installation, which can be chosen in a variety of temperatures, Ideally for freezer rooms, cold storage rooms, hypermarkets, supermarkets, convenience stores, refrigeration industry, air conditioning system, or areas for economical and efficient room temperatures, available from -30°C to +25°C and with cooling capacities from 4 to 112 kW or 2 to 50 hp, while moving towards data systems with Industrial Internet of Thing (IIOT) as follow:

Multi Compressor Rack

(Screw and Piston Compressor)

It is a combination of several compressors in the same set to reduce energy costs, save installation expenses and time, lower maintenance costs, and increase longer life of use, and have the greater cooling capacity with a wide range of temperatures. It is suitable for industrial and commercial businesses, such as department stores, distribution centers, etc.



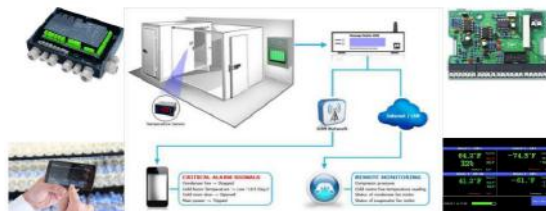
Control equipment unit, it is for protection and energy saving

Reduce electricity costs, as well as remind and prevent problems in the cooling system, lower maintenance costs, and create added value.



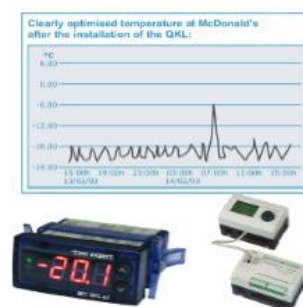
IOT

Communication system connection kit connects the entire system to know the working status. It alerts and displays the system status via Bluetooth wireless system, speeding up problem analysis, reducing maintenance costs, and creating added value



7. Defrost on Demand (DOD)

It is suitable for all kinds of cold rooms to store products. The microprocessor in the DOD helps to control the temperature with power management and humidity level in the air, including the defrosting frequency in accordance with the actual working conditions without any adjustments with difficulties just as other brands of control devices, making it easy to implement with a precise intelligent defrosting control system, as well as the use of the remaining energy in defrosting (Latent Energy) for usefulness. This results in savings of 15 - 25% in energy costs.



8. INVERTER

It helps to control the speed of the compressor to work continuously according to actual cooling load conditions with continuous work control to improve cooling efficiency and help reduce temperature changes in the cooling areas, as well as make the temperature at the cooling point accurate.

As a result, the set temperature is consistent to make the goods stored in good quality and maintain freshness for a long time, while saving up to 40% and extending the life-long use of the compressor. While working, the compressor does not suffer any tractions.



9. Danfoss Condensing units

It is a small prefabricated condensing unit, with a cooling capacity from 0.7 to 11 kW in the temperature range of +15 to -15 °C and 0.6 to 6 kW in the temperature range of -10 to -40 °C. It is suitable for small cold rooms, prefabricated cold rooms, and freezer rooms in restaurants with limited space. It is designed with maximum cooling efficiency, compact shape, low noise, lightweight, and is easy for installation and maintenance.



- Reduce the amount of refrigerant filling up to 35%
- Able to be installed both indoors and outdoors
- Use several refrigerants in one model
- Work at outdoor temperature up to 48 degrees Celsius
- Reduce time for service and maintenance
- Corrosion resistant of Micro channel coil and panel

10. Small refrigeration kit for beverage vending machines

It is compact and can be used with a small refrigerator or automatic beverage vending machine. It is designed to provide maximum cooling efficiency, with durability to cover all functions and energy saving as important in the design.



Digital Printing Products and 3D Medical

HARN distributes Digital Printing Products and 3D Medical System such as Continuous InkJet Printer (CIJ), laser printer, Thermal Transfer printer and Label Sticker Printer, Digital UV Inkjet, Packaging printer and other packaging equipment, Printer equipment and various types of consumables including 3D Printer etc. as follows:

Digital printing product group for printing of manufacture/expiry dates and lot number

Consists of machine for printer texts on packages, feeder, printing equipment, various types of supplies, etc. HARN's products are coding printers for printer manufacture/expiry dates and texts such as lot numbers as well as graphics, barcode, 2D Datamatrix, QR code, prize drawing code numbers on such surfaces as plastic bottle packaging, glass bottle, metal/aluminum can, paper box, glossy paper, plastic envelope, aluminum foil, plastic cup and others.

It employs technologies such as inkless laser coding, non-contact inkjet printing, printing with ink ribbon, printing with ink cartridge, etc.

Digital printing product group for 3D printing

Distributes and provides digital file printing service and packaging. For the Thailand 4.0 medical industry, i.e., conversion of MRI/CT scan file into 3D PDF file to have higher quality images that enable users to have comprehensive views of normal and abnormal spots and printing of organ model from MRI/CT scan which can well support education, diagnose, preoperative planning, included medical research and development with digital technology.

Digital UV inkjet printer product group

For printer of label stickers with digital technology to generate clear, sharp, bright-colored, superior quality texts and images with high speed and at lower cost for label sticker manufacturers.

After-sales services

For all product groups distributed to end-users encompass advice and consultancy for selection of product specifications that meet requirements, installation of the machines, training, and repair and maintenance, as well as insurance, etc.

Digital Printing Products

1. Continuous InkJet Printer (CIJ)

It is used to print the manufacture date, expiration date, and lot number. It can also be applied to almost all surfaces such as plastic, metal, glass, mirror, aluminum, film, paper, wood, and synthetic wood, including smooth, rough, or curved surfaces, making it a highly popular and multipurpose printing technology. It is suitable for automated production lines, semi-automatic or installed with other machines particularly, the printer has a system to prevent clogged nozzles, which can be adaptable to all formats with many ink colors to choose, various properties, low printing costs, energy saving, and environmentally friendly.



2. Laser Printer

It is used to print the date of manufacture, expiration date, and lot number, etc. on plastic, glass, paper, and sticker products. It is a laser light system using heat to react with printing surfaces as numbers / letters without using ink. It can work automatically by entering the numbers or letters on the control screen and updated according to the real date and time. It has the advantage of saving costs, high speed, production efficiency, less burden of care and maintenance.



3. Thermal Transfer Printer

It is used to print the date of manufacture, expiration date, lot number, logo, barcode, 2D Datamatrix, QR Code, etc., onto film, plastic, paper of smooth surface. Thermal Transfer printer uses the heat of the print head to melt ink for printing numbers, letters on the area with detailed text accurately and clearly. It can also specify the text to be printed on the control screen and update it according to the real-time and date. Moreover, it can be installed for all types of sachets packing machines. Particularly, it is a clean technology, no volatile matters, and high quality, sharp, easy to read, and beautiful. It is suitable for large volumes of data with cost-effectiveness and high speed.



4. Thermal Inkjet Printer

Used for printing production date, expiration date and batch number, logo, barcode, 2D data matrix, and QR code on film, plastic, and paper. In areas with smooth surfaces, the thermal inkjet printer is equipped with intelligent ink cartridges, taking the printer's usage standards to a new level. Ink includes both water-based and alcohol-based inks, which have undergone surface and adhesive performance tests. Inks have special properties. Long indentation time, uniform printing intensity, good printing quality, and clarity. The printer supports data transmission through computer systems and supports UDI (Unique Device Identification) printing.



5. Digital UV Inkjet

Label stickers can be printed with the digital technology of high quality, sharp, beautiful, and bright colors at high speed on various materials, such as paper, plastic, foil, and laminate on standard materials from the factory, with good adhesion performance. Color is durable, not easy to fade, which can help to reduce costs for label sticker manufacturers. It can also add special patterns to draw attention to the products, such as embossing on the surface, variable Information printing in numbers, letters, graphics, Barcode, QR Code, 2D Datamatrix, etc.



6. 3D Printer

It is a printer for creating models or forming parts according to the customer's specific designs by printing the workpieces with high-efficiency and high-quality resin to create a model. The workpiece surface is smooth and sharp at every point. It is suitable for printing applications, such as product packaging design, dental, hearing aids, jewelry, and automotive, etc. HARN currently sells and provides 3D printing services for industrial and general customers who want to create prototypes that they need. It has also added a new service for the medical industry in the 4.0 era to convert files from a scanner type of MRI/CT to a 3D PDF file to display high-quality images to clearly indicate normal or abnormal areas. It also includes printing organ models from MRI/CT files to support education, diagnosis, preoperative planning, and digital medical research and development.



7. Packaging printers and other packaging equipment

Letter stencils for printing on the sides of large packages which are not suitable for the conveying belts, Hot Foil Printer, roller type printer, high speed labeling machine, Print & Apply Labeler, and a set of date stamps, etc.

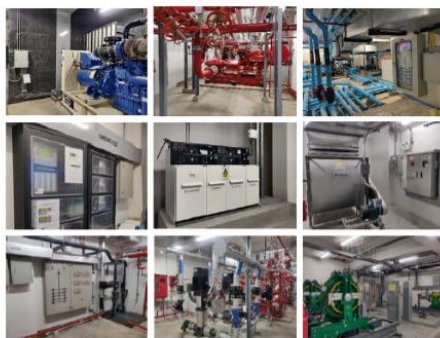
8. Printing equipment and various types of consumables

Printing ink, ink mixture, ink remover, ink ribbon, resin solution, filter kit, equipment spare parts for manual printer, roller and foil sets to print production date, etc.

Internet of Things Products

Aiyarahan Company Limited ("Subsidiary"), operates an online utility tracking system business to help building technicians and project managers monitor their operations of the building assembly system and can see their retrospective information, which is helpful for planning maintenance and planning the operation of building systems, so as to obtain greater benefits and save energy, while reducing the travel of building administrators responsible for multiple buildings, which has promoted cost-effectiveness. Since 2020, Aiyarahan installed a total of 8 locations in Bangkok and other provinces. Also, it continually builds new business related to Building Automation System (BAS) with can not only provide the functional information of the building system, but also control the building more intelligently, so that the building has higher advantages in utility and energy. As far as BMS is concerned, since 2020, it has completed the installation of three projects in Bangkok and provinces. The main target customers of these two product groups are real estate groups, apartments and factories. Their past work before HARN jointly funded, it is development of Internet of Things solutions for condominiums, office buildings, middle-class manufacturing plants, equipment and instruments for processing into large amounts of data.





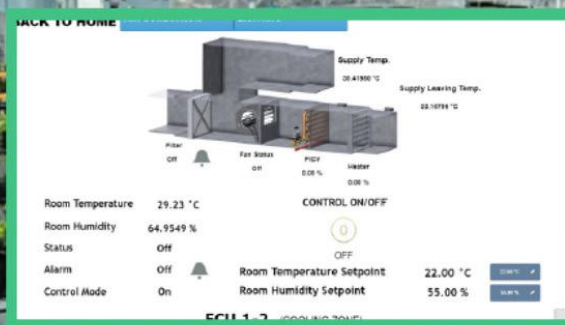
> 24 Projects

- Condominium
- Office Building

> 900 Machines

- Power Electric
- Water Supply
- Wastewater Treatment
- Generator
- Fire Alarm
- Elevator

> 13,000 Data Points



Aiyarahan has witnessed a high level of technological advances in Thailand. The Internet of Things (IoT) It is one of the keys to automatically obtain interested information. Thailand has begun to apply it as the quality monitoring systems and the data analysis for any trends. The accurate information can help the business and the industrial sectors to analyze, plan, and forecast in advance. Aiyarahan predicted that in this decade, the Internet demand for everything will be higher.

In the past, the online utility tracking system consisted of many involved working systems, which can cause the installation to take a long time and high costs. The system is therefore not suitable for finished buildings. For the trend in 2024, Aiyarahan is committed to developing a specific utility tracking system and increasing the ability to communicate wirelessly with easy installation and reasonable prices to reach more customers.

1.2.3 Innovation Development

HARN's core business involves the whole engineering system, fire protection system, air conditioning system, sanitation system, refrigeration system, digital printing system, biological 3d printing system and Internet of Things system, so its research and development focus on creating added value for products, optimizing the whole process, safety and technology-based process development. HARN has developed innovative products that can reduce costs and create added value for business units, including products suitable for the market, as follow;

Safety & Comfortable Business Unit (SC)

Quick Installation Products have been used for installation of fire extinguishing system projects, and will be expanded to air conditioning systems to reduce installation time and solve the problem of skilled labor shortages and expensive labor problems which is a strong trend at present. In 2023, sales can be increased compared to 2022 in product groups i.e. Flexible Sprinkler, Floor Control Valves and Coupling, etc. Therefore, HARN has a strategic plan to continue increasing the proportion of sales. In addition, a seminar "Victaulic Coupling and products for joining with groove systems" was held on July 24, 2023 at HARN's office to introduce it to attendees with basic knowledge. As well as presenting other products related. There were approximately 24 people interested in attending the event. This is because it is more convenient way to install than a pipe welding. And can be installed without the need for experienced workers. In the coming years, HARN still plans to cooperate with manufacturers to organize activities continuously throughout the year to promote awareness and understanding of how to install products for maximum efficiency for users and continue to spread.



Refrigeration Business Unit (RF)

Refrigeration Business Unit has collaborated with AIYARAHARN CO., LTD. ("subsidiary") to develop energy-saving innovations for refrigeration system. We have designed and installed an IoT Monitoring system under the name of Telechill Smart Solutions (S2). Which is a new product launched into the refrigeration system market. With features to monitor, alert, and collect temperature statistics for use in immediately tracking the quality of energy usage of the refrigeration system through the screen in control room. To maintain the quality of products in cold storage to be safely delivered to customers, decrease risks and better prevention of quality loss. This will differentiate itself from the competition and create more sales growth.

HARN has installed the Telechill Smart Solutions (S2) demonstration kit on the 3rd floor of HARN's office building for customers to visit and study the operation of the technology. And in the 4th quarter of 2023, the IOT Monitoring system was distributed and implemented into the market. In trust from the Amphon Foods group of companies to implement the system at the distribution center. Ban Pong District Ratchaburi Province, which is a new product of the refrigeration system business. This reinforcing our position as the leader in sales of refrigeration equipment and leader in cutting-edge technology, expertise in design, as well as providing advice on refrigeration systems. This creates sales to grow and make the difference from other competitors.





In 2023, the seminars in several regions where it has been done throughout the past several years. In order to reach customer groups in several regions and to provide information and know-how of the products. Including new technology innovations for products that save energy and maintain the refrigeration system that HARN distributes for maximum efficiency. By organizing seminars on topics to meets the demands from customer groups in every region to expand the customer base and increase efficiency. The seminar on “Energy saving innovations for refrigeration systems” on July 21, 2023 at Royal Phuket City Hotel, Phuket Province. The seminar was attended by 39 people / 24 organizations.



Seminar on the topic “Cold storage for the fruit and vegetable export ” on October 27, 2023 at Star Convention Hotel, Rayong Province, with 52 attendees / 32 organizations.



In addition, a Memorandum of Understanding (MOU) has been signed on academics and refrigeration system development with SANYO and King Mongkut’s University of Technology North Bangkok. To promote learning and increase the potential to produce the quality graduates according to international standards in academics and professional practice skills. It is also an exchange of research knowledge and technologies involved in commercial refrigeration systems, which is beneficial to the development of teaching and learning at King Mongkut’s University of Technology North Bangkok and to achieve the maximum benefit in the country’s refrigeration system industry. As well as promoting the brand’s marketing process in building relationships with target groups.



Digital Printing System Business (DP)

Digital Printing Business have the opportunity to join as a partner to driving new innovations with GS1 Thailand, Federation of Thai Industries to improve safety for consumers. GS1 Thailand is an agency under the Federation of Thai Industries. Who acts as the only official registrar for issuing product barcode numbers according to the GS1 international standard in Thailand. Which has taken care of the issuance of barcode numbers to Thai and Lao PDR entrepreneurs for over 40 years with mission to promote and support the use of the GS1 international standard to meet standards and cover all industries to reduce costs and increase ease of doing business as well.

In this regard, the GS1 Thailand Institute has moved forward to drive the innovation for consumers. By joining with CP All Public Company Limited along with CPRAM Company Limited in implementing 2D barcodes instead of 1D barcodes for checking and alerting expiration dates of consumer products at selling point. It has started piloting with ready-to-eat food products produced by CPRAM in 7-Eleven stores to build confidence in food safety for consumers. This technology also facilitates employees to check the expiration date of products. This will reduce working time and increase accuracy for inspection. The project to implement 2D barcodes according to the international standard GS1 has been launched on the topic “2D Barcodes: Solution for Consumer Safety” , which meets the demands of reliable products, raising the safety for consumers with new generation 2D barcodes on FTI Expo 2022, at Chiang Mai International Exhibition and Convention Centre.



In 2023, Mr. Withoon Thamee, Director of Sales for digital printing business participated as a speaker in a seminar for the topic of “The new generation of retail barcodes for consumers safety” August 17, 2023 at the Federation of Thai Industries. To support the use of the GS1 international standard barcode and modern digital printing technology for the manufacturing industry and promoting the application of 2D barcodes, which allows vendors and consumers to acknowledge the important details of products i.e. expiration dates at the point of sale, etc. In addition, HARN has also participated in activities and shared know-how about 2D barcode printer technology in response to the joint intention with the GS1 Thailand Institute for members and entrepreneurs in Chiang Mai, Chonburi, Surat Thani and Songkhla to develop the potential of entrepreneurs and raise the standard of Thai products as well as bringing printers and technologies to exhibitions and demonstrations at ProPak Asia 2023 at the BITEC Bangna Exhibition and Convention Center, which is the largest trade fair for the processing and packaging industry in Asia. Which has a large number of participants from domestic and oversea companies.

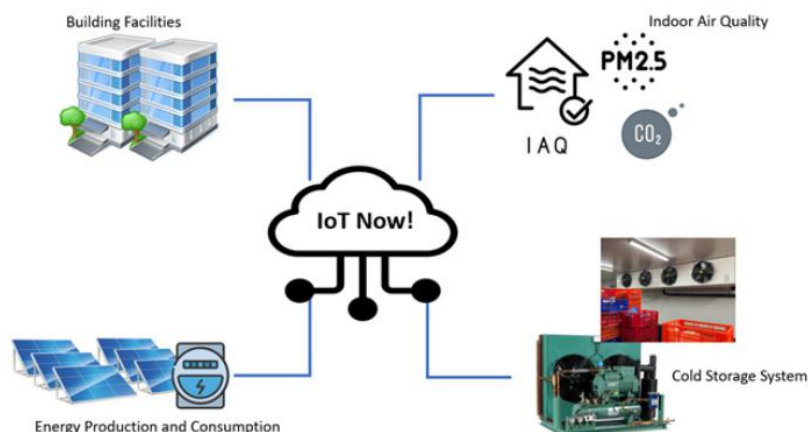
In addition, we also participated in research funding support with the National Research Council of Thailand. Under the project of “The biomaterial print head with embedded measurement device for 3/4D printing. It can be said that the result from research and development meets the goals of the first phase of the project to further develop the biomaterial print head in the second phase.



Internet of Things System Business (Aiyaraharn)

In 2023, Aiyaraharn has conducted research and development of 4 IoT products, which is the development of 1 Platform Software project and 3 Hardware projects, namely IoT Platform Software (IoTNow), Building-IoTNow Monitoring Gateway and Control Panel Board (BuildingNow), IoT for Cold Storage System (Telechill S2), and Indoor Air Quality Controller (HARN IAQ). These products are designed with the intention of working under the same ecosystem. Details of the products are as follows.

Product 1: IoT Platform Software (IoTNow)



IoTNow is a Platform Software on Cloud that Aiyaraharn developed to be the control center and operational data monitoring for IoT products that are implemented, sold, and provided by Aiyaraharn. The platform consists of the Dashboard and Control Panel for IoT work in the aspects of building systems, tracking systems for energy usage, electricity generation with solar cells. Refrigerator system, and indoor air quality systems. Customers can observe information and control the operation of these systems at the website via the internet, where IoTNow provides annually subscription. Currently, we have started providing services to customers in the refrigeration system, other systems will be gradually launched within 2024.

Product 2: Building-IoTNow Monitoring Gateway and Panel Board (BuildingNow)

This is a product developed to solve the weak points of original Building-IoT products, which were difficult to install and need to be installed from the beginning of building construction. Therefore, Aiyaraharn has taken information on the demands from customers who are responsible for completed buildings. with emphasis on convenient installation, less dismantling of electrical wires and interfere with the original building as little as possible but the information is still insufficient and can be responds to the demands from customers who are executives of medium and small condominiums. BuildingNow is still in the process of designing the Panel Board, sensor installation, and evaluating the suitability of leasing, as well as providing system rental services. It is expected that sales will begin within Q3/2024.



Product 3: IoT for Cold Storage System (Telechill S2)



AH-IoT-ColdStorage-Gateway

This is a product jointly developed between Aiyaraharn and the refrigeration system business of HARN under the name of Telechill S2. The refrigeration system business provides basic requirements, refrigeration system data that should be monitored, and provides a refrigeration system demonstration kit for testing, with Aiyaraharn is the investor, designer, and developer of the IoT Gateway, Control Panel Board, and IoT Dashboard for the refrigeration system. As well as being a manufacturer, products distributor, and provide IoT Dashboard services to customers. This product will begin selling and providing services from January 2024 onwards, with installation and service for 3 customers. IoT Dashboard is provided as an annual subscription service with IoTNow.

Product 4: Indoor Air Quality Controller (HARN IAQ)



This is a product from participation in the HARN INNO 2023 activity, the jointly conceived product is Fresh Air Dehumidification with Indoor Air Quality Improvement System, which is a product for improving the air quality in the room. By compressing fresh air into the room to eliminate the PM2.5 dust and decrease the amount of CO2. Aiyaraharn is responsible for the Fresh Air Dehumidification Controller equipment. This product is still being installed and tested. The product testing and demonstration will be completed within the first quarter of 2024.



In addition, in 2023, the Board of Directors supported the innovative creation within the organization, starting with creating a culture for 25 executives and talent employees of HARN to participate in brainstorming activities to find new creative ideas or to solve problems from multiple perspectives with a team of external consultants with expertise in the design thinking under the project to find innovation with design thinking “HARN INNO 2023” utilizing knowledge and expertise from businesses to design and develop products that promote the quality of life for society and the environment. After brainstorming, there are 5 ideas are ready to be implemented. It is expected that 2 projects, namely Indoor Air Quality Improvement and All In Any Time Anywhere could be utilize to expand the business further. For the other 2 projects, Smart Transportation and Smart Warehouse can reduce operating costs and reduce company expenses.

1.2.4 Marketing and Competition

HARN has engaged in import and distribution of Fire Suppression products, Air-conditioning and Sanitary products, Refrigeration products and Digital Printing products for industrial, and providing IoT products and solutions system development services, as well as provision of consulting, designing and installation services for fire protection systems in projects. Most of its products, which are relevant to building engineering such as fire protection, air-conditioning, sanitary and cooling systems and account for more than 50% of its total sales revenues, are supplied mainly to contractors of building construction projects, government sector projects or factory buildings, including office buildings, condominiums, hospitals, shopping malls, electric trains, industrial plants, cold storages, and so on. As such, HARN's business operation relates directly to the construction industry which grows in tandem with the country's economy, or gross domestic product (GDP), but is prone to more volatility. That is, when the economy begins to recover, construction of various properties will expand at a greater and more rapid pace, but in the wake of economic slowdown it will decelerate faster and in line with the permitted areas of construction in each year. Nevertheless, HARN has the ability to distribute business risks, which is demonstrated by the Refrigeration business unit and Digital Printing business unit being correlated to the food and packaging industry, which is different from the Safety and Comfortable business unit, etc.

1) Marketing of Key Products and Services

Marketing Policy

HARN commitment to be the leader in distributor and services with the "Sustainable Solutions" of the engineering system by utilizing the knowledge in products selection and innovations which responds to the customers' demands in order to enhance the quality and the safety of the consumers life with high quality products, modern technologies, sales and services that are fast, accurate and worth the value, including the provision of expertise consulting, which create customer's satisfactions, differentiate and increase the ability to compete, including securing the brand loyalty in the long term. Also, creating articles communicate engineering knowledge via Facebook and website of HARN to knowledge understanding of customers and general consumers, with competitive strategy as follows;

Selling products with acceptable quality and standards

Focus on selling quality products with globally recognized standards where HARN shall select quality products specially building engineering system products such as firefighting system, air-conditioning system, sanitary system and cooling system, including digital printing system products which greatly importance to safety, product storage process and the continuity of production process. Therefore, it is crucial to select good quality products which are certified by international standards and suitable to the customers' needs, well known products which are popular and widely accepted in the market, to build trust, confidence and customer satisfaction continuously.

Increase of commodity dealers

HARN plans to expand the range of dealership in building engineering products which include firefighting system, air-conditioning system, sanitary system and cooling system as well as digital printing system where the products will be ordered gradually in order to increase customers' choices whereby the customers' needs will be supported in all groups of product standards. Furthermore, HARN shall increase the number of personnel to be sufficient with the business expansion, especially in the work in firefighting system installation projects and other building engineering system work. HARN pushes to have adequate number engineers to support works in projects which are increasing in amount and value.

Offers a variety of products in complete range with sufficient stock to meet the customers' demands without leaving the customers to spend much time waiting for the products

HARN is one of the distributors of complete range of building engineering products by being the leader in business of importing and selling products in firefighting system, cooling system, air-conditioning system and sanitary system including digital printing system, with a large selection of products. Most of the products sold are imported

from other countries which takes time in ordering and waiting for the products to be transported into the country. HARN therefore must do a sales projection, make plans for product orders and keep an appropriate amount of stock in order to have sufficient current products to meet the customers' demands and able to deliver the products to the customer in a timely manner without delay which may damage the sales and the opportunity of a return customer. At the same time, HARN will not overstock that it would contribute to a high cost of stock keeping, until causing damage from depreciation according to period or the over useful life.

Organize promotional activities to stimulate sales

HARN organizes promotional activities on a regular basis such as participation in trade shows to create awareness and reach the target customers directly. There are product seminars for project designers and clients to create product familiarity for them to choose the products that HARN sells. There are advertisements in the various magazines which relate to the business of HARN as well as sending invitations to project designers to join activities in visiting the factories of producers in foreign countries, who are famous in global market, in order to study the technology and gain new perspectives on the concepts of building industry to elevate the standards of construction in Thailand, which is one of HARN CSR policies, and building confidence in the products imported by HARN to be sold leading to their choosing of HARN products to be used in the various projects with confidence.

For 2023, it is still a year of the COVID-19 pandemic epidemic recovery, and the epidemic shows a downward trend. Therefore, HARN has pushed forward exhibition activities, held product seminars, provided customers with product selection training, and other domestic and foreign sales activities.

Pricing Policy

HARN policy on pricing is Cost Plus Pricing whereby the determination of HARN products selling price must be flexible and suitable to the characteristics of each product, distribution channel, target customers, volume and value of the orders as well as taking in consideration the market price of that product, which in some instance, a discount may be given in accordance with the market conditions and the competition in that moment in order to remain competitive in the market. At the same time, the gross profit margin must be maintained at a level that can support the cost of sales, administration and other operations.

Regarding pricing for project works, HARN mainly determines the service charges in accordance with the customer's budget and the cost of each project where there shall be flexibility in the quotations given in order to compete with other competitors in the market, while at the same time, importance must be given to the quality of service as well as the products and equipment used in the task, in order to build continuous credibility and trust from the customers. Moreover, in offering quotations, HARN must achieve adequate level of gross profit margin to support the cost of sales, administration and other operations.

Target Customers Groups and Distribution Channels

HARN main target customers are customers in building construction projects, government sector or industrial plants such as shopping malls, office buildings, condominiums, BTS SkyTrain projects, underground subway projects, government buildings, factory buildings, cold storage buildings and warehouses, including international contractors from Korea, Japan and USA for large petrochemical and power plants, as examples, that require an installation of building engineering system such as firefighting system for safety in accordance with building control laws, sanitary and air-conditioning system in buildings or factories, cooling system in cold storage or system room. HARN clients may be direct clients who hold the ownership of the construction project, or project contractors who purchase HARN products to install in their projects, as well as stores or distributors of products related to the various systems who purchase HARN products to resell to project contractors or direct users, in which HARN has always have a good relationship the mentioned group of clientele. Moreover, there are groups of clients who regularly order HARN products because of their confidence in the quality and the safely of the products, in which most of them have received international standards certification, combining with excellence service by the sales team who possess great knowledge about the various products. However, in 2022 and 2023, HARN does not have any clients who's spending exceeds 10% of total revenue from sales and services.



Most of products HARN receives advance orders from the customers for most of the products sold where there is a time period to prepare the purchase and delivery to the customers as per the agreement, in which most of the time the customers will inform their specific requirements to HARN including the products'

standards, the source or the producers, in order for HARN to be able to offer the products as per the customers' needs along with quotation and other sales conditions. Most of the products distributed are from producers whom the customers trust and in compliance with the standards used in the works of firefighting system, air-conditioning system, cooling system and digital printing system, customers therefore continuously trust in HARN's products. In this regard, HARN distribution channels are divided into 3 main channels as follows;

Main building contractors or system contractors

It sells to construction building projects, government projects or industrial factory projects and cold storage contractors, as examples, in which the contractors shall source the products or install HARN products in the various projects in accordance with the specification that the project designer has outlined. Most of HARN sales are through this distribution channel or calculated at 51.55% and 59.80% of the total revenue from sales and service in 2022 and 2023 respectively.

Retail or related product suppliers

Distribution through this channel enables HARN to distribute the products more widely. The sales ratio through this channel is calculated at 6.61% and 8.35% of total revenue from sales and service in 2022 and 2023 respectively. Additionally, in some cases the aforementioned retail or distributor are also HARN business partner that sells some products to HARN in order to install in a project according to the customers' request or to resell to the contractors who have ordered products from HARN in which the mentioned product may be a product from other producers that HARN does not distribute or is a product that doesn't have such a high demand in the market and HARN does not keep it in stock, for example.

End User

Is a distribution directly to the owner of the building, industrial factory or general users where it is a sale of digital printing system that includes products and/or service in a form of installation project work on firefighting system and other various engineering system that HARN is equipped the aspect of engineering and manpower, design, installation, inspection and maintenance service for the firefighting system as well as being distributed to the general retail users, however, the quantity is not significant and the volume of order per transaction is not of high value. The ratio of distribution through this channel is calculated at 41.84% and 31.85% of total revenue from sales and service in 2022 and 2023 respectively.

2) Conditions of Competition

2.1) Safety and Comfortable Business Unit

Marketing

The market condition of the fire protection and safety system business in 2023 has grown approximately 10% more than last year due to the COVID-19 situation that has begun to decrease and returning to normal. Including projects which has slowed down during COVID-19, construction has begun more to accommodate customer groups that are more likely to purchase i.e. the Forestias project, One Bangkok, and the project to install fire protection systems at 3 sub- power plants, causing the department to increased sales from the previous year. However, in 2024 HARN still has products waiting to be delivered to the project in large numbers and are looking for new products to sell in addition to the existing customer base. The additional products coming to market will focus on new innovative products that responds to the work of contractors in projects, so they can work faster and easier with fewer workers. To answer the problem of the shortage of skilled labor and wages, which are likely to increase. By adding products to the air conditioning system, namely the copper pipe product group with special features to be bent, and sanitary systems are PPR and PEX pipe product groups to help increase sales, etc. It is expected that the situation in 2024 will have sequential increases in sales. However, in 2024 it is expected that there will still be problems with

continuously increasing product prices. And the currency continues to fluctuate all the time, which may affect the cost of products. And managing the number of products in the warehouse that may have increased product volume from the fact that we have added such new products must still be given importance so that we can manage product costs to make more profits than last year.

Air Conditioning System and Fire Extinguisher Equipment

Overall in 2023, sales of both systems increased from 2022 by approximately 17%, due to last year's COVID-19 situation that returned to normal. This has resulted in the expansion of construction work in many different projects, especially the construction of condominiums and factories. As a result, the demand for fire extinguishing equipment has increased as well, and we have been able to increase sales in the new product section. There are some product groups whose sales have increased continuously every year, i.e. the product in the fire extinguishing system, the Flexible Sprinkler, whose sales have increased by up to 20% due to a labor shortage. Customers want faster installation work with fewer installers. As a result, the product is popular and sales have increased significantly. As for the overall market group in 2023, the majority of customers are still contractors for system work and most of the projects that occur. It will be condominiums, offices, and industrial factories, etc. The market trend at the end of 2023 is still receiving product orders continuously and the volume has increased more than last year. Therefore, it is a good sign that the situation in 2024 will be better than in 2023 and HARN has introduced new products. Always entering the market, i.e. the Flexible Sprinkler, which helps customers who are contractors install work faster and save on labor costs, including in 2024 we have a tendency to become a distributor of products in the PPR pipe section, which will allow us to have more products to sell and is an opportunity for us to expand into the sanitation market further.

Extinguisher System for Industrial Projects

The overall picture of 2023 has an increase in sales of approximately 17% compared to the previous year. This is because the projects have started installation work and took delivery of products from customers, i.e. the One Bangkok project and the 3 sub power plant project of the Electricity Generating Authority of Thailand. In 2023, the customer group with the most purchases is still the Contractor group. Which accounts for 80% of total product sales and products with the highest sales it is a Hygood brand product, which is a fire extinguishing gas product installed in various electrical rooms, including Data Center rooms, etc.

As for the trend in 2024, there will be increasing sales than in 2023 from the overall of receiving more product orders than last year and the amount of products waiting to be installed and delivered in 2024, which is expected to be realized. Income is approximately Baht 80 million in 2024 and there is a high chance of getting many more jobs from the auction. As a result, fire extinguishing system inspection services are likely to growth from the old customer base in 2023 and there will be more quotations waiting to be finalized in 2023, including a relatively high chance of getting the work. Most of the work is bidding for installing fire extinguishing systems for electrical substations of the Electricity Generating Authority of Thailand and follow up with new customers for services that will increase after the warranty period for the project that HARN has installed expired.

Extinguisher System for Petrochemical and Power Plant Projects

Overall in 2023, total sales decreased from 2022 by approximately 30% due to several projects. In this market group, there have been project delays due to the uncertain world situation. Increase in interest rates including the situation within the country As a result, construction decisions have been delayed during this situation. Overall, in 2024 this market is still slowing because it is a large project, which requires a high investment budget and a long project period, so investors continue to wait and monitor the situation.

In 2024, has backlog orders is approximately Baht 23 million. There are still large-scale projects waiting for a price summary, it is also expected, which HARN has a high chance to win the auction. The total work value is approximately Baht 70-100 million from the petrochemical industry, including improvements, additions and expansions of the power plant section of the additional fire suppression system in the next phase.

Competition

Importing and distributing fire extinguisher products

Has medium level of competition from existing competitors. This is because the products are concerned with safety; therefore, the equipment must be of good quality with certified international standards and reliable distributors. The core competitors of HARN are companies that distribute the products from overseas in which the numbers are not extremely high due to limited recognition of the brands at the global level. Also, most of the producers have the policy of dealing with only one distributor or appoint few representatives in order to prevent inside competitions between the distributors. However, there are about 4-5 direct competitors who import fire extinguisher products for the buildings and factories market. In some cases of the business operation, the competitors may become the trade partners in buying products from HARN as well. When considering the market share of HARN by comparing with the revenue of the 3 main competitors who hold approximately 80% of the market share, HARN owns about 25% of the market share. Our fire protection product sales presumably occupy 10% of total industrial market share of fire protection products in general.

Servicing contract projects, designing, supplying, installing and testing the fire extinguisher system

Has few competitors. This is because installing the fire extinguisher system requires specialized skills of design engineer. The main competitors are the group that distributes and contract the fire engineering projects. This business still has the potential to grow since the government had issued the stricter law to prevent fire including the renovation of buildings and factories in accordance with the Thailand Building Control Act B.E. 2535 (1992), resulting in higher demands for goods and services relating to the fire extinguisher system.

Importing and distributing products for sanitary and air conditioning system

In the past year, the competition remains fierce. However, due to the large market size and the large diversity of HARN products as well as product acceptance by customers, as well as there is an increase in the searches for products in the group of sanitary and air-conditioning system, therefore a continued growth is anticipated with greater distribution channels to the customers. HARN has the advantage of selling various products that are well known in the market and can reach both general customers and contractors equally.

The main competitors are companies that are the distributors of the products valve are installed air-conditioning systems with water 5 competitors, water control valve (PICV) 5 competitors, water pressure temperature devices 2 competitors, and VRF air-conditioning 2 competitors, when comparing the all revenue of the Safety and Comfortable business unit with 22 other competitors, accounted 3% of total market value.

2.2) Refrigeration Business Unit

Marketing

As for the refrigeration market in 2023, the overall competition in the cooling system business showed high competitions in terms of prices, product quality and the availability of the products for distribution. The best-selling products in the past year were condensing units and small refrigeration units, of which customers have confidence in the design and production by HARN, including HARN's accumulated experience in machine assembly that made production fast and error-free. The second-best selling products were evaporator products, which were sold to many customer groups, such as convenience stores, industrial plants, and cold storages. In today's refrigeration market, there is high competition from both domestic and international distributors, including the situation of raw material shortage and the fluctuation of the baht inevitably resulting in higher product costs. In addition, the tensions between Israel and Russian Hamas directly affect energy prices, causing producers to bear additional costs. As an overview of project work in 2023, there were ongoing projects related to distribution centers and food factories due to the situation of COVID-19

that continued to improve, which led to entrepreneurs resuming their operations according to their previous business expansion plans. The industries that drove the growth of refrigeration systems follow:

Frozen Food Industry

For Thailand, there are several groups of frozen food exported around the world, with main export products include frozen fresh fruits and vegetables, frozen seafood, and fresh and frozen chicken. In 2023, Thai fruit exports to China will play a role in the picture. Total exports from Thailand to China It accounts for 18.2% of all Thai product exports to China. Fresh durian is considered the fruit with the highest proportion of exports.

Kasikorn Research Center expects that in 2024 Thai fresh durian exports to China will be at 4,500 million USD, expanding 12%YoY, growing at a slower pace from a high base last year. This is a result of the volume and price growth slowing down. from the previous year even though Thailand still holds the majority of the market share But durian from competing countries has a greater share of the Chinese market. From such information The growth of Thai fruit exports to China continues to grow In response to investment in building cold storage rooms to freeze fruit exports, the number continues to increase. Especially in the southern zone that has investment from a group of Chinese investors and currently, a group of Thai investors that has increased interest in investing more by virtue of having their own land and have the ability to find productivity in their area.

The frozen food industry has continued to grow under the situation of the COVID-19 outbreak as a result of changing consumer behavior, with modern consumers focusing on convenience and speed, coupled with the work-at-home culture that has made the frozen food business grow steadily, and frozen food can be kept fresh for a long time. The frozen food business has attracted interest from both Thai and foreign investors, referring to information from the Ministry of Commerce that mentioned a significant increase in the registration of frozen food businesses in Thailand over the past 3 years.

In addition, the frozen ready-to-eat food industry is another industry that throughout the past COVID-19 situation has changed for the better due to changing lifestyles. Most of the frozen ready-to-eat foods are mainly produced for domestic distribution with a variety of distribution channels and easy access for consumers such as convenience stores that have a large number of branches in line with the continuous expansion of urban communities in Thailand.

Retailing business

As for the retail business in the category of discount stores and supermarkets in 2023, there has been an improvement. The supporting factors came from the government's economic stimulus, as well as the increase in agricultural income and the recovery of tourism sector from the opening up of the country, which lead to the recovery of the tourism sector, including the online distribution which brought good results for supermarkets and wholesale businesses of food and daily necessities. There were ongoing improvements to existing branches in order to make more efficient use of the available space, and the entrepreneurs continued to expand branches in large communities in order to serve consumers more comprehensively.

The overall image of Thai retail trade: in 2023 Began to recover gradually according to the opening of the country and the arrival of foreign tourists, and more spending by domestic tourists. However, it continued to be affected by inflation and household debt problems that resulted in a decrease in spending.

Discount store / Hypermarket: Over the past year, hypermarkets and discount stores that combine multiple product categories in one place have grown with store expansion across the country, and most target customers are middle-income or less. Price competition within the business remains intense as the products sold are similar to those sold in other retail outlets such as convenience stores and supermarkets. They also had to compete with retailers selling cheaper branded products to seize market share as consumers nowadays focus on buying cheaper products due to the economic slowdown.

Supermarket: It is a group whose target customers are middle to high-income customers, with strengths in quality and variety of products. In 2023, there has been steady growth due to the expansion of branches into various cities with high purchasing power, as well as further development in terms of online distribution channels.

Convenience store / Minimart: In 2023, it was still able to grow by focusing on the strategy of selling ready-to-eat food products and home delivery services, which helped boost some sales. At the same time, we also saw that large, branded hypermarket operators have opened smaller stores in the market to compete for market share in this group. This made the competition in this market continued to be more intense.

Competition

Importing and distributing products for refrigeration system

In 2023, the overall domestic market was still highly competitive in terms of product prices and speed of delivery. However, many distributors have increased the product price, but also imported lower-priced goods from China to add more options for the customers to be able to reduce the cost of building a cold room. In addition, the products related to IoT systems have also begun to be sold in order to create distinctive features and added value for each product brand because today's young entrepreneurs are more interested in controlling and communicating in the form of digital data. As a result, the cold storage industry has to adapt to the times, whether it is the introduction of wireless cold storage temperature and working status monitoring technology to meet the needs of this group of business owners. In past 2023, there were projects that started to resume, resulting in the delivery of goods in many large projects. There are also a number of big projects waiting to be delivered in 2024.

As for the competitive situation of the refrigeration business as a whole, it is still under pressure from many aspects whether it is from the cost of the main raw materials used in the production of refrigeration parts that have increased significantly recently, including copper pipes and steel, which are the main raw materials used in the production of parts of the cooling system, causing the cost of importing products to increase, and along with the shortage of production materials such as brass and electronic chips, caused significant delays in shipments. There is also the need to monitor the conflict situation in the Middle East that is starting to affect shipping by sea. Because of the cooling system business there are a number of products imported from Europe. As a result of this incident, shipping operators have canceled sailings through the Red Sea area. As a result, the cost of transporting goods has increased by approximately 30-40% and the transportation time has lengthened by 3-4 weeks. The impact will be monitored and evaluated further. However, in the sales of refrigeration systems, there were still advantages in terms of advanced stock preparation and the readiness for service in unusual circumstances to respond to customer needs quickly. Furthermore, in 2023, we were able to produce a large number of condensing units and compressor racks in the market and received satisfaction from customers in terms of quality and good after-sales service.

2.3) Digital Printing Business Unit

Marketing

The main target groups of HARN's digital printing products are industrial factories and end-users. Printing on packages is one of the crucial steps in manufacturing process of industrial plants, encompassing the printing of Date of manufacture / expiration or lot numbers or texts on products and packages before distribution. The target customers also include newly opened factories, factories with production line expansion, and factories needing to replace the existing system and products that have depreciated according to their useful life. HARN currently sells digital printing products to a broad variety of industries since there is demand for such products in all industry sectors. The industries that are major end-users of its products are food and

beverages, consumer products, construction, electrical appliances and electronics, etc. Hence, the trend of digital printing products relates closely to the private sector investment index and the industrial factory construction value, which could mirror the overall situation of all industries.

Competition

Has seen medium level of competition. This is because the customers emphasize more on good after sales services and the readiness of after sales staffs, inventories, and spare parts that the customers need to use regularly. Most of the goods sold are well known brand with high quality had been appointed to solely be the distributor. The revenue structure can be divided into 3 categories; 1) the revenue from selling the machines; 2) The revenue from selling supplies; and 3) Revenue from spare parts, services, and servicing contracts.

The main competitors are companies that are the distributors of the products from foreign countries which there are not many since the brands that are accepted worldwide are extremely limited. Therefore, the customers in the medium and large size factories will mainly choose the brands with the international standards. When comparing the revenue of the digital printing business top 10, representing a total sale of Baht 2,088.52 million, accounted 76.83% of total market value, the total sales of the other 25 sellers are Baht 629. 91 million, accounted 23.17%, Digital Printing System Business has increased the revenue 5.63% when comparing the total revenue of top 10 of increases 5.14%, and is among the top 3 in incite market with approximately 13.30% (Source: Department of Business Development, sales in 2022).

1.2.5 Procurement of Products or Services

HARN Most of the products sold by HARN, approximately 70%, are ordered from many producers from foreign counties, which most of them are producers of leading products related to firefighting system, sanitary system, air-conditioning system, refrigeration system and digital printing, global 3D printing, and the Internet of Things. HARN has a policy which focuses on selling quality products and with standards that match with the customers' requirements with procurement and selection procedure to obtain quality products, certified by various credible departments or institutions. In this regard, HARN aware importance of the safety and health of customers is one of the businesses operationally.

In ordering products to sell to the customers, HARN has an advance ordering plan in the appropriate quantity, taking into consideration the market trends, the customers' demands in each time period including the inventory quantity in order to prepare sufficient number of products for distribution, reducing the damage from opportunity loss due to lacking product in the inventory or the inability to source the products on time and enough to satisfy the customers' demands. At the same time, the inventory quantity must be controlled to an appropriate level not allowing the products to be left in the inventory for too long until causing to expire, or damage from depreciation according to period or the over useful life.

There are over 13,000 categories of products sold by HARN under over 60 famous brands. Within this number HARN owns 7 brands and 45 brands that HARN has been appointed as a distributor in Thailand for 5 producer's brands including 2 US producers' brands which are Potter Electric and Weiss, 3 German producers' brands which are KUBA DOD, ESK SCHULTZE and DOD defrost on demand, as well as producers from other countries which are DOMINO (UK), KORTHOF AH (Netherlands) and EDM (Japan). In this regard, HARN is the importer and distributor of each product category as follows;

Product group	Manufacturer	Brand country
1. Valves and firefighting equipment which includes piping system equipment, groove coupling, fire extinguish valve, automatic sprinkler, fire hose set, fire line, fire hose rack, portable fire extinguisher, chemicals, firefighting foam, firefighting foam equipment, automatic fire suppression system, smoke detection system, clean fire suppressant system, fire and smoke detection camera, etc.	POTTER ELECTRIC	USA.
	VICTAULIC	USA.
	MOYNE ROBERTS	Ireland
	BADGER	USA.
	GIACOMINI	Italy
	HYGOOD	United Kingdom
	5-ELEM	China
	NIBCO	USA.
	CHEMGUARD	USA.
	WAGNER	Germany
	SIEMENS	Germany
	SRI	Malaysia
2. Valves and sanitary system equipment which includes gate valve, butterfly valve, check valve, air vent, strainer, pipe and piping system equipment, pipe connector, pressure and temperature measuring devices, etc.	GKB	Taiwan
	RELIABLE	USA.
	WEISS	USA.
3. Balancing Valve and Valve for automatically adjusting water flow and temperature (PICV)	VICTAULIC	USA.
	HONEYWELL	USA.
4. Cooling equipment which includes copper pipe and copper pope connector, compressor lubricant, cooling agent, compressor, cooling coil, automatic defrost control equipment, energy saving equipment, pressure control device etc.	OVENTROP	Germany
	Kelvion	Germany
	DOD	Germany
	ESK SCHULTZE	Germany
	BITZER	Germany
	ABB	Finland
	DANFOSS	Denmark
	O&F	China
	ZEILABEGG	Germany
	EBM PAPST	Germany
	BVA	China
	Suniso	Belgium
	9 LIFE	Taiwan
	NARA	South Korea
	3Q	Thailand
	EVAPCO	USA.

Product group	Manufacturer	Brand country
5. Digital printing equipment for packaging system which includes expiry date printer package label printer, workpiece feeder for 3D printing and color sticker label printing including printing equipment and various types of consumables etc.	Domino	United Kingdom
	Korthofah	Netherlands
	EDM	Japan
	MSSC	USA.
	United RIB type	USA.
	ETEC	Germany
	Materialise	Belgium
	Yeacode	China

HARN selects a manufacturer in order for HARN selects a contract manufacturer to produce HARN branded products by taking into consideration the capability of the manufacturer and the capability of the factory. For each of the brand, HARN chooses to use the same producer who has been a business partner over an extended period, which is a production contract from time-to-time, no long-term production contract is made. In the past, the distribution ratio of products under HARN own brand is considered small in comparison to the imported products from foreign countries. The sales ratio in 2022 and 2023 is calculated at 4.64% and 3.68% of the total revenue.

In this regard, in 2022 and 2023, HARN did not receive order from any one of the manufacturers exceeding 30% of the total order value.

Quality and standard of the products

HARN emphasizes on the quality and the standard of the distributed products so that the customers can be confident in the quality and the safety of the products that follows the terms and conditions agreed upon with HARN. The products sold by HARN are mostly certified by the UL (Underwriters Laboratories) and/or FM (Factory Mutual) and/or BS (British Standard) and/or TIS (Thai Industrial Standards) and/or EN (European Standard) and/or Vds Standard. As for HARN's OEM, these are produced under BS or ASTM International, including all aspects of HARN's operation is certified by the ISO 9001:2015.

- Note :
- Underwriters Laboratories (UL), safety standards by the Underwriters' Laboratories Inc. (UL), non-profit independent organization from the USA. Responsible in testing and prepares the safety standards and safety insurance of the products.
 - Factory Mutual (FM), responsible in testing protective and fire extinguisher equipment of the insurance group in the USA.
 - British Standard (BS), safety standards by the British Standard Institution (BSI)
 - Thai Industrial Standards (TIS), industrial standards, products guaranteed by the Thai Industrial Standard Institute.
 - VdS is an independent institution that tests fire prevention and extinguishing equipment That guarantees safety And reliability in the field of fire protection and safety Germany

Products Insurance

HARN ensures the damages or defectives of products following the insurance conditions of the products that HARN distributes or installs for the customers for 6 months to 1 year, for the machines and the spare parts, respectively. The products of HARN had been insured already by the suppliers for similar time.

For project sales, after completion of installation work, HARN ensures the installed products under the conditions for 1 year where the suppliers also ensure the products to HARN for 1 year as well and may consider purchasing additional warranty from the seller in case the customer wants a longer warranty.

Processes of storing products in warehouses and transportation products

HARN has 3 warehouses: as follow;



The main warehouse is located at 888/14-16 Moo.21, Bang Phli Yai, Bang Phli, Samut Prakan 10540. The rental area covers 6,374.23 square meters which HARN owns the ownership to store valve products and other products in Fire protection system, Air-Conditioning system, Sanitary system, Refrigeration system and Digital printing system. This place is also used to assembly equipment's on a made to order basic.



The 2nd warehouse is located at 509, Soi Soonvijai 4, Bang Kapi, Huay Kwang, Bangkok 10310. Is rented from a person related with HARN to store products, assembly and maintenance of printers and equipment in digital printing system. This place is also used to assembly equipment's on a made to order basic.



The 3rd warehouse is located at 38/43, Moo 4, Lam Luk Ka Road, Lam Luk Ka, Lam Luk Ka, Pathum Thani 12150. This place covers 80 square meters and is rented from an outsider who provides the warehouse service which is not involved with HARN. It is used to keep hazardous chemicals that purchased from manufacturer and wait to distribute to customer or use to install the fire protection system for customer.

Processes of storing products in warehouses

Warehouse staff prepare space to store and a bar code product as details receives from a purchasing staff to check correctness and make an acknowledgement receipt. Which warehouse staff will inspect product type, quality, quantity, bar code, and acknowledgement receipt to correctness. Then, will store products in warehouse, placing products came first outside and products came later inside for convenience in next distribution and control quality of product before reaches customer. In case of incorrect purchasing and product defect/ damage, the warehouse staff will report to the purchasing division in order to examine as well as inform manufactures, and/or the insurance.

Processes of transportation products

Delivery staff record a picking list and makes a delivery control note to the warehouse staff for check name of customers, product quantity, delivery place, and to plan a logistic route, in order the sales division will have data to inform customer an appointment about the estimated delivery time. Also, packing staff to collect documents related for all delivery to transportation providers who contracted by HARN for check type, detail, and total of products delivery, then, sign on the delivery control note as evidence. After that, deliver to accord to route specified, In case of emergency delivery or appointment for advanced shipping, the packing staff will receive a delivery note from salesperson and coordinate with the to transportation providers who contracted by HARN.

HARN distributes products from warehouses to customers (shipping cost included in product price) by HARN trucks and other delivery trucks hired from the transportation operators outside who are not involved with HARN. Now, operators are selected and registered as the approved vendor list (AVL) by our HARN. We also have insurance for products kept at warehouses to prevent damage or accident during storing and operating in case of fire, lightning strikes, earthquake, storm, flood, and other accidents in warehouses. Now, the insurance covers assets at the Head Office and products at warehouses. As of December 31, 2023 our HARN have insurance on product shipping domestically for high value purchasing to prevent loss or damage from accident, during lifting product to the delivery truck and transporting on truck. HARN is an only beneficiary and from 2012 until present we never claim damage from a serious accident except for some minor accidents from moving products at warehouses, costing less than Baht 10,000 in each time.

Note : HARN's will determine a sum assured in each year according to asset values from the latest financial budget before having insurance and review the increase/decrease of insurance amount as appropriate.

1.2.6 Undelivered Project

As of December 31, 2023, there were backlog order total about Baht 356.57 million (excluding subsidiaries), comprising the sale of fire protection products and installation of fire extinguishing system including air-condition and sanitary products total about Baht 280 million, Refrigeration products total about Baht 44.08 million and Digital Printing products total about Baht 32.49 million. Purchase order have been awarded by customers and wait to be delivered in 2024.

1.3 Shareholding Structure of HARN

HARN operations with an emphasis on value added to its businesses as well as creating innovation, HARN has mission maximize our customer satisfaction, maximize potential employee, make a good investment return to shareholders, make grow our business in a sustainable, create long term values for stakeholders with taking care of the environment to be strong, has a clear and transparent shareholding structure and there is no pyramid shareholding structure in the group of HARN Therefore does not cause a conflict of interest to any party the following structure illustrates the integration of business operations: as follow;

1.3.1 Business Structure of HARN and Subsidiary





HARN collaborated with Aiyarafun Group by a joint venture agreement signing between Mr. Prasertsak Detudom and Mr. Satit Wanitchaikit to operate a business to provide intelligent building and IoT system development services for products and solutions. Computer program development and related services, under the name Aiyaraharn Co., Ltd (“subsidiary”) address 559 Soi soonvijai 4, Rama 9 Road, Bangkok, Huaykwang, Bangkok 10310 with registered capital at Baht 2,000,000. The shares that HARN holds 65% of the subsidiary’s shares of the registered capital on June 24, 2020.

1.3.2 Parties with Conflict of Interest

- None -

1.3.3 Relations with Major Shareholders’ Business Group

HARN has mission make a good investment return to shareholders, make grow our business in a sustainable, create long term values for stakeholders, under the supervision of the guidelines of the Stock Exchange of Thailand (SET) and the Office of the Securities and Exchange Commission (SEC), including the provisions of the Public Limited Companies Act B.E. 2535 (including those amended), has a clear and transparent shareholding structure without cross-holding with major shareholders. Therefore, does not cause a conflict of interest to any party.

1.3.4 Shareholders

HARN had shareholding structure as of December 31, 2023, the record date for the year as follows:

Shareholders	No. of Shareholders	No. of shares held	%	Legal Entity			Individual person		
				shareholders	shares	%	shareholders	shares	%
Thai shareholders	3,562	510,581,225	87.35	6	3,274,450	0.56	3,556	507,306,775	86.79
Foreign shareholders	3	73,918,775	12.65	1	73,316,475	12.55	2	602,300	0.10
Total	3,565	584,500,000	100.00	7	76,590,925	13.11	3,558	507,909,075	86.89

Top 10 shareholders of HARN as of December 31, 2023 are as follows: (There are 166,437,733 minor shareholders representing 28.475% of the total shares)

Names		Shares	% Share
1.	Mr. Wirat Sukchai	89,006,630	15.228
2.	Mrs. Sirima Iamsakulrat	81,884,151	14.009
3.	Nice Noble Limited	73,316,475	12.543
4.	Mr. Jain Charnnarong	68,953,030	11.797
5.	Miss Nopporn Charnnarong	26,307,444	4.501
6.	Mr. Thammanoon Tripetchr	23,260,187	3.897
7.	Mr. Chaiwat Taepaisitpong	15,920,000	2.724
8.	Miss Panatda Thongliam	14,832,149	2.538
9.	Mrs. Nopparat Sukchai	13,000,000	2.224
10.	Mr. Pracha Phromphonchai	11,582,201	1.982
Total top 10 shareholders		418,062,267	71.525

Note : • Number 3 are nominee accounts, exercise no influence over HARN's management policy formulation, including director nomination.
• Number 1, 2, 4 and 6 with significant influence on the establishment of HARN's policy and strategy, but are ineligible for voting at shareholders' meetings in any agenda has conflict of interest, for other shareholders no significant influence of HARN's.

1.4 Registered and Paid-up Capital

As of December 31, 2023, HARN's registered share capital was of Baht 292,250,000, comprising of 584,500,000 common shares at a par value of Baht 0.50 per share. Paid-up capital was Baht 292,250,000 in paid-up capital, or 584,500,000 common shares. Among them, there are no other shares with different terms or rights from common shares, and there are no HARN's shares or convertible securities as underlying securities for issuing mutual and funds for foreign investors.

1.5 Issuance of Other Securities

As of December 31, 2023, HARN's does not have convertible securities, and there are no debt securities.

1.6 Dividend Policy

HARN's Policy

HARN's dividend payout policy is to pay at least 40% of the separate net profit after deductions of all categories of reserves as specified in applicable laws, considering of the consolidated financial statements. Each year, the dividend payments are subjected cash flows and investment plans and other necessities and factors the Board of Directors (the Board) deems appropriate. The Board may consider paying the annual dividend with approval from the Annual General Meeting of Shareholders (AGM), except to the payment of interim dividend, which the Board has the authority to approve periodically when HARN's profit deems appropriate. The interim dividend payment shall be reported at the following AGM.

Dividend Payment	2023 ^{1/}	2022	2021	2020
Interim dividend payment (Baht per share)	-	-	-	-
Annual dividend payment (Baht per share)	0.15	0.13	0.10	0.13
Stock dividend (Baht per share)	-	-	-	-
Earnings per share (Baht) ^{2/}	0.20	0.15	0.12	0.17
Dividend payout ratio (%) ^{2/}	75.00	86.67	83.33	76.47
Par Value (Baht per share)	0.50	0.50	0.50	0.50
Outstanding ordinary shares (Share)	584,500,000	584,500,000	584,500,000	584,500,000

Note : Ordinary person shareholders may request a tax credit at rate of 20/80 of the dividend payment pursuant to the guidelines set forth in Section 47bis of the Revenue Code.

^{1/} The 2023 dividend payment of Baht 0.15 per share paid being submitted to approval at the 2024 Annual General Meeting of shareholders.

^{2/} Referring to consolidated financial statement of Harn Engineering Solutions Pcl.

Subsidiary's Policy

The Dividend Policy for Subsidiaries of HARN shall be considered by the Board of each subsidiary, and later proposed to each subsidiary's AGM for approval each year. Consideration shall be made on investment plans and other requirements, such as adequacy of cash flow of each company after deducting reserve funds in compliance with the law.

2. Risk Management

2.1 Risk Management Policy and Plans

Risk Management Policy

Recognizing the value of risk management under changing circumstances that may affect businesses due to internal and external factors, HARN relentlessly complied with the principles and approach of COSO, an international standard on risk management. Regards risk management as a critical component of all its business processes that must be comprehensively connected, so it has risk management policy for everyone to observe. The Risk Management Committee were thus appointed to steer overall risk management for maximum effectiveness.

Risk Management

Corporate risks are systematically managed through various risk management committees to give risk management plans effectiveness and efficiency in line with corporate goals and strategies. Operational risks fall under the supervision of executives responsible for managing and controlling risks to manageable levels and this has been spelled out in the job descriptions of all units.

However, HARN has investigated and applied various risk management tools, including adopted Risk & Control Self-Assessment (RCSA) to help analyze the risk factors and prioritized to assess the level of impact of the major risks and Key Risk Indicators (KRI), to indicate the impact on operating results in the form of the existing control level, as well to define measures, prevent and monitor. In addition, it monitors key changes in external factors and emerging risks to develop proactive risk management measures before such risks harm business.

HARN cultivates risk management awareness among all its employees along with nurturing risk management ambiance and culture, focusing on due resource allocation and provision of assorted supports for continuous improvement of corporate risk management efficiency, a risk management policy has been published on a website accessible to all, along with risk management training courses, as well as an annual review opinion and understanding of corporate risk management.

2.2 Risk Factors Facing HARN's Businesses

2.2.1 Risks Facing Businesses

HARN analyzes internal and external risks that affect business, various trends economic, social, political, technological, industrial, competitor, including important goals and strategies of the organization and others to arrive at corporate risk factors, grouped as follows:

1) Risk from Loss of Distributorship Status

HARN is a distributor of valves and fire extinguishing system equipment, air-conditioning system and sanitation system, refrigeration system, and digital printing systems including 3D printing systems and Internet of Things systems, containing various products. HARN is a world-renowned products distributor, and the top three brands have sales accounting for 44% and 52% of the total sales revenue in 2022 and 2023 respectively. Therefore, if HARN loses its position as a distributor of major brand products, it may adversely affect HARN's income.

Being appointed as a brand distributor is an important factor in HARN's business. As a distributor of two partners has the characteristics of established representative age and no representative age limit. However, for most of the brands distributed by HARN, it has not yet officially entered into distributorship contract with the brand owners. If the company is losing the rights to sell these brands, it may cause significant impacts on the total sales of the company under whatever circumstances, for example, trade partner entering joint venture with another company or trade partner discontinuing business, etc. Since 2011, HARN's brands had never been revoked since being authorized as the distributor. Nonetheless, over more than 60 years, the company had good relationships with suppliers, customers and adheres to ethical trading conditions. Therefore, the Company has been trusted with the manufacturing that owns the brand and has been appointed as distributor.

HARN has distribution coverage of over 60 brands, as well as a large customer base of over 5,400 customers, with the image of professional distributor of the complete engineering products and rich business experience, as well as developed and improved its distribution channels to cover changing target customer groups. HARN is confident that if it loses distribution authorization of any brand, it will be able to secure alternative brand to satisfy the market demand. Furthermore, HARN also has a policy to reduce the risks and the damage arising from the loss in becoming a distributor, by selecting high-quality goods and goods, new technologies constantly emerging, and also the development of brands under HARN trademark in some products to meet the needs of customers.

As can see, HARN's sales have grown in an orderly manner, coupled with Hahn's efficient distribution channels and strong sales team. As a distributor, products can create sustained sales growth, including the application of IoT technology to the company's products. Become a distributor that meets customer needs and continuously create added value for products. Believe that the brand owner will continue to designate HARN as the distributor. Therefore, it is classified as an organizational level risk and evaluated to be controlled at a satisfactory level.

2) Risk from Brand Owners Implementing Marketing by Themselves

If a foreign brand owner intends to enter the Thai market without going through HARN, there may be the risk of losing the agency right of the brand and the risk of competing with such brand owner companies.

However, HARN firmly believes that this kind of risk is unlikely, because HARN has won the trust of the owner brand company to create good sales in Thailand. In addition, the owner of the brand must consider the value of investing in and selling the product itself. In addition, the distribution of products in the construction engineering system for fire protection system, air-conditioning system and sanitary system, refrigeration system, Digital Printing system and biological 3D printing, must be able to offer a broad variety and comprehensive solutions, can fully meet satisfaction customers, due to customers will consider the convenience of ordering goods from dealers who have the required goods. HARN, as a multi-brand dealer, has a team proficient in goods, maintains good relations with customers for a long time, and has a strong customer base in many industries, which can help reduce the risk of sales decline when any brand owner enters the Thai market. Over the past years, some brand owners from abroad assigned their subsidiaries to directly operate on their behalf, but they failed, so they have switched back to the original distribution method through distributors, it is therefore classified as assessment the risk control at a satisfactory level.

3) Regulation Risks

Changes in the government's policies focusing on economic growth in parallel with development of society, communities, and the environment do not affect current businesses, however HARN has therefore monitored new investigated laws and regulations, changes in government policies, e.g. laws on trade competition and the Public Procurement and Supplies Management Act, laws concerning public-sector financial discipline, laws on anti-corruption, Personal Data Protection Act (PDPA), laws on cybersecurity, and laws whose interpretation is unclear, causing a discrepancy in compliance as well as its HARN image and reputation.

To ensure that HARN's operation complies with the laws, regulations, announcements, rules, and the public sector's directives that bind businesses to be enforced in the future, include operation context as well as changes. HARN has determined the acceptable risk level of the organization, communication with management and employee to raise awareness of the workplace rules, as well as set goals to monitor and prevent risks of violating laws and regulations related to business operations. Operate in line with the corporate governance code and adequate internal control by performance reports are to the Risk Management Committee.

4) Business Disruption Risks

The management and control of safety risks for its operations by setting long-term goals to control incidents that cause losses and affect lives, property, and the environment. Targets for accidents that cause injuries to employees and contractors until work stoppage must be zero. Defined work standards equivalent to international standards and creating a safety culture for employees and contractors through imparting knowledge and activities to raise awareness of safety are fundamental to the organization-wide and continuous improvement of operations.

Domestic and international operations are likely to be affected by operations interruption from human errors, catastrophes, threats of political instability, together with terrorist activities, epidemics. Therefore, values Process Safety by focusing on systematically managing and controlling operating risks through the introduction of engineering technology and sophisticated international standards, to lower the likelihood and impacts of such threats. HARN has safety, health, and environmental management standard and the business continuity management system standard to prevent disruption and prevent value-adding activities under business chain from being disrupted. In addition, HARN also review, improve and develops connection business management with human resource preparation plans, work from anywhere, and information system preparedness plan to ensure a practical connection between business units.

Personnel Health and Safety, had regular provision of news and information along with easy access and continuously monitoring the number of infected people, including people at risk, continuously announcing measures and guidelines from relevant government agencies to determine measures and guidelines to prevent and reduce the risk of infection in HARN's work areas.

Risk control results in 2023 are at a controllable level without deaths or accidents from operations, and not affected by threats that significantly affect HARN's costs.

5) Manpower and Competency Capacity Risks are Insufficient for Business Growth

HARN had the introduction of technology and new innovations to drive business operations. If unable to groom an adequate supply of skillful and experienced personnel in time, this could harm its businesses and long-term goal achievement. Therefore, HARN has adjusted staff recruitment and development to be in line with the vision, strategy, and direction of the organization and align with the New Normal. With human resources department is responsible for developing the potential of employees with competency through various training courses, including employee's competency development of each business to ensure the provides training and in-depth skills of each business. In addition, has created learning media, increased

communication channels and build relationships within the organization to address all age groups' needs, modified the work for more flexibility, including increasing welfare schemes' diversity to meet employees' needs while supporting compliance with the human rights in the workplace.

In addition, HARN has laid down a structure supporting work and allocated personnel required to meet the needs of each business unit. At the same time, personnel management proceeds through the mechanism of career path management. Each career path features a manpower review where key positions are identified along with individual development plans to develop specialized skills for each career path as well as leadership development and promotion of overall learning. These moves ensure that HARN will constantly command an adequate supply of quality executives and employees.

In 2023, the results from the survey of employee engagement, happiness, and satisfaction with work had an average of 81.26%, an increase of 0.72% compared to 2022 with an average of 80.54%. However, HARN is aware of the importance of improving the organization's overall to be more consistent with the demands of employees.

The employee turnover rate in 2023 had an average of 12.93%, which was achieved to the target of no more than 14% per year and decreased by 3% when compared to 2022, which had an employee turnover rate of 13.33%, with the rate of recruiting new employees for vacant positions in 2023 having an average of 13.26%, lower than the target of not less than 18% and decreasing 17% when compared to 2022, with a recruitment rate of 19.69%. However, the current number of employees to the require workforce is 94.50%, which is still at a controllable risk level. HARN is committed to creating a happy, enthusiastic, innovative working environment, and continuous development, as well as reviewing current qualifications and compensation structures, compare with compensation in the labor market at the same level annually.

6) Personal Data Protection Act (PDPA)

Personal data is a risk that must be properly managed as it may fall into the wrong hands. Failure to safeguard personal data also negatively affects the business credibility. HARN recognizes the importance of safeguarding personal data of our employees, customers and stakeholders, which have been collected, used, disclosed, and transferred.

HARN's personal data protection policy aims at enhancing the data security standard as so to comply with the Personal Data Protection Act (PDPA), e.g. establishing a personal information working group, and setting up a cookie and consent management database, training and communicate personnel within the organization, regularly check whether the operation complies with the above policies, etc.

7) Volatility Exchange Rate Risk

Fluctuations in the exchange rate, directly and indirectly, affect the costs of products. As the prices of fire protection system products, air-conditioning and sanitation system products, refrigeration system products, digital printing system products, and biological 3D printing system, refer to the prices of foreign manufacturers, However, the fluctuation of exchange rate will affect HARN's gross profit to some extent, Tender offer and payment for products are primarily denominated in US dollar, Pound Sterling and Euro currency, while most products are almost entirely for local distribution in Thai baht.

However, its import volume in 2022 and 2023 made up 76.24% and 76.19% of total volume of product procurement respectively. Tender offer and payment for products are primarily denominated in US dollar, Pound Sterling and Euro currency totally 99.17% and 99.21% of product procurement of foreign currency respectively.

To ease risks of baht fluctuation, HARN has the exchange rate management policy, including risk management requirements of maybe impact the financial condition as the follow:

- Require a pre-opened foreign exchange trading limit with financial institutions to prevent such risks. The contract value covers all existing of product procurement of foreign currency. HARN balances its purchasing forward foreign currencies its foreign-currency product procurement invoice in each ordering cycle, including while managing its foreign-currency deposits in USD, GBP, EUR, JPY and AUD for smart repayment from customer in foreign currencies.
- Also continuously monitor the trend in the change of the currency for evaluation and to manage the risks from the exchange rate closely.

In addition, if foreign exchange rates change to the level that leads to sharp increase in its cost, HARN will revise its selling prices based on market conditions with prior notice thereof to its customers. HARN also keeps a stock of products to accommodate product distribution in advance. Therefore, foreign exchange volatility does not have any significant impact on the revenues and costs of HARN.

To ease risks of foreign currency fluctuation, in 2022 and 2023, HARN has purchasing forward foreign currencies for smart repayment and commercial transactions total Baht 654.97 million and Baht 536.53 million, or 97.46% and 92.29% of its import volume. Furthermore, HARN managed its exchange rate risk by always keeping abreast of foreign exchange movement, resulting in only not much risk exposure as can be seen from its exchange risk management outcome. In 2022 and 2023 which recorded foreign exchange gains of Baht 0.11 million and Baht 2.97 million, respectively, it is therefore classified as assessment the risk control at a satisfactory level.

8) Risk from Impairment of Goodwill

HARN has record goodwill from a fair value of the consideration for the purchase and acceptance of entire business transfer of net assets of Chillmatch Co., Ltd. and subsidiary, which is higher than a fair value of Chillmatch Co., Ltd. and subsidiary as of the date of issuance of newly ordinary shares as a consideration for the said entire business transfer. In this respect, the executive of HARN will conduct an impairment test in every year and set aside an allowance for impairment loss (if any). HARN may therefore be exposed to risk in case the auditor considers that there is impairment of goodwill which then affect HARN's net profit and loss, equity and debt to equity ratio.

However, The executive conducted the impairment test of goodwill of the two business is Refrigeration Business and Digital Printing Business, by estimated the expected free cash flow in future or "Realizable Value" consisted of forecasted sales, cost of goods sold, selling and administrative expenses (depreciation and amortization excluded), income tax, capital budgeting necessary to operate and also the changes in relevant working capital such as accounts receivable, inventory and accounts payable. Those annual free cash flows were discounted into present value to determine the realizable value. The discount rate used is a pre-tax rate that reflects the specific risk of HARN as whole according to the Value in Use criteria.

The free cash flow valuation based on reasonably business assumptions and most likely possibility according to the current economic circumstances. As the result the realizable value is greater than the carrying amount of the fixed assets used in the operation of the business unit, goodwill and customer relationship it arrives from entire business transfer from Chillmatch Co., Ltd and Q II S Co., Ltd. Therefore, there is no indication of impairment of goodwill as of December 31, 2023. Also, complied the financial reporting standards was audit by the certified public accountant.

9) Risk from Corruption

HARN is committed to conducting business with honesty, transparency, and fairness in accordance with the principles of good corporate governance. Regardless of whether the business activities are within the country or overseas for the government agencies or private companies. HARN will comply with the relevant law and regulations, as well as never accept to all forms of corruption directly and indirectly.

Protect from the illegitimate activities i.e. products import, customs clearance, product offer, sales auction, and/or high value project installation services, as well as internal processes which may result from neglected operators, i.e. procurement, control of goods or assets, facilitation bribing, bribing or being asked for bribing from government officials, improper disbursement of expenses, or incorrect accounting, etc., Therefore proceed as follows:

- Prepare and announce the policies and guidelines for anti-corruption. In order to request cooperation from executives and employees throughout the organization to adhere to the same approaches and consistent with HARN's risk management process and communicating to internal and external stakeholders. As well as promoting the encouragement of trading partners to join in implementing anti-corruption measures.
- Established a Risk Management Committee, analyze and determine measures manage business risks, prevent and monitor risks of corruption both at the organization and operation levels a quarterly basis.
- Define the management structure, appropriate roles and responsibilities, provide the channels for complaints and whistleblowing in transparent and fair manner, as well as an adequate and appropriate internal control and audits from external independent auditors. Directly report to the Audit Committee for proposal to the Board of Directors quarterly., including have internal monitor to quality standards ISO 9001:2015 every year.
- Announced the intention as member Thai Private Sector Collective Action Against Corruption (CAC) since March 21, 2017, with a certified for member CAC on quarte 3/2018 and certified for CAC recertification first time on quarte 3/2018.

In 2023, there were no complaints or reports of corruption, not any violations of ethical and code of conduct. The results of corruption risk control are controllable.

10) Emerging Risk

10.1) Cybersecurity Threats Risks

Cybersecurity threats are rapidly on the rise these days, it will continuously impact the operation confidence, and image of the organization in several aspects, for example: data theft. being extorted for ransom, loss of image and reputation, as well as business disrupted.

HARN is realize the dangers of these mentioned threats. Therefore, the policies and information technology development plans have been prepared, plans and investments have been provided to develop information technology systems in compliance with international standards to prevent and decrease the risks from potential cyberthreats. AS well as continuous development of information technology personnel, provide adequate and suitable internal control and audits from external independent auditors for the operations. Moreover, provide the communication, notification, enhancing knowledge and understanding, as well as cultivating caution in all personnel in the organization. In addition, defining the permission to access information, suspend inappropriate use, setting up the network to set up a data backup center to support emergencies, and prepare the plan to respond with cyber incidents, Test the system and practice the information system recovery plan. In order to ensure the risks can be managed effectively and reduce potential impacts on the organization and business opportunities an and continually meet customers' and stakeholders' needs.

10.2) Climate Change Risks

Reflections from important issues in the meeting of member countries 28th United Nations Climate Change Conference (COP 28) from November 30 - December 12, 2023 in Dubai, United Arab Emirates. which focuses on accelerating the move to triple the renewable energy by 2030 to prevent the global average temperature from rising over 1.5 degrees Celsius and transition from the fossil fuels usage. Thailand is more aware of global warming and the government has improved its action plan to reduce greenhouse gases according to the participation goals schedule in 2030 to cover all economic sectors. In order to transition to carbon neutrality and Net Zero GHG Emission.

However, HARN's strategic business plan in regards to sustainability in the environmental dimension declaring the clear position and goal to aim for carbon neutrality by 2040 and Net Zero by 2050, which has been conveyed to executives and employees to adjust the operations to be consistent with HARN's goal.

HARN has defined the measures to control and decrease the impacts with plans covering current business operations and future investments to support climate change. With a plan to reduce greenhouse gas emissions directly and indirectly in Scope 1 and Scope 2, by increase the proportion of electrical energy and expand the proportion of corporate car to be electric cars. This will reduce the purchase of electrical energy and reduce the procurement of fossil fuels, as well as considering projects to achieve the long-term greenhouse gas emissions reduction goals, i.e. forestation, etc.

In addition, HARN has management procedures to maximize the resources, campaigns to encourage employee's engagement to reduce environmental problems. reduce the waste, waste segregation, and utilize the renewable resources etc.

2.2.2 Investment Risks for Shareholders

- None -

2.2.3 Risks Facing Investing in Foreign Securities

- None -

3. Driving Business for Sustainability

3.1 Sustainability Management Policy and Targets

3.1.1 Sustainability Management Policy

HARN and Subsidiaries are determined to operate and grow a sustainable business, covering all three dimensions: economy, society, and environment and support of the corporate vision “We are committed to be a leading provider of sustainable total engineering solutions that meet customer needs to improve quality of life, society, and environment” by integrate it into every process of business activities, under good governance principles and code of conduct, Considering the impacts on stakeholders along the value chain. The Sustainability Management Policy set to drive operations on sustainable development in line with for setting long-term operational goals. Following the policy’s content and performance effectiveness reviews, by the Board of Directors in 2023, it was confirmed that the policy continues to sustainability material topics thoroughly and communicated effectively throughout the organization.



3.1.2 Sustainability Management Targets

To ensure the business operation and good corporate governance, support of the corporate vision and business strategies as well as United Nations Sustainable Development Goals (UN SDGs) while responding to the global trend involving ESG issues, and reflect the aim of management important issues in sustainability in environmental, social and governance dimension, which have become more and more vital to stakeholders and business operations. HARN reviewed its sustainability management strategy implemented and identified a strategic plan and goals regarding ESG operations. Through one of the important goals of becoming carbon neutrality by the year 2040 and emission Net Zero by the year 2050, as detailed below:

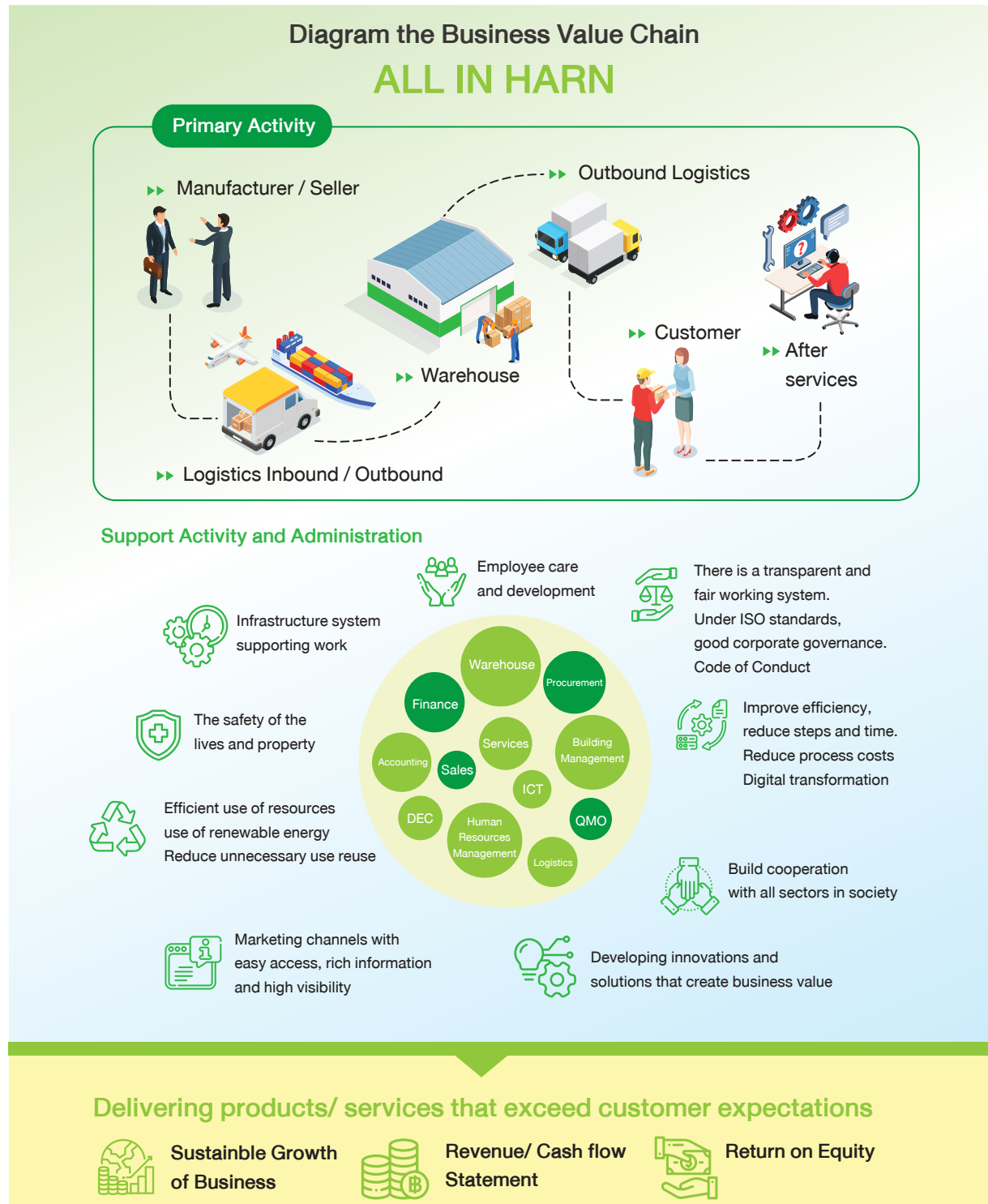
Sustainability Issues



3.2 Impact Management to Stakeholders in the Business Value Chain



3.2.1 Business Value Chain

HARN has taken into account the utmost importance of the stakeholder management throughout the business value chain, covering those impacted by HARN's business operation or have influences on the company from the past, present and into the future. Along with management with enterprise sustainability value chain, encompassing economic, social, environment, and human rights impact. The specifying its stakeholders involving in the business value chain, which starts from purchasing, transporting products into the warehouse, sale, until after-sales to evaluating impacts as shown in the diagram below:





3.2.2 Stakeholder Analysis from the Business Value Chain

To ensure our mission to balance all groups of stakeholders equally. HARN has analyzed the stakeholders in the business value chain. Into 7 main groups is executive and employee, customer, trade partners and/or creditors, competitor, Investor, public sector, community and regulatory, and society and environment, as well as determine the roles and responsibilities of internal organizational communication and information exchange to stakeholders continuously. To use in the analysis of stakeholders impacts, whether of operations, throughout value chain impacts on economic, social, environment and human rights aspect, as well identifying stakeholders', expectations, in order to identify work line's topics that align with organization, following guidelines:

Employee and Executives 	Promoting capability building professionally and ensuring that employees' well-being is level with other leading companies in order to strengthen employee engagement.	Channels	<ul style="list-style-type: none"> Conference, LINE Official, company announcement, intranet, email, Digital Signage, direct communication from CEO to employees via Town Hall once a year
		Expectation	<ul style="list-style-type: none"> Treated equally fair, there is an opportunity to grow and progress It is safe and hygienic Have remuneration and welfare suitable
		Response operation	<ul style="list-style-type: none"> Promote participation and two-way communication in organization Promote safety at work There are channels for complaints or suggestions
		Performance	<ul style="list-style-type: none"> Labor problems or complaints equal to 0% Salary and other benefits compare results with the labor market every year <ul style="list-style-type: none"> Central Division In standard Sales Service Group Above average market 2 employee accidents from work compared to 240 employees to 0.80% The number of employees with the criteria metric is 100% Working satisfaction is 81.52%
Customer 	Ensuring customers satisfaction and loyalty by delivering world-class quality products and services at fair prices.	Channels	<ul style="list-style-type: none"> Visits, LINE Official, FB, Website, Seminar
		Expectation	<ul style="list-style-type: none"> Deliver goods and services in accordance with the agreement. Employees have knowledge and understanding of products / services. Able to provide accurate helpful advice Obtaining on-time after-sales service Personal information security
		Response operation	<ul style="list-style-type: none"> Educate to customers/partners through the Knowledge Sharing Project and employee training
		Performance	<ul style="list-style-type: none"> Product / service complaints were 0.009% 108 employee sale and service training with average training of 20 hours Customer satisfaction is 93.88% 9 Knowledge Sharing Projects have been organized in Bangkok, its vicinity, and other provinces

Trade partners and/or creditors 	Conducting fair business practice with all trade partners while promoting trust, good relationship, and cooperation to expand business capability and increase efficiency in long-term business partnerships.	Channels	<ul style="list-style-type: none"> • Visits, websites, e-mails, conferences, seller evaluation
		Expectation	<ul style="list-style-type: none"> • Fair, follow the commercial terms • Have been aware of the problem and how to fix it honestly.
		Response operation	<ul style="list-style-type: none"> • Communicate news and a complete, timely trading policy • Visit and exchange information to improve collaboration
		Performance	<ul style="list-style-type: none"> • Vender evaluation twice a year • 13 field/assessment visits • Domestic Vender evaluation for the first half of the year and the second half of 2023 is 94.97% and 96.13% respectively. • Foreign Vender evaluation for the first half of the year and the second half of 2023 is 98.03% and 96.85% respectively.
Competitor 	Complied with the rules of fair competition and treated business competitors fairly under the Competition Law Framework. Refrained from dishonesty or improperly seeking confidential information on business competitors.	Channels	<ul style="list-style-type: none"> • Facebook, Website: www.harn.co.th
		Expectation	<ul style="list-style-type: none"> • Competition freely on the legal framework
		Response operation	<ul style="list-style-type: none"> • Not any seeking competitors' confidential information through dishonest
		Performance	<ul style="list-style-type: none"> • 1 complaint of infringement of competitor's property
Investor 	Operating profitable businesses that lead to sustainable growth while generating optimal returns.	Channels	<ul style="list-style-type: none"> • Shareholder meeting • Opportunity Day performance conference • Investor Relations Website • Company visit
		Expectation	<ul style="list-style-type: none"> • Sustainable business growth • Continuously receive returns • Business operations are transparent
		Response operation	<ul style="list-style-type: none"> • Increase growth channels and expand business to new potential markets • Have good corporate governance
		Performance	<ul style="list-style-type: none"> • Developing full range of solutions and services • Pay a dividend not less than 40% • CG Score "Excellent" level

Government sector and regulatory agencies 	Support public sector policy, ensuring business to support economic growth of countries.	Channels	<ul style="list-style-type: none"> Website www.harn.co.th Visiting the staff according to the notification Monthly report submission
		Expectation	<ul style="list-style-type: none"> Comply with all applicable laws, rules, regulations and regulations Operate business responsibly and with transparency
		Response operation	<ul style="list-style-type: none"> Review relevant laws, rules and regulations Repeat operation test regular
		Performance	<ul style="list-style-type: none"> There is no penalty for neglecting to comply with the law. Become an affiliate Thailand Private Sector Collective Action Coalition Anti-Corruption (CAC) No corruption, unethical, or unethical behavior. CG Score “Excellent” level
Community, Society and Environment 	Maintaining an excellent corporate standing in Thai society by exercising environmental stewardship of internationally standards and improving the quality of life for communities and societies.	Channels	<ul style="list-style-type: none"> Website: www.harn.co.th
		Expectation	<ul style="list-style-type: none"> Conduct business to reduce the impact on the communities and the environment
		Response operation	<ul style="list-style-type: none"> Promote natural resources protection activities/ campaigns and use resources wisely
		Performance	<ul style="list-style-type: none"> Use renewable energy with solar panels, accounting for 25% of the total electricity used in 2023.

3.3 Economic Sustainability Management (Smart & Lean)

3.3.1 Economic Policy and Practice

HARN aims to maintain the leader in services with the “Sustainable Solutions” of the engineering system by utilizing the knowledge in products selection and develop innovations which responds to the customers’ demands in order the quality and the safety of the consumers with high quality products, modern technologies, sales and services that are fast, accurate and worth the value. These are the tools which create customer’s satisfactions, enhance flexibility and increase the ability to compete, including securing the brand loyalty, gaining value in the long term to HARN. In addition, also seek more cost-effective and appropriate investment opportunities through the following strategies:



HARN is committed to sharing the engineering knowledge of HARN with its customers and the general public by posting contents on Facebook and HARN’s website to establish a with wider knowledge and deeper insights. However, HARN did a project called “Knowledge Sharing” to efficiently expand the customer base, enhance product awareness among customers, establish relationships with customers nationwide, foster credibility and brand loyalty, instill confidence in product quality and after-sales service, enhance knowledge and skills in the field of work and correctly maintaining products in accordance with engineering principles. Adhering to the principle that “providers always learn and grow,” in the year 2023, we conducted seminars/workshops on energy-saving innovations in refrigeration systems, date printing technology, and innovations in fire suppression and air conditioning systems, which were distributed to customers and interested parties in various regions, totaling 29 events. In the provinces of Nakhon Sawan, Samut Sakhon, Chonburi, Rayong, Ayutthaya, Songkhla, Ratchaburi, Chiang Mai, Chonburi, Surat Thani, Phuket, Nakhon Ratchasima, and Bangkok.

Additionally, HARN has been driving operations to achieve its sustainability goals as follows:

- 1) In the 2D Barcode for Consumer Safety and Protection project, HARN’s sales director joins in the working group and becomes a lecturer in printing technology. This is an operation by CP All Public Company Limited, along with CPRAM Company Limited, and the International Code Institute (GS1 Thailand), Federation of Thai Industries for a change on the printing of production and expiration dates on food packaging, from only numbers and letters to 2D Barcode together. When scanning the product for payment, the scanner reads information from the 2D barcode for payment and verifies the product’s expiration date at the same time. In case of an expired product, it notifies of such immediately. This is a campaign so called “2D barcode printing to prevent the sale of expired products at the point of sales”, to improve the quality of life of consumers while creating business opportunities.
- 2) The 3DMed research project creates an organ model with advanced 3D printing technology to help diagnose and plan effective treatment.
- 3) In the 3D for Medical Application, Siriraj Hospital made a memorandum of agreement 3D model files continuously in 2023 totaling 25 cases. In the past year, there have been a total of 4 cases. Rajavithi Hospital has a total of 56 cases, and last year there were a total of 13 cases, the more than 300 cases cumulative of cases

in 2023 which HARN is also a coordinator between the Faculty of Dentistry, Chulalongkorn University, King Mongkut's University of Technology Thonburi, and Materialise to organize a workshop on the application of Mimics program in creating 3D files and 3D models used diagnostic purposes and surgical planning for about 15 medical doctors, while being in the process of coordinating to arrange a workshop for Khon Kaen University. This can be another success as a leader and professional in bringing the 3D technology to the medical field. Moreover, HARN is a co-sponsor of the 3D printer research grant to print biomaterials for Professor Ratchathin Chanchaoen, which was approved by the National Research Council of Thailand, committed to success in the project of "Biomaterial print head with embedded measurement device for 3/4D printing".

- 4) Project to develop a prototype commercial refrigeration system in Thailand, SANYO S.M.I. (THAILAND) COMPANY LIMITED and King Mongkut's University of Technology North Bangkok signed an MOU in the year 2023 to collaborate academically and develop refrigeration systems. The collaboration also aimed to promote learning and enhance the capability to produce quality graduates according to international standards, both academically and professionally. Furthermore, it involved the exchange of knowledge in research and various related technologies in commercial refrigeration systems which aimed to benefit the development of teaching and learning at King Mongkut's University of Technology North Bangkok and to maximize benefits for the refrigeration industry sector in the country.

Academic Partner, government, and Standard regulatory agencies



3.3.2 Economic Performance

1) Targeted operations

HARN monitors progress towards its goals, plans, and specified indicators to review effectiveness and efficiency as outlined in the year 2023. Significant outcomes of the operations include:

- Retention of existing customer base with total sales of Baht 988.26 million compared to the target of Baht 996.39 million or a decrease of 0.82% due to economic conditions and relatively high price competition
- Business expansion with new products or sales channels for total sales of Baht 303.13 million compared to the target of Baht 345.61 million or a decrease of 12.29% because some groups of products are not yet accepted by the market.

However, HARN continues to strengthen relationships through continuous customer visits, organizing product promotions, and conducting events/seminars to provide knowledge and understanding to both existing and target customers. Furthermore, sales staff are consistently trained to understand product aspects thoroughly, enhancing their expertise to effectively convey accurate information to customers. Additionally, there is a focus on product development and seeking new products to increase sales opportunities.

2) Promote fair competition

In the year 2023 HARN not any advantage by seeking competitors' confidential information through dishonest or improper means, and do not defaming competitors using slander that lead to reduction or limitation of trade competition, including no disputes with trade competition occurred, with the guidelines as follow;

- Undertake the business activities in compliance with the law and competition regulations, and cooperate with the government authorities.

- Establish the procedure and measure preventing the involvement in or conspiracy with the behavior against fair competition.
- Ensure the employees be aware of fair competition and compliance with applicable competition law.
- Promote fair competition and activities, and support anti-monopoly and anti-dumping.
- Pay attention to social context and not take advantage of natural or social conditions, such as poverty, to unfairly create competitive advantages.

3) Promote social responsibility in value chain

In the year 2023 HARN not any violation of good corporate governance, code of conduct and compliance with relevant laws, rules and regulations, has safety and legal management standards, with the guidelines as follow;

- Define social and environmental measures in the policy and procedures for procurement and distribution.
- Encourage other relevant companies to accept and apply the similar policy in order to prevent unfair competition.
- Actively participate in elevating awareness of the principles and issues relating to CSR activities in which takes part.
- Promote fair treatment to one another throughout the value chain, both in terms of costs and benefits of implementing CSR activities; that is to say, improve the capability to achieve the CSR targets in all operations of the value chains including appropriate procurement such as creating guarantee for fair price with adequate lead delivery time and an established trade agreement.

4) Promote respect for assets rights

In the year 2023 HARN not any violation of intellectual property infringement by complying with the law related regulations, with the guidelines as follow;

- Appropriately check to ensure that is legally allowed to use and grant the right to use a certain property.
- Not participate in any activity violating other person's properties, for example, inappropriately using advantageous marketing position, producing fake products, and intellectual property infringement.
- Fairly pay for the use or acquisition of a certain property.

HARN allows for reporting of any possible offence or filing any complaint of any breach of law or ethics through chairman of Audit Committee. HARN has an established procedure for actions to be taken after getting the report of such issue. The reported matter shall be investigated and then submitted to the Board's.

In addition, HARN also sets a practice guideline for the directors, top executives and employees, including code of ethics and accountability for the stakeholders. The guideline is aimed at creating behavioral standard for the operation of such personnel on an integrity basis. It is also a guideline for the Board members, top executives, and employee's organization-wide to be aware and follow. In this regard, HARN has set a process to monitor such performance on a regular basis.

5) Customer Responsibility Management and Development

Responsibility to Consumers

HARN develops the responsibility to the consumers through the practical process and the staff activities in various departments, Operations under ISO 9001:2015 have been strictly executed along with continuous improvement of the management system as well as development of an efficient internal system for data collection and review, to minimize any possible error in data transmission and to facilitate data validation. The audit unit is responsible for driving the assessment of compliance with laws and regulations while developing some tools or systems that help enhance work efficiency. In 2023, HARN has no major legal deficiencies according to an audit by the ISO Certification Institute from SGS (Thailand) Co., Ltd. on November 27-28, 2023.

With realization of the importance of products that enhance quality of life and safety of consumers, HARN has paid great care and attention to all processes on an end-to-end basis until the goods reach the consumers according to policies and guidelines, as follows;



Confidentiality of Customer's Personal Data

HARN adheres to the importance of respecting the rights and committing to protect the personal data of customers which have been collected, stored, used, and revealed in presenting products and services to meet the needs as appropriate. HARN has announced its policies on privacy at the website to show transparency in its operations. The personal data protection officers (DPO) are responsible for taking care of customers' personal data. Those policies and guidelines are in accordance with the Personal Data Protection Act (PDPA) as follows:

- Personal data collected by HARN
- Objectives of personal data processing
- Disclosure of personal data
- Duration of personal data collection
- Rights of the owners of personal data
- Contact channels to HARN and personal data protection officers
- Review of policies on privacy

Customer Relationship Management Plan

HARN defined policy and action plan to strive is committed to strengthening customer satisfaction and confidence by delivering quality products based on their requirements along with honoring agreements and conditions made with customers on a fair, complete, prompt and factual basis, as well as foster a sustainable relationship between the customers and HARN through various programs. These programs included the regular customer visits, launched customer satisfaction survey continuously every year, set channel for receiving complaints related to products, services and solutions on HARN's website. In addition, service quality is monitored in order to improve complaints, improve service quality, Including, monitoring the progress in solving various problems and operational reports etc.

In 2023, the Quality System Management Department randomly inspects service quality, complaints, compliance with operational regulations twice a year, including sending surveys to customers to assess satisfaction with service quality, as well as notifying the said survey results and recommendations to relevant agencies to improve and carry out relationship enhancement activities, such as continuously visiting customers and immediately organizing support teams when customers encounter product issues, provide training for sales personnel to enhance their professional skills able to accurately and clearly communicate to customers, includes developing products and finding new products to meet customer needs. The overall average satisfaction survey results in 2023 increased compared to 2022, representing 0.22% and higher of 3.09% compare target set of 90%

Customers' Satisfaction	2023	2022	2021
Product (quality, variety of products)	97.67	91.82	88.72
Sale persons (product knowledge, services, problem solving)	93.84	93.19	92.11
Other services (management, providing information, contact channels with the company)	93.78	93.66	92.70
Overall average	93.09	92.89	91.18

3.4 Environmental Sustainability Management



3.4.1 Environmental Policy and Practice

HARN considering on all impacts on protecting the environment along the demand chains, emphasize on efficiently the use of resource and good resource management since selection of products selection which does not harm the natural resources and is environmental friendly, strictly following the laws and regulations instructed by governing bodies, reducing the wastes and leftovers from the operation, save energy in the work place, by setting the policy of occupational health, safety and environment under ISO 45001:2015. In order to have the management in term of safety, occupational health and environment as per guideline. HARN set the objectives in term of environment by managing, controlling the efficient use of resource, reducing the use of resource from the previous year. There was the review of roles and responsibility for the safety, occupational health and environment Committee so that the duties in accordance with the policy., also make the plans for the operation and activities in order to create the working environment with safety, as well as continuous campaigns to raise awareness and provide knowledge about the environment to employees. For example, providing safety in work training courses for employees, setting greenhouse gas emission reduction targets, and communicating through email, LINE official, intranet and digital signage for raise the awareness of sustainable energy saving of all employees. In addition, the company assigns the building management to monitor and manage the use of resource such as; measures using air conditioning, lighting, water supply, waste or waste, as well as doing the monthly performance report for the meeting of managers so that the performance can be improved for efficiency and effectiveness, and reduce impacts and maintain a good environment along with sustainable business growth.

3.4.2 Environmental Performance

In 2023, had reviewed the training manual used on occupational health, safety and environment, including the training for 25 new employees. The test results after the training show 95.6% of success with communicate via email, LINE Official, Intranet and digital signage to let all employees know importance of greenhouse gases, benefits of carbon footprint, the way organization to reduce greenhouse gas emissions and energy consumption, water consumption, waste/pollution management, including how to prevent dangers from PM2.5 dust and fires. Including how to use electricity safely when it rains. To create awareness of the dangers that can occur in the rainy season, etc.

training for new employees

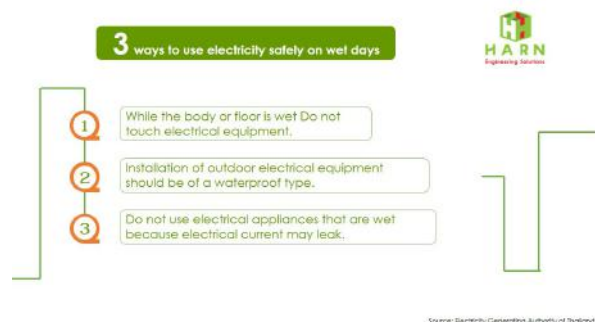
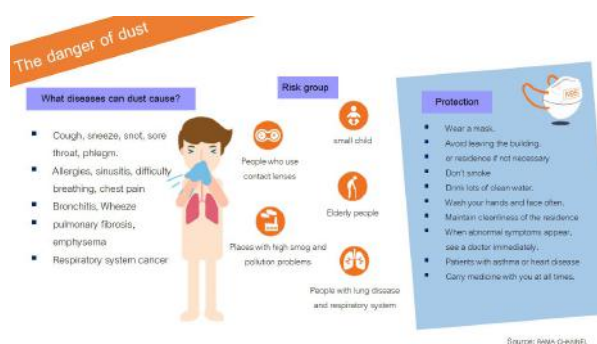


25 employees



The test results after the training show

95.6%



Climate Change Action

Currently, climate change is a very serious problem. Many countries worldwide have paid attention to reduce greenhouse gas emissions due to the environmental impacts. It is crucial to determine the direction for implementation in accordance with the framework of the United Nations Convention on Climate Change and the Paris Agreement. Thailand has committed to fully raising the level of problem solving with improved its action plan to reduce greenhouse gases according to the participation goals schedule in 2030 to cover all economic sectors. In order to transition to carbon neutrality and Net Zero GHG Emission.

HARN is aware of the impact from greenhouse gas leading to have the global warming and the change of world's weather with declaring the clear position and goal to aim for carbon neutrality by 2040 and Net Zero by 2050, established the Carbon Footprint Management Working Group in 2022, with Dr. Jain Charnnarong, directors and Mr. Thammanoon Tripetchr, CEO act to set clear goals, control and review of the organization's greenhouse gas emissions. Focusing on management energy, water resources, waste and/or pollution reduction, including greenhouse gas emission management from business operations. The past year, HARN conducted and evaluation the risks and creates a plan to review the target value of greenhouse gas emission control, the installation plan of a solar power generation system in the car park area, and promote use of business electric vehicles to reduce impacts on the environment and greenhouse gas emissions in the value chain with a tangible way, including the follow-up on the operating performance systematically.



Declaring the clear position and goal to aim for carbon neutrality by 2040



Net Zero by 2050



Established the Carbon Footprint Management Working Group

Greenhouse gas emission management from business operations

1) Energy Management

HARN is operated in the service industry, therefore, it was found that the activity with the highest greenhouse gas content is the use of electricity and fuel from corporate vehicles. Therefore, made plan to reduce energy consumption, and set the goal of reducing energy consumption of 20% compared with the base year 2022. However, HARN there is a system for data collection of energy consumption to analyze and plan on energy consumption control, while promoting indirect energy savings, with the installation of 330 solar panels size of 127 kW and selected the smart PoE Lighting system to control the lighting system from the lights inside the building by using internet lines instead of electric wires. The system automatically dims the light from the lamp when there is enough sunlight from outside. This can save electric energy and expenses, including the reduction of environmental impacts.



Reduce energy consumption, and set the goal of reducing energy consumption of 20% compared with the base year 2022



Energy consumption control, while promoting indirect energy savings, with the installation of 330 solar panels size of 127 kW

Also, HARN chose to learn and establish a building and energy management system by its internal team, together with Aiyaraharn Co., Ltd. (Subsidiary) with Internet of Things (IoT) know-how, we aim for energy to be less than 100kWh/m²/year, which is considered lower than in Bangkok office building in 2023. Statistics found in 2023, HARN had electricity consumption in HARN's head office building of 60.9 kWh/m²/year, which was 40% lower than the design target. It was a building with very low energy per square meter, approaching a zero-energy building (ZEB) of 57 kWh/m²/year. This kind of building would typically have the capability to generate sufficient energy to meet the needs during certain periods of the day. Moreover, HARN's building has been awarded the DGNB (Green Building) standard, Gold Certificate level by the German-Thai Chamber of Commerce and DGNB GmbH.

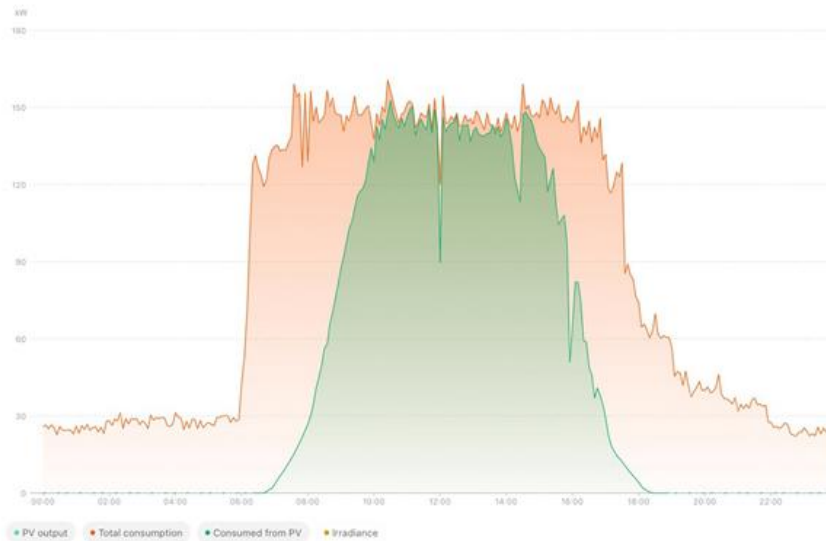
At the end of the year 2023, HARN installed an additional 177 kW solar panel. In total, it can generate more electricity from renewable sources by approximately 20%. In January 2024, energy consumption was observed to have decreased to an average of 54 kWh/m²/year. It can be considered that HARN's office buildings have begun to qualify as buildings type ZEB. From the graph, it is evident that HARN can sufficiently produce electricity from solar energy to meet demand between approximately 10:00 a.m. and 3:00 p.m.



Installed an additional
177 kw
solar panel

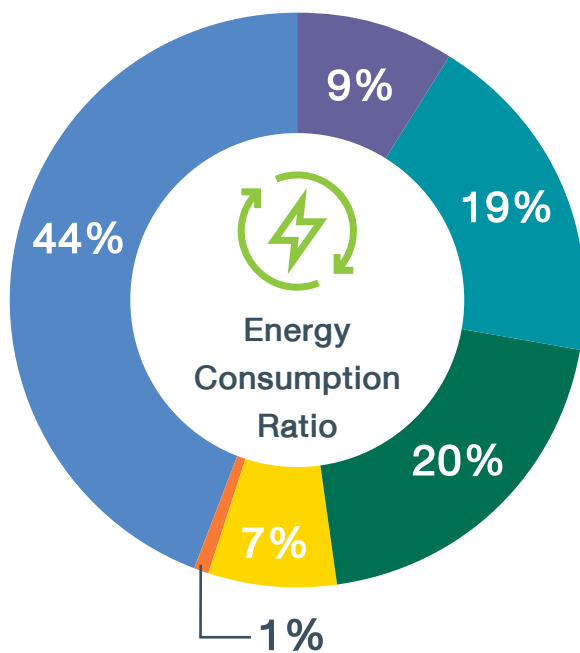


Generate more electricity from
renewable sources by approximately
20%



The amount of electricity generated from sunlight (green) with the total electricity consumed (orange) each day. The difference is the electricity that needs to be purchased from the Metropolitan Electricity Authority (MEA). It is noticeable that during the period between 10:00 a.m. and 3:00 p.m. HARN has capability to generate electricity equal to the demand.

The data obtained from the Building Management System developed by HARN and Aiyaraharn Company Limited (“Subsidiary”), it found the proportion of energy consumption in the HARN office the entire year of 2023 is as follows:



Lighting
1,662,420 kwh



Outlets
3,337,720 kwh



Air
3,459,844 kwh



Data Center
1,170,053 kwh



Lift
204,741 kwh



Chiller
7,781,499 kwh

It can be seen that chillers and AHU & A/C are the systems that consume energy accounting for 64% of the total energy consumption, so modification of the two systems is required to reduce energy consumption. HARN aims to optimize the maintenance these two systems for always maximum efficiency.

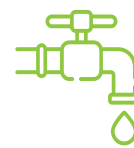
For the lighting system, typical buildings consume 25% of the total energy consumption. It can be seen that HARN's office building has only 9% of the energy consumption because HARN uses a PoE lighting system that dims or turns off the lamps according to the intensity of the light and only when they are used. Additionally, the building harnesses natural light to create brightness without introducing heat (Light Harvest).

What HARN has built in this office building will become a corporate culture of energy-saving consciousness, and no matter where employees are located, they will always have a sense of reducing energy loss.

2) Water Resources Management

Due to the fact that HARN's operations in the service industry, the main business does not problems water issue. However, HARN put the importance to wisely use the water. In 2023, HARN set the goal in order to control the use of water and reduce the use of water of 5% of the office and warehouse compared with the base year 2022 with raise the level of water management according to the principles of circular economy with using water economically and the wastewater is used for watering plants to reduce costs on water and lower the amount of wastewater. HARN's water use in 2023 is 12,283 cubic meters, increase of 24.71% compared base in 2022 (referring to November 2022 to October 2023). However, due to in 2023 there was a cancellation of the Work from Home and there were more tenants, was unable to meet the target. HARN may be necessary to adjust the target to the number of liters/persons, improvement the activity to increase the awareness and involved of the employees, including regularly check for the utilities related equipment in the office and warehouse, which will be reflected more accurately in 2024.

In 2023, HARN set the goal



**in order to control
the use of water
and reduce the
use of water of
5%**

Water use in 2023 is



**12,283
cubic meters**

**Increase of
24.71%**

3) Waste and/or Pollution Reduction Management

HARN, emphasizes on the waste management in the right way in order to lower the volume of waste impacting on the environment as well as the pollution management by setting the plan to reduce the volume of non-hazardous waste in office and warehouse of 5% of non-hazardous waste waste compared with the base year 2022. In 2023, encourage employees to manage waste correctly, creating the awareness of energy conservation, encouraging the employees to understand the environmental issue, in addition, implemented the waste segregation by the type of 4 waste, which is recycle waste, dry waste, wet waste and toxic waste by authorized individuals from the Department of Industrial Works, Ministry of Industry is the operator who disposes of hazardous wastes or chemicals e.g. solvents and contaminated containers, can be verified and traced back. Meanwhile, the non-hazardous wastes be sent to landfill by government agencies. For recycled waste such as plastic, paper, glass, metal, are delivered to other service providers for proper separation and recycling.

HARN manages each type of waste appropriately the 3R principle is reduction, reuse, and recycling. According to the performance in 2023, all activities were 100% successful, with a non-hazardous wastes' disposal volume of 56,172 kilograms, decrease of 5.73% compared to base the year of 2022 (referring to November 2022 to October 2023), the target has been achieved, with the standardization and efficiency improvement of waste/waste management plans, the waste volume of HARN has decreased compared to last year and the project is implemented annually as follows:



The plan to reduce the volume of non-hazardous waste in office and warehouse of **5%** of the office and warehouse compared with the base year 2022



The performance in 2023, all activities were **100%** successful



non-hazardous wastes' disposal volume of **56,172** kilograms

decrease of **5.73%** compared to base the year of 2022

Reduce

- Use email to send document e.g. Gmail/ Outlook
- Store data via Data Center
- Use e-meeting
- Change paper-based surveys to Google Form
- Reduce giving out handouts of seminars to soft copy via email
- Implement "One Quality Project" to reduce paper by adjusting the working method, develop using digital systems

Reuse

- Print on one side printed paper

Recycle

- Placement of separate bins e.g. General waste, used paper, bottles & plastics and sell reusable waste from paper, bottles & plastics

4) Greenhouse gas emission management from business operations

Carbon Footprint

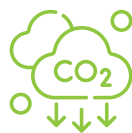
To support the goal to aim for carbon neutrality by 2040 and Net Zero by 2050. The working group on carbon footprint management has met to review and monitor its implementation plan, including risk assessment and continuous adjustment of the Organization's emission storage method, so as to achieve the set target of 5% of the emission reduction compared with the base year 2022. Operating results in 2023 HARN installed the second batch of solar panels of 177 kW/h in some areas of the parking completed earlier year 2024. Combined with the production capacity of the first batch of solar panels, the office building HARN a total power generation of 307 kW/h, in addition, the organization's vehicles be changed from combustion vehicles to electric vehicles in a number of 4 cars already and when each car the service life or cost-effectiveness is considered, will gradually change. In addition, Dr. Jain Charnnarong, the directors, has been involved in the restoration of green spaces, joined with the government, private sectors and citizens in preserve and restore green areas to study ways to reduce forest fires by solving the problems of the villagers, called "Ban Ko Sandbox", to help reduce the PM2.5 dust problem by improving quality of life.

The operation, as of 2023, the direct and indirect business emissions of HARN are 1,044.46 tCo₂e is divided into scope 1 equal 776.12 tCo₂e and scope 2 equal 268.34 tCo₂e (referring to November 2022 to October 2023) decreased of 1.58% compared to base the year of 2022, the principles and formulas cited by Thailand Greenhouse Gas Management Organization (Public Organization: TGO). However, HARN has implemented this plan to strengthen culture, promote knowledge, and raise awareness of reducing greenhouse gas emissions in order to achieve the set goals. HARN's carbon footprint calculation data has not passed the review of TGO experts. In addition, in 2023, HARN complied with the prescribed standards and laws, did not pay any fines, and was not subject to any environmental penalties.



**The direct and indirect
business emissions of
HARN are**

1,044.46 tCo₂e



Scope 1 equal

776.12 tCo₂e

Scope 2 equal

268.34 tCo₂e

decreased of 1.58%

compared to base the year of 2022

5) Develop an IoT system for refrigeration systems to reduce energy consumption

In calculating greenhouse gas emissions from business operations in Scope 3, which have not yet undergone review by experts from the TGO. In calculating greenhouse gas emissions from business operations in Scope 3, which have not yet undergone review by experts from the Thailand Greenhouse Gas Management Organization (Public Organization: TGO), HARN has become aware of the proportion of greenhouse gas emissions from the sale of a large quantity of compressors to the refrigeration and air conditioning industry. Indeed, HARN itself does not have a direct role in the energy consumption reduction process, however, it should strive to develop technology for the customers. Refrigeration systems are directly related to the preservation of food and medicine, making them indispensable and a critical factor. Compressors are considered crucial components consuming a significant amount of energy. Furthermore, the efficiency of the system relies on several interconnected equipment. Therefore, HARN should to develop IoT technology to enhance efficiency and reduce energy consumption in refrigeration systems.

HARN, in collaboration with Aiyaraharn, has begun developing an Internet of Things (IoT) system to monitor the performance of refrigeration systems. The aim is to enhance efficiency and reduce energy consumption in refrigeration units by designing the IoT system to integrate with various devices represented by HARN. Moreover, it can also be adapted to other devices in the market that are widely used.

Key operational data from the refrigeration units will be stored in the cloud system, accessible from anywhere and at any time. This enables analysis of performance and provides insights for improving efficiency, particularly in energy consumption, which is crucial.

Once the data is collected, in the future, HARN can further analyze it using artificial intelligence to make the system smarter and capable of devising energy-saving strategies for refrigeration systems. This could potentially may also become new data-driven business in the future.



3.5 Social Sustainability Management (Together)

3.5.1 Social Policy and Practice

Since HARN conducts a trading business, not only the selection of quality products, but also the existing work systems and services which efficiently meet the changing of customers’ demands due to economic conditions, technology or other factors are key to success. HARN realizes that “employees” are he to driving the organization towards success and sustainable growth. However, to achieve that goal, the employees need excellence, kindness, and happiness. The mission of HARN is committed to drive success to strengthen and develop personnel accordance to the business strategy plan Sustainability in the social dimension which is powered by together, consisting of: SMART PRO; SMART Care; and SMART Learning, through the human resources administration policy of HARN which designates to “be determined to create a working atmosphere to be happy, enthusiastic, with initiative and also the development to be well-rounded employees on the principles of accuracy, justice, positivity and professional responsibility.”



There are 5 practical policy and guidelines as follow;



1) Human rights respect policy

HARN is committed to conducting business under the policy of human rights respect according to the plan of 100% of business activities, has reviewed risk aspects on human rights covering HARN's business operations under were aspects that represented core operational risks: safety and occupational health, migrated labor, security, suppliers workplace conditions, the standard of living of communities, and the rights of natives/employees to ensure to keep risks manageable. Also, the implementation of this plan is to be monitored every quarter, report to the Board for acknowledgment and comments. This year 2023 **no** complaints and **not** any violation of human rights in business process, are practical guidelines as follow;

- Has guidelines to promote and motivates the practice based on the principle of basic human rights and equality by disregarding the differences between nationalities, race, skin color, sex, language, religions, political or any other beliefs, ethnicity or social background, wealth, birth or social status.
- Supports and respects the protection of human rights by regularly inspecting its own business so that it does not involve with activities which violates the human rights, for example, not supporting forced labor, or opposing to child labor
- Respects the opinions of the employees which cover the freedom of opinions that is free from outside influences, obtaining information or ideas from various Medias, including providing the communication to freely listen to the opinions of the stakeholders.

2) Fair treatment of employee's policy

HARN is committed to conducting business under the policy of fair treatment of employees according to the plan of 100% of business activities, in 2023 did **not** violate the laws regarding labor, consumers, employment, trade competition, environment, the practice guidelines are as follows;

- Strictly comply with the laws and regulations which relate to the employees.
- Provide a good working atmosphere that is safe to the lives and assets of the employees.
- Treat the employees gently, respect their individuality and human dignity.
- Fair remunerations for employees.

- The promotion, relocation, including rewards and disciplinary actions are conducted fairly by considering the knowledge, capabilities and suitability of the employees as the standard.
- Emphasizes on the skills development of the employees by providing regular opportunities and equally.
- Avoid any unfair actions which may affect the stability of the employees' jobs or threaten and create stress to the employees.
- Employees have the rights to appeal when they are treated unfairly according to the process and system in place.
- Listen to suggestions and opinions of the employees from all levels equally and fairly.

3.5.2 Social Performance

1) Manpower planning and employment

HARN has an employment policy which focuses on equity, no limitation or discrimination on gender, race, religion, and culture, based on qualifications, experience, and capacities as specified in the code of conduct with transparency and fairness to all candidates who are internal employees and candidates who are external employees. In 2023, HARN had a total of 240 employees, with different age, gender, education level, and various operational characteristics, while retaining the employee rate according to the manpower plan of 94.94% and there is also a voluntary turnover rate of 11.68% employees.

HARN maintains its duties in compliance with the law and the importance according to the Promotion and Development of Quality of Life for Persons with Disabilities Act, B.E.2550 (2007) for support to people with disabilities their sufficient income in life. In 2023, HARN has notified its intention to comply with the occupational promotion under Section 35 (allowing concessions) two persons with organizing relaxation massage activities for employees, with a total of 241,740 baht.

The number of staff	2023			2022			2021		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Total employees	97	143	240	97	149	246	93	149	242
Employees who voluntarily resign	12	16	28	10	18	28	7	13	20
Newly recruited employees	12	13	25	13	23	36	10	12	22
Disabled employees	0	0	0	0	0	0	0	0	0
Non-employees with disabilities	0	0	0	0	0	0	0	0	0

2) Labor Disputes

HARN and its subsidiaries have a lawsuit in the Civil Court with a total amount of baht 11.01 million. Later, on July 11, 2023, the Company entered into a reconcile agreement with the parties in the court. The Company agreed to pay compensation from termination of the labor contract of baht 0.76 million within 30 days and the court found that the agreement was legitimate according to the reconcile agreement, and the case is closed. The Company has fully recognized the compensation as an expense in the statement of comprehensive income for the years ended of 31 December 2022 and 2023.

3) Remunerations and Benefits for the Employees

HARN has a policy of fair compensation as well as creating career stability and fair career advancement opportunities and provide various welfare benefits for employees as required by law according to the following guidelines;

- Establish a welfare committee to provide employees with opportunities to participate in consultations. And propose relevant welfare suggestions that are beneficial to employees and the organization through designated communication channels.

- Participated in the wage surveys and HR Benchmark 2021/2023 to reconsider compensation and welfare which would help HARN in attracting and retaining skilled workers, as well as keeping the cost of HARN to be reasonable. Besides the salary, employees will fairly and appropriately receive welfare and other benefits in various forms. **More details appear in Section 2 “7.5 Information of the Employees”, page 171-174**

4) Employees Development

HARN there a policy to continuously promote personnel development at all levels, improve their higher performance and prepare them for tough competition, encouraging learning opportunities and develop knowledge, skills and gain experience that contribute to the growth of organization, which annual training in and outside, including overseas training and study, so as to develop their skills. Moreover, HARN following up, assessing, applying gained knowledge to the workplace, create growth of knowledge together within the organization.

HARN defined its core values as “POSITIVE”, which is significant in molding the management and employees at all levels to team work behavior clearly, as responsible the organization the outside society.



HARN is determined to execute its human resource development plan as soon as its employees start working at HARN by providing training focused on knowledge and basic skills necessary for the work, focused on developing good so as to strengthen the motivating to develop potential and work, with a long-term master plan and regular communication with employees to raise awareness of a learning organization, can access and leverage such. This help promote employee progress and to help increase competitiveness tangible for the business.

In 2023, the personnel training and development within the company are as follows:

Organizational potential development

1. Team Engagement for TOP Culture course: Cultivating Team Power towards an Outstanding Organizational Culture

There were 233 people in this training course of 6 hours per person per year. The course is designed to re-inforce the concept and awareness of the importance of embodying behaviors according to HARN’s values in collaborative teamwork professionally. It aims to foster love, commitment, and a sense of ownership of the organization collectively, striving towards HARN’s goals for successful outcomes.



2. Course on Building a Proactive Thinking Framework in working for Success

There were 33 people in this training course of 6 hours per person per year. A course aimed at promoting employee learning and understanding of collaborative work concepts, emphasizing the importance of achieving success in the workplace through a professional perspective, focusing on personal development, organizational advancement, and fostering proactive work attitudes among employees. These efforts contribute to the long-term competitiveness of the organization.



3. Design Thinking for Innovation “Harn Inno” Course

Learning and developing a creative design thinking process, combined with business thinking, to systematically innovate. Creating an understanding of needs and problems, rallying ideas for solutions, through learning and hands-on practice, to generate value and innovation.



Sales and service

Sales and service staff is necessary are considered important personnel in the business, developing knowledge, skills, attitudes, and good sales and service incentives, enhance a good personality, have a service mind, and boost professional in presenting HARN’s products and services to meet the needs of customers. They can consult, give advice, solve problems professionally and impress customers with successful management according vision that says “We are committed to be a leading provider of sustainable total engineering solutions”, encourage its staff to have business trips and receive training focused on products, working systems and new technology abroad. Knowledge experience gained will be shared with the team and apply to products and services development in the future, as follows:

1. Course on Developing Personal Image and Effective Communication for Sales and Service Roles

There were 45 people in this training course of 6 hours per person per year. This course supports employees learn and develop a positive personal image, along with professional communication skills, fostering a good attitude towards sales and service. It contributes to enhancing a positive image, creating favorable impressions, and delivering excellent customer experiences.

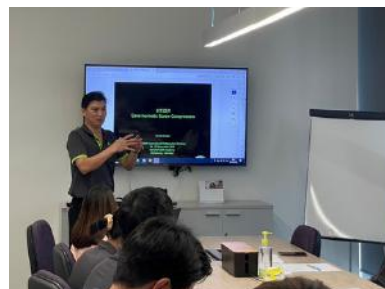


2. Course on Developing Effective Sales Skills for Organizational Sales Representatives

There were 15 people in this training course of 6 hours per person per year. The course focuses on developing skills and techniques in sales to groom individuals into effective sales representatives for the organization by enhancing knowledge and understanding of contemporary sales processes, enabling participants to present solutions that meet customer needs and generate satisfaction. Sales staff can apply this knowledge to advance their sales abilities independently and achieve HARN's objectives successfully.



Furthermore, sales and service staff continuously develop knowledge related to HARN's products and services to enhance expertise and build confidence in HARN's products and services among customers. This includes product knowledge such as Reliable, NIBCO, knowledge of automatic hybrid fire suppression systems, DOMINO R-Series for GE Camera, knowledge of GS1 Standard for Smart Business, installation of scanners and printers, techniques for installing and using Ax-Series printers, and product knowledge of BITZER.



Development of Teaching Skills within Organization Project (Train the Trainer)

1. Course on Using Microsoft Excel for Data Summarization and Report Generation

There were 44 people in this training course of 3 hours per person per year. At present, large volumes of work data makes having accurate and efficient decision-supporting data crucial. Therefore, employees must understand how to organize and manage data quickly and accurately to derive maximum benefit and efficiency.



2. Course on Writing Professional Emails in English for Communication

There were 40 people in this training course of 3 hours per person per year. Communication is a vital skill in the workplace. This course helps employees learn and understand the principles and techniques of communicating via email in English with clear and easily understandable content to achieve communication goals effectively while also enhancing the professional image of the organization.



In addition, HARN also promoted employee learning through online self-study on the website of the organization called of “HARN Academy” in which employees are able to learn and develop self-study anytime, anywhere, and supports various devices, which the topics are related to the important policies of HARN, personal finance. Employees can learn and test their understanding of online courses, such as corporate governance principles, code of conduct, anti-corruption within the organization etc. to ensure employees at all levels have the knowledge and understanding of correct practices, as well as the awareness of importance, roles and duties, which is a process of the effective prevention and anticorruption in the organization.

Summary of Employee Training and Development

Employee development	Unit	2023	2022	2021
The number of total staff	Person	240	246	242
Total working hours of employees	Hour	499,800	462,078	451,663
The number of training hours	Hour	6,364	3,114	2,153
The number of training hours of each staff on average	Hour	26.52	12.66	9.05
Expenses on training domestic	Baht	1,031,586	246,959	125,752
Expenses on training abroad	Baht	-	-	-
Score of bonding experience	% Engagement	81.26%	80.54%	81.49%

Course	Description	Unit	2023	2022	2021
Basic work course	Knowledge about organizational goals, policies, values, work culture, and knowledge that all employees need at work.	% staff trained	100%	100%	100%
		Average training hour	12.47	20.97	13.81
Core competencies of the enterprise	Knowledge and skills required by employees at all levels to promote the performance of their duties and influence the company's goals and vision.	% staff trained	100%	92%	93%
		Average training hour	11.30	13.86	6.56
Position capability	Improve the work potential and professional knowledge and skills, so that understand the factors that affect oneself or one's job, so that they can develop or adapt to changing conditions.	% staff trained	77%	72%	45%
		Average training hour	12.04	7.32	3.82
Management ability	Manage work and personnel knowledge and skills management based on roles responsibilities. Establish leadership, learning, and development enhance the competitiveness of the organization.	% staff trained	13%	10%	2%
		Average training hour	2.55	0.62	0.44

5) Occupational Health, Safety and Working Environment

HARN defined policies that encourage employees to performance of duties safely, is concerned about all employees' safety in performance of duties, including contractor performs who the work and committed to implementing standards in accordance with the Occupational Safety, Health and Environment Act 2011., which has established Occupational Health, Safety and Environment Committee to supervise and report operation results comprehensively and equitable. In 2023, follow up and rectify unsafe working conditions, and review as well as update "Safety Handbook" and work regulations and procedures for use as guidelines for safety in work performance.

In 2023, HARN continued to provide alerts and continuous infection reports for the COVID-19 to monitor the epidemic situation, if employees are infected with COVID-19, will be reported through the command line and relevant departments, including reducing the density of the workplace and allowing employees to work at home according to risk factors, as HARN technology effectively supports and supports work, such as working at home through VPN system, online meeting and health report through Google Form system, which can regularly summarize health information and executive reports.

In 2023, the operating performance on occupational health and safety of employees and contractors follows:

1. Statistics of accidents/absenteeism/illness rates resulting from work

Types of Accident	Numbers of Accident in 2023 (zero target)						Total
	Passed Away	Disability	Compensation of more than 3 days off	Compensation of less than 3 days off	No Day Off	Damage to Assets	
Contractors	0	0	0	0	0	0	0
Employees	0	0	1	1	0	6	8

2. Seminars and basic fire drills are held

HARN organized 25 person-times training on “Work safety with fire extinguishing gas”, with 6 hours training time per person per year, and organized 239 person-times basic fire training activities on July 26, 2023, as well as the planning and assigning responsible persons so that the practice is carried out correctly and efficiently, evaluation results illustrates fire drill and evacuation plan, which Assessed by Department of Labor Protection and Welfare as ‘Good’.



3. Annual medical check-up

To promote the prevention and treatment physical health of employees to be healthy and strong. HARN provides medical check-up and examination according to risk factors according to job characteristics by selecting hospitals that meet standards for health check-ups for employees on February 8, 2023, in which 232 employees undergoing medical examinations, 225 were actually examined, representing, 96.98%



6) Labor Relations Management

HARN has policies and guidelines for treating employees fairly with respect to their rights and freedom to form groups, it emphasizes internal communication within the organization to ensure that employees are informed about policies, work practices, and relevant work-related information, as well as to foster understanding goals in the same direction. The communication channels are provided for opinions via LINE Official Account, Email and Digital Signage. Additionally, there are channels available for employees to lodge complaints or make suggestions that would benefit the overall organization, with no causes of any troubles to employees or the organization.

In addition, HARN sets up the welfare committee as representatives of employees to share their opinions in various welfare arrangements which will be beneficial and suitable for employees and the organization.

In 2023, HARN still a policy to encourage communication and happiness its staff through participate in various activities so they can have a bonding experience, and support for the growth of employees is provided throughout all times, covering both their professional and personal lives, which helps to create physically and mentally healthy, and have high employee morale, leading to a sustainable growth, as follows:

1. Inheriting Songkran Tradition and annual make merit

An activity to promote good culture, expressing respect and deference towards seniors, fostering relationships, and providing encouragement and motivation in the workplace between management and employees.



2. Happy Friday

Promoting positive relationships among colleagues outside of work hours, emphasizing employee satisfaction to enhance both work and personal life quality, and fostering confidence in being part of the team.



3. Annual travel

An activity that helps employees full relaxation from work, strengthen relationships between colleagues, create love and bond of all employees in the organization to achieve new inspirations, be ready to fight with goals work.



4. HARN NO FAT: City Run

HARN promotes the good health of all employees and collaborates with Thai Life Assurance to support physical fitness activities and foster positive emotional relationships. This helps create a conducive and happy working environment.



5. HARN GAMES

An activity to promote to participate in sport skills in order for employees to have good physical health and strengthen the unity among colleagues as well as acceptance and respect to the rules and results of sport competition to achieve good relationships through sports and exercise.



6. New Year Party

The year-end celebration activity fosters enjoyment and relaxation from year-long work commitments. It also serves to strengthen camaraderie and unity within the group, fostering love and bonds within the organization.



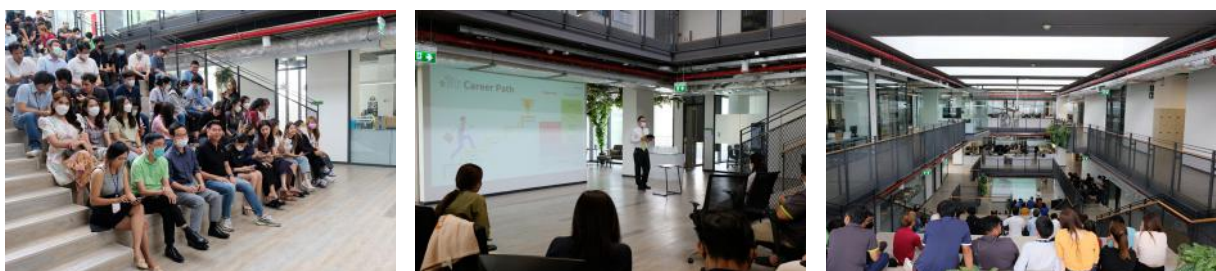
7. The joint celebration activity expresses congratulations for weddings, welcomes newborns, and celebrates the first homes

HARN is committed to being an integral part in supporting the growth of employees at every stage of life's successes, fostering motivation and creating satisfaction in the quality of life for employees.



8. The annual staff meeting

On March 10, 2023 the Chief Executive Officer the opportunity to communicate short-term and long-term goals, directions, and strategies, including emphasize vision, mission for employees at all levels, in order to create an understanding of performance to achieve the same goals, and organizing ceremony rewarding the employees whose years of service meet the criteria for the purpose of raising morale for work performance and support to being an important power to organizational success.



9. Survey of employees' engagement and work happiness and satisfaction

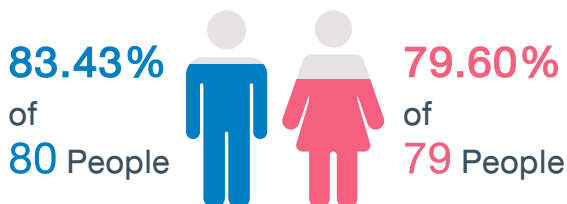
HARN believes that career security, good work environment, good health and happiness at work will contribute to enhancement of work efficiency. In 2023, the employees survey 159 out of the total of 240 employees, representing 66.25% of employees. The average survey result is 81.26%, an increase of 0.72%. Compared with 2022, it accounts for 80.54% on average, which is still lower than the set target of 85%. However, HARN utilize the results from the survey to analyze and to formulate strategies and activities that constantly enhance engagement, increase effective communication channels, and develop a work environment that enhances mutual trust. Also, developing employee a good understanding of the organization.

Overview of Employee Engagement Survey Result

Employee Engagement Statistics Year 2021-2023



Commitment by gender Year 2023



10. Communication via LINE Official Account

As a channel for speedy communication to employees in addition to communication email and Intranet and HARN website, while being another way for can employees to communicate and provide suggestions or complaints on various matters for HARN to realize those problems, as well as the working systems can developing to promote a happy and participatory work atmosphere.

7) Human Resource Management and Development with Information Technology

To provide accurate and complete information on Human Resources, as well as to effectively apply information in many aspects and reduce errors from operations. In 2023 HARN continued to utilize the Human Resource Management System, E-Business Plus, for various tasks including salary calculations, requesting leave approvals, overtime requests, medical benefits claims, and checking employee compensation information. Employees were able to perform these transactions independently through self-service access anytime and anywhere. This has facilitated convenience and efficiency, reducing the burden of document verification and storage in human resource management. Additionally, there has been development in the online performance evaluation system, replacing paper-based registration for training/seminars, measuring outcomes, and testing knowledge post-training, all of which can now be conducted through digital technology.

HARN is in ensure that the Administrative allocates resources efficiently and efficiency while considering effects to the resource management and value chain to achieve goals and objectives sustainably. Also, to ensure has plans to develop information technology in organizational level that correlate to the needs of business continually, considering covering all dimensions in terms of increase business opportunities and development plans. Administer risks information technology along with cyber security to achieve objectives and main goals of the business.

In addition, in the year 2023, review the policy and development plan of information technology in Digital Transformation 2022-2024 both hardware and software. Also, a goal of 100% achievement is set each year for all activities to increase competitiveness by using digital technology in accordance with the business operation strategy and response to cyber threats. The budget planning of Bath 1.61 million has already been approved by the Board of Directors.

The operating performance against cyber threats has been analyzed and resolved on cyber security flaws of the organization, with protection from external attacks through applications, use of the Virtual Private Network (VPN) system, external email authentication, restriction of access to hazardous sites, prevention against virus infection, backup data to avoid data damages in case of an emergency, and drills of emergency situation plans to deal with such events. Meanwhile, important resources are allocated as appropriate for the performance of operations.

Hardware Road map – 2023

1. Hardware Good Performance	Supply and modernize the deteriorated computer equipment and notebooks.	100%
2. License Software	Purchase and procure licensed software valid for the organization, while suspending illegal personal devices within the organization.	
3. Network and Security Good Performance	Open a VPN license for employees and optimize sufficient internet speed for overall use in the organization, including an effective protection against viruses and cyber threats from outside.	
4. Network Anywhere	Server on Cloud management, Employees use Wi-Fi within the organization to support Digital Transformation.	

Software Road map – 2023

Digital Transformation Project	<ul style="list-style-type: none">• Manage the working processes in a digital form and improve the ERP system, including various programs to stably and accurately operate according to the process, with verifiability.• Develop processes, reduce costs, increase revenue, change the method of operations, upgrade business efficiency, and create a modern corporate image.	99.98%
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3.5.3 Community & Social Performance

HARN as a company providing engineering services in fire protection systems, air-conditioning, sanitary, refrigeration, digital printing, and 3D bioprinting. Having a mission to sustainably contribute to society by conducting business responsibly by leveraging the capabilities of its personnel, technology, and collaboration with both public and private sector partner networks. Creating positive impacts on society, communities, and the nation, initiatives include developing human resources, communities, and society, as well as promoting conservation and restoration of natural resources and the environment. Additionally, promoting opportunities for disadvantaged individuals to improve their quality of life aims to mitigate potential negative impacts of business operations. HARN has considered covering and aligning with the needs, expectations, and concerns of all stakeholders through participatory processes to foster relationships and understanding. This involves creating shared value between the organization and the community in balanced, leading to sustainable collaboration in the future. This approach aims to generate social holistic images and outcomes, with details as follows:

1) Support in the form of donations

HARN implemented social through various processes, to uplift the level of creating social shared value in the form of Creating Shared Value and operated as a social enterprise with the aim of maximizing the positive impacts to the society. In 2023 support was provided for community and environmental welfare activities, encouraging employees to participate in social activities within an appropriate budget. These included collecting used desk calendars to donate to organizations needing them for educational materials production, and donating items to the “Luea-Khor” project in exchange for scholarships for children under the care of the Baannokkamin Foundation. These initiatives aimed to enhance the organization’s image by promoting community social responsibility towards disadvantaged individuals’ quality of life.

2) Participation in forest fire reduction and conservation efforts to restore green areas

Dr. Jain Charnnarong, the Director, attention and importance to safety of community, society, environment and quality of life, has realized the environmental problems regarding PM 2.5 and begun to study the solutions to reduce forest fires and villagers’ poverty which is called “Ban Kor Sandbox,” Ban Kor (Kor village), Kor sub-district, Li district, Lamphun province is one of the villages which has suffered the most from forest fires in Thailand. Over the past 22 years, the area of Mae Ping National Park which surrounds Ban Kor has been exposed to forest fires up to 20 times which amounts to burning area between 110,000 -275,000 rai per year. by for the cooperation from the civic sector to work with villagers and government officials in solving forest

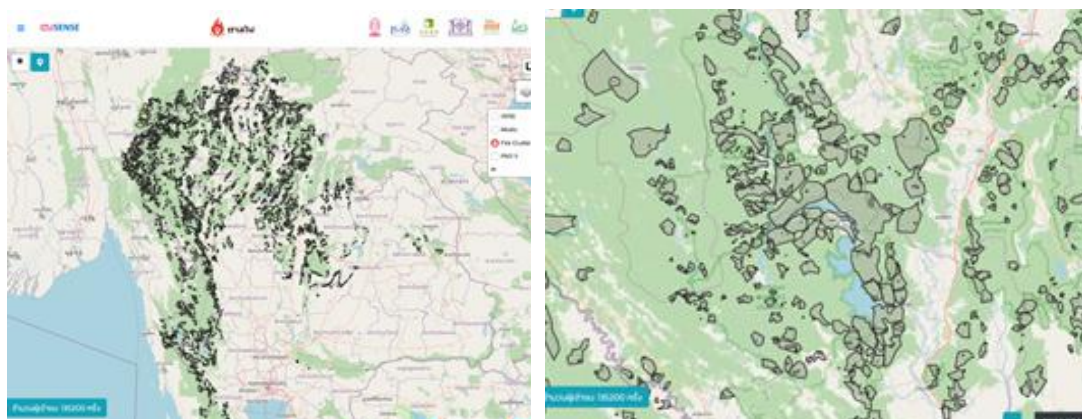
fire problems and reducing the villagers' poverty through water and soil resource managing, reforestation, livestock and fishery, travel, and wisdom creation.

Even the new plants have been recovered after a few months of forest fires, the microorganisms which cannot be seen with the naked eye were also destroyed, especially fungi. The tree roots of the Dipterocarpus Family in the Deciduous Dipterocarp Forest are colonized by fungi. Such must have fungi provide water and nutrients for plants, and in exchange, the plants will photosynthesize and provide sucrose and glucose to the fungi. The symbiosis relationships bring which will help the abundant trees in the Deciduous Dipterocarp Forest, even in dry areas lacking minerals in the soil. But when the forest fires often occur, microorganisms and fungi are destroyed, the Deciduous Dipterocarp Forest will dwarf lack the abundant. Moreover, the fires prevent the soil from holding water, which is why Ban Kor had such a long dry season such that other plants could not be grown, except field corn.

To reduce forest fires in the Mae Ping area by raising the quality of life, in 2021 the club encouraged villagers to have the right to make a living in the park area under Section 64. The villagers had a resolution to help the Mae Ping National Park with forest fire prevention, conservation, rehabilitation, and learning to achieve sustainability when they receive the right. The Groundwater Department also initiated a large groundwater supply project to solve the problem of drought caused by the royal initiative to help the people to have water sources for building a tap water supply system in the village in order to solve the water shortage problem, along with using the budget from the Groundwater Fund to develop groundwater for large-scale agriculture of 500 rai, as well as digging over 33 artesian wells in the area under Section 64 to have sufficient water for cultivation for another 500 rai. The addition of groundwater will help the villagers change their methods from monoculture in the rainy season to mixed crops throughout the year to gain more income and stability and to reduce forest burning according to the objectives.

In addition, in 2022, the company supported the Young Forest Fire Detective Challenge Project, in cooperation with the Office of Policy Administration of the Prime Minister, the Anandamahidol Foundation Scholarship Awardee Association, and Chulalongkorn University, in creating a "Tam Fire" application to display the heat points in a time series, which shows the size and direction of the fire front of wildfires day by day. We will see the behavior of fire from birth until it goes out. When the heat points in a time series are displayed on a map showing things covering the land, it makes us know the motives for incineration to provide long-term protection.

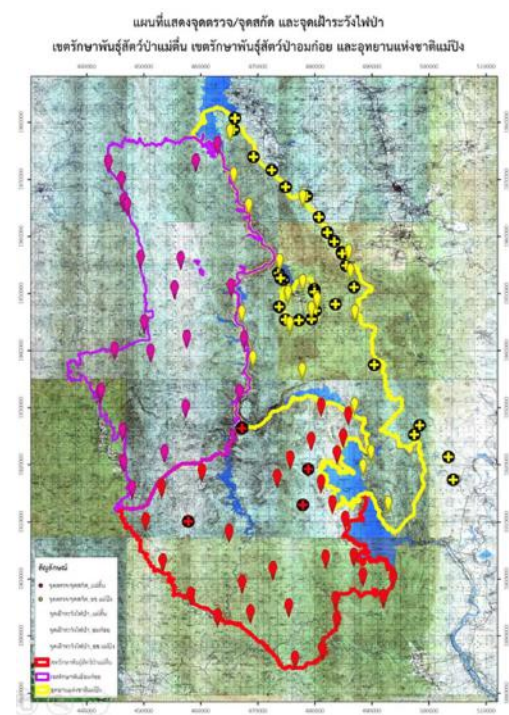
In 2023, develop "Tam Fire" was developed to enhance the capability of pinpointing forest fire origins from ignition to tracking continuous spread, enabling the delineation of fire perimeters in each unit. This resulted in the creation of Thailand's first-ever "Forest Fire Map" in 2023. This map is highly beneficial for elucidating motivations behind forest burning in various areas. Understanding these contexts can lead to addressing the root causes of forest fires in the future.



The forest fire map of 2023 and an enlarged image of the forest fire map in the area of Mae Ping, Omkoi, MaeTuen
The polygons contained within each unit represent the positions of forest fire origins within the unit

The “Tam Fire” application has been made accessible to the public for analyzing forest fires in the area without any charges. From November 13, 2021 to February 13, 2024, there have been 135,200 visitors to the application, averaging approximately 6,000 visitors per month.

Furthermore, towards the end of 2023, Dr. Jain Charnnarong proposed to the government of Prime Minister Srettha Thavisin to designate the Mae Ping, Omkoi, MaeTun areas as special learning zones for forest fire reduction. The government assigned the Ministry of Natural Resources and Environment, the Ministry of Interior, and the security sector to collaborate in integrated efforts within the area. Additionally, the security sector, in collaboration with the national parks, began working on-site and changing the attitudes of individual forest burners, establishing camps within villages alongside local residents throughout the wildfire season. This initiative is considered the first concerted effort involving three ministries to earnestly reduce forest fires in the country.



In the social sector, the Northern Thailand Breath Council, along with Chiang Mai Breath Council and Lamphun Breath Council, began engaging with local communities and implementing various projects to develop the area. These efforts aimed to exert pressure on forest burners. Together with supporting community groups opposed to forest fires, encouraging them to clearly express their stance and desire for clean air to community leaders and residents, this has led to the restoration of green areas and the establishment of positive relationships. This, in turn, promotes environmental conservation and restoration efforts in collaboration with government, private sector, and people.

After the wildfire season of 2024, we collectively extracted lessons to apply knowledge and best practices in other forest areas going forward. Despite varying contexts, long-term benefits may emerge.

4. Management's Discussion and Analysis (MD&A)

In reading Management's Discussion and Analysis (MD&A), investors are advised to study the supporting documents including the consolidated financial statements, financial information, overall performance, together with note to financial statements and this document.

4.1 Operating Results and Financial Position Analysis of HARN and Subsidiaries

In 2023, the world economic faces increased geopolitical problems. Whether it is the war between Russia and Ukraine that has been dragging on since last year, causing the price of petrol to increase, resulting in hyperinflation. Central banks of many countries including Thailand have taken measures to increase the policy rate. Where the conflict between the Palestinian Hamas and Israel in the Gaza Strip has led to attacks on shipping ships in the Red Sea at the end of the year. Causing shipping companies around the world to suspend sailing on the certain routes and switch to other routes that take longer time to transport. As a result, the freight charges has increased on many routes. From these situations, it inevitably results in higher product costs and the world economic situation comes to the slowdown period. As for the economic in Thailand, it has been affected by the increase of interest rate by the Bank of Thailand, resulting in economic expansion was lower than expected, and the value of Thai Baht currency is continuously fluctuating.

Overview of this year, HARN has revenue recognition from its sales and services of Consolidated with the value of Baht 1,299.62 million, which is an increased of Baht 79.96 million or equivalent to 6.56%, when compared to that of 2022, in which Harn's sales revenue and services was Baht 1,219.66 million from the gradual delivery of products from several projects which was delayed from last year, and other income in 2023 is Baht 26.61 million, which is an increase of Baht 3.98 million or equivalent to 17.58% from mutual fund investment, earned interests, office building and warehouse rental income and dividend income. Sales and services cost the value of Baht 908.61 million and increase of Baht 35.35 million or equivalent to 4.05%, when compared to that in previous year. The proportion of the increase in sales and service costs was less than the increase in sales and service revenues. This shows an increase in gross profit margins, with distribution costs have increased for Baht 0.68 million, accounted for 0.60%, according to increased sales and services revenues, administrative expense has increased for Baht 17.01 million accounted for 11.99% from increased salary, employee benefits, unrealized loss from fair value of investment, and increased cost for office building maintenance.

This year, gross profit margin of 30.39% compare in 2022 of 28.40%, which is a 1.69% increase from the previous year. As can be seen, HARN still maintains a stable gross profit margin as product sales pricing can be adjusted effectively to reflect the rising cost of products and services, cost and risks are well managed, resulting in the net profit of HARN is to increase to Baht 114.04 million, which is an increase of Baht 25.26 million, or 28.45% and the net profit margin of 8.53% compared to 7.15% in 2022.

HARN has important financial ratios for 2022 and 2023 as follows: current ratio equal to 3.35 and 4.18 times, debt-to-equity ratio equal to 0.32 times and 0.27 times, and return on shareholder's equity ratio equal to 6.66 and 8.35 times, respectively. from the financial ratios mentioned above, it shows that HARN has a stable financial structure, high liquidity, low liability compared to shareholders' equity, no reliance on loan from financial institutions, ability to generate good returns for shareholders. In addition to that, HARN also adheres to financial reporting standards and exercises caution and prudence in its decision-making process. For example, it estimates potential credit losses, stock obsolescence, and slow inventory turnover to ensure that asset valuations are appropriate and up to date. HARN hires an independent appraiser to determine the value of land, and buildings and HARN prepares suitable financial forecasts to review the impairment of goodwill acquired through entire business transfer (EBT).

4.1.1 Overall Performance of HARN and Subsidiaries

1) Revenues from Sales and Services

Revenue	For the year ended December 31							
	2023		2022		Increase/ (Decrease)		2021	
	MB	%	MB	%	MB	%	MB	%
Sales and Services Revenues								
1. Fire Protection Products and Projects	643.83	48.55	559.74	45.06	84.09	15.02	423.94	40.53
2. Sanitary and Air-conditioning Products	59.88	4.52	55.70	4.49	4.18	7.50	47.85	4.57
3. Refrigeration Products	247.32	18.65	230.34	18.54	16.98	7.37	197.35	18.86
4. Digital Printing Products	346.55	26.13	366.65	29.51	(20.10)	(5.48)	351.90	33.64
5. Internet of Things Products (Aiyaraharn)	2.04	0.15	7.23	0.58	(5.19)	(71.78)	4.94	0.47
Total Sales and Services Revenues	1,299.62	98.00	1,219.66	98.18	79.96	6.56	1,025.98	98.07
Other Income ^{1/}	26.61	2.00	22.63	1.82	3.98	17.59	20.15	1.93
Total Revenues	1,326.23	100.00	1,242.29	100.00	83.94	6.76	1,046.13	100.00

Note : ^{1/} Other income included gains/losses on investment in mutual funds and marketable securities, interest receivable, dividend income, and foreign exchange gains/losses, Including rental and service income from investment properties etc.

HARN has two subsidiary companies: Harn Vietnam Company Limited, which deals in the sales and servicing of digital printing systems in Vietnam (HARN owns 100% of the shares), and Aiyaraharn Company Limited, which is involved in the sales of products and services related to IoT systems in Thailand (HARN owns 65% of the shares). In 2023, The revenue from sales and services consists of the revenue from Fire Protection Products and Projects at 48.55%, Sanitary and Air-conditioning Products at 4.52%, Refrigeration Products at 18.65%, Digital Printing Products at 26.13%, Internet of Things Products at 0.15%, and other income of 2.00% with the total revenue 2023 of Baht 1,326.23 million, when compared to previous year an increase of Baht 83.94 million or equivalent to 6.76%, Due to the gradual delivery of the backlog order from the previous year, especially of fire-suppression products and projects in 2023 saw an increase revenue of Baht 84.09 million or equivalent to 15.02% when compared to 2022.

In 2023, HARN does not have any single customer that contributed more than 10% of the total revenue from sales and services. However, the company relies on large customers who account for more than 10% of revenue in two business units: 1. The refrigeration system products have two major customers, which account for 31.22% of sale revenue, and 2. The IOT (Aiyaraharn) system products have three major customers, which account for 55.88% of sale revenue and service.

Sales and services revenues can be divided according to customer groups as follows:

Customer Group	For the year ended December 31							
	2023		2022		Increase/(Decrease)		2021	
	MB	%	MB	%	MB	%	MB	%
1. Contractors	777.17	59.80	629.34	51.60	147.83	8.20	503.76	49.10
2. End-users	413.93	31.85	509.82	41.80	(95.89)	(9.95)	438.09	42.70
3. Trading/Dealers	108.52	8.35	80.50	6.60	28.02	1.75	84.13	8.20
Total sale revenue and service	1,299.62	100.00	1,219.66	100.00	79.96	-	1,025.98	100.00

In 2023, HARN relies more on customers from the contractor group, accounting for 59.80% of sales and service revenue of 8.20% increased and a decreased in the end user group for 9.95% compared to the previous year. This is consistent with the table of sales and service revenues by product group. This year, the fire suppression system and project product group had increased sales accounting for 15.02% compared to 2022.

2) Cost of Sales and Service

Cost	For the year ended December 31							
	2023		2022		Increase/(Decrease)		2021	
	MB	%	MB	%	MB	%	MB	%
Cost of Sales and Services								
1. Fire Protection Products and Projects	468.70	72.80	422.01	75.39	46.69	11.06	311.39	73.45
2. Sanitary and Air-conditioning Products	44.12	73.68	40.19	72.15	3.93	9.78	33.74	70.51
3. Refrigeration Products	184.64	74.66	172.54	74.91	12.10	7.01	143.17	72.55
4. Digital Printing Products	209.83	60.55	233.14	63.59	(23.31)	(10.00)	222.04	63.10
5. Internet of Things Products (Aiyaraharn)	1.32	64.71	5.38	74.37	(4.06)	(75.46)	3.37	68.22
Total Cost of Sales and Services	908.61	69.91	873.26	71.60	35.35	4.05	713.71	69.56
Gross Profit	391.01	30.09	346.40	28.40	44.61	12.88	312.27	30.44

The significant costs of sales and services are the costs of products, import cost, transportation cost and including the salary of in charge engineers along with installation team and the contractor's fee for equipment installation, in 2023, cost of sales and services are Baht 908.61 million, increase of Baht 35.35 million or equivalent to 4.05%, and the gross profit margin is 30.09%, increased by 1.69% compared to the previous year. The gross profit margin for the year 2023 increased a result of selling price adjustment based on import and logistics costs, which are influenced by political conflicts and the volatile global economy. This is an important issue that consistently drives up the cost of goods in the global market.

In 2022 and 2023, HARN have relied on 2 major foreign manufacturers/owners of leading brand products (repeated manufacturers in each year) who accounted was 29.14% and 32.93% of total purchases, respectively.

3) Distribution Cost & Administrative Expenses

Expenses	For the year ended December 31							
	2023		2022		Increase/(Decrease)		2021	
	MB	%	MB	%	MB	%	MB	%
Distribution Cost & Administrative Expenses								
Management								
Distribution Cost	113.84	8.58	113.16	9.11	0.68	0.60	107.57	10.28
Administrative Expenses	158.83	11.98	141.82	11.42	17.01	11.99	132.50	12.67
Total Distribution Cost & Administrative Expenses	272.67	20.56	254.98	20.52	17.69	6.94	240.07	22.95
Total Revenues	1,326.23	100.00	1,242.29	100.00	83.94	6.76	1,046.13	100.00

• Distribution Cost

HARN's Distribution Cost in 2023 are at Baht 113.84 million, with the rate of 8.58%, of total revenue respectively, increased by Baht 0.68 million or 0.60% compared to 2022 from increased sales and service revenue.

• Administrative Expenses

HARN's administrative expense for the year 2023 are at Baht 158.83 million accounting for 11.98%, of total revenues, and increase is Baht 17.01 million or accounting for 11.99% compared to 2022 from the recognition of unrealized losses from measuring the fair value of investment units of Baht 12.33 million and salary and

employee welfare for supporting teams. Administrative expenses consist of salary and employee welfare for supporting teams, executives and board of directors, amortization of the right of use for buildings and warehouses, utilities costs, depreciation and various professional fees. There are also non-monetary expenses related to the amortization of customer relationships and allowance for expected credit loss. These administrative expenses are according to the terms of the financial report standards, which are non-cash item accounting expense.

4) Net Profit

HARN's total net profit for the years 2023 of Baht 114.04 million, an increase of Baht 25.26 million, or equivalent to 28.45%. Main of the reason from the revenue sales and services increase of 6.56% and net profit margin of 2023 is at 8.53%, an increase of 1.38% from the previous year, when compared to 2022.

On July 8, 2020, HARN co-invested and registered a company, named "Aiyaraharn Co., Ltd." and HARN and its joint investor hold 65% and 35% of the total issued shares of such company. The objective of HARN is to improve the system of IoT Products and Solutions through the implementation plan which focuses on the services of SMART Building solution and initiates the business from the current customer base of the companies in the condominium, high-rise buildings and cold storage group in order to expand the business for more sustainable growth.

On July 30, 2019, HARN invested in establishing a subsidiary in Vietnam under the Harn Vietnam Co., Ltd. to support HARN's domestic customers who moved their production base to Vietnam. And increasing the acquisition of new customers abroad. However, the subsidiaries operations are still in the early stages of acquiring customers and the operations still rely on the assistance of HARN in the form of working capital.

In the criteria for preparing the consolidated financial statements, there were the eliminations of intercompany transactions, inventory's profit, intercompany receivable and intercompany payable, as well as investments and shareholders' equity of Subsidiaries Company.

5) Other comprehensive income (OCI)

HARN'S total comprehensive income for the year 2023 of Baht 112.44 million, it increased by Baht 23.60 million, which is 26.56% when compared to the year 2022, which items of comprehensive income items include; loss from financial statements translation of foreign subsidiaries for Baht 0.24 million and loss from re-measurement of employee benefits net of tax for Baht 1.37 million.

6) Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA)

EBIT and EBITDA	For the year ended December 31							
	2023		2022		Increase/(Decrease)		2021	
	MB	%	MB	%	MB	%	MB	%
Earnings before Interest and Taxes (EBIT)	144.94	10.93	114.05	9.18	30.89	27.08	92.35	8.83
Depreciation and Amortization - cost basis	29.17	2.20	31.26	2.52	(2.09)	(6.69)	29.93	2.86
Depreciation and Amortization - fair value appraisal	-	-	-	-	-	-	0.24	0.02
Customer Relation Amortization	12.62	0.95	13.85	1.11	(1.23)	(8.88)	13.85	1.32
Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)	186.73	14.08	159.16	12.81	27.57	17.32	136.37	13.04
Total Revenue	1,326.23	100.00	1,242.29	100.00	83.94	6.76	1,046.13	100.00

HARN obtains the Earnings before Interest, Tax, Depreciation and Amortization (EBITDA) in 2023 the amount of Baht 186.73 million, increase 17.32% when compared 2022. In 2023, monetary profit increased due to the exceeding revenue from sales and services, while distribution cost and administrative expenses to a more than proportion. In 2023, HARN realized a decrease in the provision for slow-moving or obsolete inventory, as well as an increase in the provision for credit losses due to some customers experiencing liquidity and/or delayed debt repayment issues beyond the credit term. However, this is in accordance with the best forecasting in consideration of possible risk which was based on data on previous repayment and independent expert estimates. (More details are shown in the topic of account receivable and inventory).

4.1.2 The Company's Asset Management Capability HARN and Subsidiaries

1) Financial Position Analysis as of December 31, 2023 and 2022

HARN has the total assets as of December 31, 2023 of Baht 1,754.03 million, decreased by Baht 29.08 million, accounting for 1.63% with the major assets as percentage of total assets are comprised of cash and other current financial assets in a proportion of 22.27%, trade account, other receivables and other current contract asset of 17.67%, inventories 17.18%, investments property of 9.28% and the goodwill of 19.08%, and this year HARN fully amortizes of customer relationships, which is considered another type of intangible asset. Therefore, the information does not appear in the statement of financial position. The goodwill has been tested for impairment in accordance with financial reporting standards annually.

As of December 31, 2022 major assets as percentage of total assets comprised of cash and other current financial assets in a proportion of 16.80%, trade account, other receivables and other current contract asset of 15.15%, inventories 24.18%, investments property of 8.60% and the goodwill of 18.77%

2) Trade Receivable

Trade receivable	As of December 31						
	2023		2022		Increase/ (Decrease)	2021	
	MB	Turn Over (days)	MB	Turn Over (days)	%	MB	Turn Over (days)
Trade Receivable by Segments							
1. Fire Protection & Sanitary Products and Projects	171.05	85	155.03	87	10.33	138.76	107
2. Refrigeration Products	49.44	61	32.54	61	51.94	45.00	74
3. Digital Printing Products	45.31	53	53.73	52	(15.67)	51.29	51
4. Internet of Things Products (Aiyaraharn)	-	n/a	-	n/a	n/a	-	n/a
Total Trade Receivable by Segments	265.80	71	241.30	71	10.15	235.05	81

Trade and other current receivables	As of December 31						
	2023		2022		Increase/ (Decrease)	2021	
	MB	%	MB	%	%	MB	%
Trade and other current receivables							
Trade receivable	265.80	92.67	241.30	93.90	10.15	235.05	92.02
Other current receivables	22.82	7.96	21.33	8.30	6.99	26.45	10.35
Current portion of leased receivables	8.33	2.90	8.31	3.23	0.24	6.58	2.58
less Allowance for Doubtful Accounts	(10.12)	(3.53)	(13.96)	(5.43)	(27.51)	(12.64)	(4.95)
Trade Receivable and Other Receivables - Net	286.83	100.00	256.98	100.00	11.62	255.44	100.00

HARN's account receivables can be divided into 4 products groups which are 1) Fire protection, sanitary and air conditioning systems 2) Refrigeration system 3) Digital printing system and 4) Internet of things system and has lease receivables due within one year were classified to trade and other current receivables in the financial statements.

At the end of 2023, the net trade and other current receivables amount to Baht 286.83 million, which increased by 11.62% from the previous year. The accounts receivable turnover for 2023 (excluding other debts and provision for expected credit losses to occur) was 71 days, equal to the previous year. This was achieved through closed management and monitoring of debt collections.

HARN has a policy to provide an allowance for expected credit loss that may arise from the inability to collect from receivables. TFRS 9: Financial instruments prescribes the businesses to recognize the expected credit loss by considering the past and present debt repayment history, as well as the future economic situation forecasting that may affect customer debt collection, and hires outside experts to calculate the expected rate of debt collection, and also estimate the allowance for expected credit loss of HARN. For the year 2023, HARN recorded the allowance for expected credit loss at the rates, decreases of 3.53%, when compared to previous year of 5.43% of trade account and other receivables.

The following is the information on the debt collection of the customer by the value of the payment, term credit and average collection period in three main business units of HARN (excluding information of subsidiaries companies)

Customer groups sorted payment	2023			2022			Average overdue period Inc (Dec.) Day
	Proportion of the Collection Amount (%)	Average Credit Term (days)	Average Collection (days) ^{1/}	Proportion of the Collection Amount (%)	Average Credit Term (days)	Average Collection (days) ^{1/}	
1. Fire Protection, Sanitary and Air-Condition Products							
Top 20 customers	45.20	51	60	42.37	59	94	(34)
Top 50 customers	64.75	51	57	60.63	57	90	(33)
Top 100 customers	78.29	49	56	75.86	47	86	(30)
Total Customer	100.00	44	56	100.00	49	76	(20)
2. Refrigeration Products							
Top 20 customers	68.27	42	62	70.22	47	72	(10)
Top 50 customers	83.47	41	59	86.87	46	69	(10)
Top 100 customers	93.46	40	58	95.51	45	67	(9)
Total Customer	100.00	38	58	100.00	43	65	(8)

Customer groups sorted payment	2023			2022			Average overdue period Inc./ (Dec.) Day
	Proportion of the Collection Amount (%)	Average Credit Term (days)	Average Collection (days) ^{1/}	Proportion of the Collection Amount (%)	Average Credit Term (days)	Average Collection (days) ^{1/}	
3. Digital Printing Products							
Top 20 customers	37.07	38	59	39.62	37	53	6
Top 50 customers	59.59	37	57	58.03	37	52	5
Top 100 customers	74.78	36	58	72.46	36	51	7
Total Customer	100.00	33	58	100.00	34	49	9
including the company							
Top 20 customers	30.44	47	61	30.03	56	81	(20)
Top 50 customers	46.08	48	61	45.22	52	80	(19)
Top 100 customers	61.10	46	59	59.42	50	78	(19)
Total Customer	100.00	40	57	100.00	43	66	(9)

Note : ^{1/} Average collection period (days) is calculated from the average of the difference between the payment date and the invoice date.

The information on the collection period shown above, it can be seen that the average collection numbers are higher than the average of the original credit of all three business units; and in all groups of customers. However, the average collection period of customers in each product has improved when compared to 2022. The average receivable collection period of fire protection sanitation and air conditioning products improves 20 days, refrigeration system products improves 8 days, the digital printing system product worsens 9 days and the overall figure improves 9 days. Indicates that HARN is able to better manage debt collection. However, HARN has reviewed the credit limit, term credit and followed up on debt repayment regularly in order to reduce credit risks to be appropriate and competitive.

3) Finished Goods

Finished Goods	As of December 31						
	2023		2022		Increase/ (Decrease)	2021	
	MB	Turn Over (days)	MB	Turn Over (days)	%	MB	Turn Over (days)
1. Fire Protection & Sanitary Products and Projects	169.53	143	230.94	155	(26.59)	162.76	156
2. Refrigeration Products	72.68	164	92.95	169	(21.81)	66.71	163
3. Digital Printing Products	56.72	104	62.41	95	(9.12)	58.97	92
4. Internet of things Products (Aiyaraharn)	0.34	84	0.27	16	25.93	0.20	11
Total Finished Goods	299.27	138	386.57	141	(22.58)	288.64	137

Inventories	As of December 31						
	2023		2022		Increase/(Decrease)	2021	
	MB	%	MB	%	%	MB	%
Inventories							
Finished Goods	299.27	99.31	386.57	89.67	(22.58)	288.64	87.92
Goods in Transit	34.02	11.29	84.23	19.54	(59.61)	73.65	22.43
<u>Less</u> Allowance for obsolescence and slow moving stocks	(31.94)	(10.60)	(39.71)	(9.21)	(19.57)	(33.99)	(10.35)
Inventories - Net	301.35	100.00	431.09	100.00	(30.10)	328.30	100.00

As of December 31, 2023, HARN has inventories divided into 4 products groups which are 1) Fire protection, sanitary and air conditioning systems 2) Refrigeration system 3) Digital printing system and 4) Internet of things system with the inventory turnover (excluding goods in transit), in 2023 138 days, decreased of 3 days from the previous year. There is higher inventory turnover, faster from the gradual delivery of products prepared last year before adjusting the selling price for seller. Resulting in a decrease in inventories for Baht 87.30 million, accounting for 22.58%.

HARN has a policy to allowance for obsoleted goods or slow rotation items by setting two criteria when considering allowance for obsoleted goods or slow rotation, are 1) goods of two or more years old, 2) annual turnover rate less than 20% of each item unit of inventories for two consecutive years, HARN believes that the condition for the allowance for obsoleted goods or slow rotation will be enough conservatism to maintain the inventory value state no higher value than the Net Realizable Value according to the Thai Financial Reporting Standards, allowance for obsoleted goods or slow rotation is considered low, for the year 2023. The allowance is Baht 31.94 million decreases Baht 7.77 million, or 19.57% from the write-off and sale of slow-moving scrap products during the year in order to manage inventories efficiently and increase product storage space.

4) Investment property

Property type	Net book value (million baht) as of December 31			
	2023	2022	Increase/(Decrease)	2021
Land	135.29	135.29	-	135.29
Factory Buildings	16.89	17.38	(0.49)	17.86
Building Improvement	0.51	0.61	(0.10)	0.66
Tools and equipment	-	0.07	(0.07)	0.13
Right-of-use assets	10.16	-	10.16	-
Total investment property - net	162.85	153.35	9.50	153.94

As of December 31, 2023, the net book value of investment real estate was Baht 162.85 million and fair value of Baht 197.80 million consists of;

- 1) 5 plots of undeveloped land in size of 5-0-90 rai or 2,090.00 square wa, located at Soi Chaloem Phrakiat Rama 9, Soi 28, Dokmai Subdistrict, Prawet District, Bangkok, purchased in 2017, with cost price of Baht 114.95 million. According to the appraisal report, the price from an independent appraiser dated December 8, 2023 has a fair value of Baht 125.40 million, where the mentioned land has no obligation.
- 2) land with warehouse size of 6-2-00 rai and cost price on the date of acquisition is equal of Baht 117.00 million. The utility space of the warehouse building consists of three stalls of two-story reinforced

concrete building with utility space of 5,690 square meters, as well as the Permit for factory operation (Ror Ngor. 4). In 2020, HARN changed its objective in holding part of the land and building from being leased to being used as HARN's warehouses by cancelling one warehouse lease contract with an outsider and another warehouse lease contract with a related individual. HARN has occupied and used the as its own warehouses in the area of HARN since May 2020, HARN transferred investment property with an accounting value of Baht 74.13 million to land, building and equipment. Net book value as of December 31, 2023 of Baht 37.74 million and according to the appraisal report from an independent appraiser dated January 17, 2024, has a fair value of Baht 44.18 million.

- 3) In 2023, the purpose of use of the right-of-use assets according to the lease agreement for some area of office buildings has changed from original internally use as office space to short term lease out. The Company therefore transferred certain right-of-use assets under the building lease agreement to investment property at a cost of Baht 14.51 million with the net book value as of December 31, 2023 at Baht 10.16 million, and the fair value was assessed by the company's executive. Using discounted cash flow model of expected net cash flows to evaluate the value, with fair value of Baht 28.22 million.

HARN has income from rental of investment properties for the year ended December 2022 and 2023 in the amount of Baht 3.83 million, and Baht 6.91 million respectively and operating expenses in the amount of Baht 0.88 million and Baht 2.55 million respectively. From a warehouse tenant, the lease agreement started on July 1, 2021 and will expire on June 30, 2024. Harn and the tenant has been using the full capacity of the warehouse. Meanwhile, the right to use the office building only for the purpose of short term lease out as of December 31, 2022 and 2023 has an occupancy rate of 36% and 45%, respectively.

5) Property, Plant and Equipment

Property type	Net book value (million baht) as of December 31			
	2023	2022	Increase/(Decrease)	2021
Land	37.36	37.36	-	37.36
Buildings and structures	31.72	32.63	(0.91)	33.54
Tools and equipment	2.86	3.90	(1.04)	4.40
Furniture and office equipment	18.12	22.30	(4.18)	26.14
Vehicle	7.61	6.54	1.07	8.55
Assets for rent and demonstration	19.93	21.21	(1.28)	25.17
Assets in progress	3.06	0.62	2.44	0.62
Total Property, Plant and Equipment	120.66	124.56	(3.90)	135.78

As of December 31, 2023, HARN has property, plant and equipment - net of Baht 120.66 million, decreased from assets amortization and more depreciation during the year. There are capital expenditure obligations of Baht 1.23 million.

6) Assets Right-of-Use

Property Type	Net book value (million baht) as of December 31			
	2023	2022	Increase/(Decrease)	2021
Buildings	63.70	83.24	(19.54)	93.49
Office equipment	0.41	-	0.41	0.76
Total Assets Right-of-Use, net	64.11	83.24	(19.13)	94.25

As of December 31, 2023, HARN has net assets right-of-use in the value of Baht 64.11 million, which is a decrease from transferring it out as investment property with a cost price of Baht 14.51 million and amortization expenses incurred during the year. Assets under right-of-use consists of the lease contract for the headquarters building, the expected rental period including contract renewal is 10 years, after which there may be negotiations to further extend the contract and the lease contract for photocopier office equipment, lease period of 4 years. HARN does not recognize assets right-of-use for a lease contract that has a contract period of less than 12 months and does not have the right of purchasing or lease contract in which reference assets have low value. All of which are according to the financial reporting standard no.16 regarding lease contract.

Regarding changes of accounting standards concerning the said lease contract, there has been a change from recording the paid lease in each installment as expenses to a recognition of assets right-to-use and liability according to the lease contract, in which assets right-to-use was gradually disposed of as amortization and financial cost recognized throughout the lease period. The said changes cause the return on asset ratio to decrease, debt to equity ratio to increase and profit before financial cost, income tax, depreciation and amortization (EBITDA) increase.

7) Goodwill and Customers Relationship

Property Type	Net book value (million baht) as of December 31			
	2023	2022	Increase/(Decrease)	2021
Goodwill	334.67	334.67	-	334.67
Customer relationship	104.31	104.31	-	104.31
Less accumulated amortization	(104.31)	(91.68)	12.63	(77.83)
Customers relationship - Net	-	12.63	(12.63)	26.48
Total Goodwill and customer relationship	334.67	347.30	(12.63)	361.15

Goodwill is an intangible asset to HARN. It arrives from entire business transfer from Chillmatch Co., Ltd and QIIS Co., Ltd. It is done by issuing shares of Baht 675.36 million. The swap ratio is equal 0.67. This is to exchange for net identified assets of both companies at fair prices of Baht 340.69 million. This leads to intangible assets being valued at Baht 334.67 million. Under the financial reporting standards, Goodwill must be reviewed every year for impairments. During the year 2023, the management team of HARN prepared a financial forecast for the business units of the refrigeration and digital printing systems to test the value proposition. The evaluation of the value in use was calculated using the Discounted Cash Flow (DCF) method based on the present value of future free cash flow, estimated for the next 5 years (from January 1, 2024 to December 31, 2028), discounted by the weighted average cost of capital (WACC) rate of 4.01%. The terminal growth rate was adjusted to 0%. The present value was calculated by discounting the cash flow using a discount rate that reflects the risk specific to each asset unit, with the management believing that there will be no decline in the value proposition. In other words, the present value of the net cash flow of each asset unit generates more cash flow than the identified intangible and fixed assets of the business unit.

Customer relationship are intangible assets, estimated from the business' values of Chillmatch Co., Ltd and QIIS Co., Ltd by the certified appraiser from the list of the Securities and Exchange Commission. As reported on October 3, 2016, HARN issued policy to write off customer related intangibles with straight-line method for 7 years as of December 31, 2023, HARN fully amortized the customer relationships amount. Therefore, the balance does not appear in the consolidated financial statements.

8) Trade and Other Current Payables

Trade and Other Current Payables	As of December 31						
	2023		2022		Increase/(Decrease)	2021	
	MB	Turn Over (days)	MB	Turn Over (days)	%	MB	Turn Over (days)
Trade Payables	106.51	65	168.73	53	(36.88)	115.25	48
Other Payables							
• Accrued Expenses	47.53	n/a	43.24	n/a	9.92	42.27	n/a
• Others	58.11	n/a	58.54	n/a	(0.73)	46.43	n/a
Total Trade and Other Current Payables	212.15	65	270.51	53	(21.57)	203.95	48

The payment period for debts in 2023 is 65 days, which is longer than in 2022, when the payment period was 53 days. This has a positive impact on managing working capital and cash-flow cycles. As a result, the trade payables and other current payables decreased by Baht 58.36 million, which is a 21.57%. Some of this decrease is due to a decrease in inventory purchases compared to last year.

9) Cash Conversion Cycle

Description	For the year ended December 31			
	2023	2022	Increase/(Decrease)	2021
Average collection period (days)	71	71	-	81
Average sales period (days)	138	141	(3)	137
Less Average repayment period (days)	(65)	(53)	(12)	(48)
Cash Conversion Cycle (days)	144	159	(15)	170

HARN has the cash cycle in 2023 in the amount of 144 days, circulatory is 15 days faster than last year. Due to a decrease in inventory quantity and an increase in debt repayment period, the sales period has decreased. However, HARN has a policy of maintaining a relationship with foreign partners by whom HARN was appointed as a distributor of world-famous products, if HARN loses its distribution of significant branded products, it may cause the long-term revenue of HARN. To maintain the good relationship, it should be initiated from the maintenance of financial credit and still able to bargain prices of products and services. The cost of the product was the most important cost of the trading company which would increase the competitiveness and maintain the profitability of HARN sustainably.

10) Types of Credit Limits and Interest Rates

Types of credit	Facilities (Million Baht)		Interest rates (% per annum)	
	2023	2022	2023	2022
Overdraft	9.00	9.00	MOR, MOR-0.50	MOR, MOR-0.50
Letter of Credit / Trust Receipt	120.00	120.00	MLR-1, MMR	MLR-1, MMR
Letter of Guarantee	74.00	74.00	1.00 – 1.25%	1.25 - 2%
Forward Contract	410.00	410.00	-	-
Total	613.00	613.00		

Forward Contract

(Million USD)	7.00	7.00
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In 2023, HARN's current ratio has increased to of 4.18 times, compared to 3.35 times in 2022. HARN is still has good efficient in managing its liquidity and working capital and obtains capital structure that is not of loan from banks nor financial institutions. Therefore, there is not payable interest and debt to equity ratio is relatively low. HARN has credit facilities to support the expansion of its businesses and/or to invest in engineering business in the future.

11) Foreign Exchange Risks

Currency	2023		2022	
	Proportion of Import according to Currency (%)	Proportion of Foreign Exchange Forward Contract Executed (%)	Proportion of Import according to Currency (%)	Proportion of Foreign Exchange Forward Contract Executed (%)
United States Dollar	50.89	88.77	52.52	96.59
Euro	22.05	98.20	20.26	98.91
Pound Sterling	26.26	99.45	26.39	101.43
Yen	0.43	77.32	0.42	76.27
Singapore Dollars	-	-	0.02	90.91
Other	0.37	-	0.39	-
	<u>100.00</u>		<u>100.00</u>	

*Information in the above table is from the separated financial statement of HARN.

Currency	As of December 31, 2023			As of December 31, 2022		
	Trade account payables	Risk hedging		Trade account payables	Risk hedging	
		Foreign Exchange Forward Contract (Balance)	% Proportion		Foreign Exchange Forward Contract (Balance)	% Proportion
United States Dollar	506,863	486,231	95.93	2,361,477	1,837,067	77.79
Euro	689,670	360,862	52.32	440,054	304,454	69.19
Pound Sterling	435,244	359,968	82.70	552,651	421,911	76.34
Yen	1,284,300	-	-	1,428,500	-	-

*Information in the above table is from the separated financial statement of HARN.

12) Foreign Exchange Gain and Loss

unit : Million Baht

Description	2023	2022	Increase/(Decrease)	2021
Unrealized gain (loss) on exchange rate	(0.14)	0.13	(0.27)	1.47
Realized gain (loss) on exchange rate	3.11	(0.02)	3.13	2.14
Total gain (loss) on exchange rate	2.97	0.11	2.86	3.61

HARN entered into forward contracts with banks, based on consideration of appropriate foreign exchange and delivery period to ensure availability for debt settlement and by keeping abreast of updated information on and analysis of foreign exchange reporting to decrease currency volatility risk. On average, while most of the sales of products are domestic products in Thai baht currency. It is, sometimes, impractical to adjust the product price in accordance with the increased cost of the product immediately. Therefore, HARN may be affected by the fluctuation of exchange rates which will affect the cost of products and the gross profit of HARN. However, HARN has an agreement for some customers to settle prices in USD, EUR and GBP on HARN's foreign currency deposit accounts. It is considered that HARN protects against exchange rate risks naturally.

As of December 31, 2023 and 2022, HARN had protected against the risks in currency exchanges of USD, EUR and GBP for its trade payables in foreign currencies, including the purchase orders which cannot be cancelled (Firmed Commitment) due to HARN issued sales orders to customers by agreeing to the terms of payment in Thai baht. HARN has no policy to speculate in currency fluctuations since it is not a core business and does not have enough expertise in forecasting future movements in exchange rates, but it only wants to reduce the exchange rate risk that will affect the inflow and outflow in the future to be in a controlled level. As a result of the aforementioned impacts, HARN recognized foreign exchange gain in the year 2023 and 2022 of Baht 2.97 million and Baht 0.11 million respectively.

Moreover, as of the end of 2023 and 2022, HARN had a USD 0.95 million deposits and USD 0.43 million deposits respectively from a local institution in order to protect the foreign exchange risk of product orders from abroad as well.

4.1.3 Liquidity and Working Capital

1) Cash Flows from HARN's Financial Statement

unit : Million Baht

Description	For the year ended December 31			
	2023	2022	Increase/(Decrease)	2021
Net Cash Flow from Operating Activities	197.61	91.98	105.63	68.25
Net Cash Flow from (Used in) Investing Activities	27.42	(62.25)	89.67	(45.69)
Net Cash Flow from (Used in) Financing Activities	(87.48)	(69.81)	(17.67)	(86.76)
Effect of translation adjustment on foreign currency financial statements	(0.22)	0.11	(0.33)	0.96
Net Increase (Decrease) in Cash and Cash Equivalents	137.33	(39.97)	177.30	(63.24)
Cash and Cash Equivalents - B/F	202.86	242.83	(39.97)	306.07
Cash and Cash Equivalents - C/F	340.19	202.86	137.33	242.83

Analyzing the Cash Flows Statement for the year ended December 31, 2023

HARN has net cash flows from the business operation in 2023 of Baht 197.61 million, increases Baht 105.63 million when compared to 2022, mainly due to the increase in net profit Baht 24.32 million, and inventories decreased by Baht 135.25 million. While the trade accounts payable and other accounts payable decreased by only Baht 59.04 million,

The cash flow from in the investment activity for 2023 in the value of Baht 27.42 million, from receiving money from bond redemption equal to Baht 50 million, investing in other current financial assets equal to Baht 15.84 million baht, and purchasing equipment and intangible assets equal to Baht 11.46 million.

The cash flows used for financing came from the dividend declaration at the rate of Baht 0.13 per share, representing Baht 75.98 million and the settle of lease liability is equal to Baht 11.38 million.

Analyzing the Cash Flows Statement for the year ended December 31, 2022

HARN had net cash flows from the business operation in 2022 of Baht 91.98 million, a decrease Baht 23.73 million when compared to 2021, mainly due to the increase in net profit Baht 16.62 million, trade accounts receivable current receivables decreased by Baht 10.48 million and inventories increased by Baht 109.12 million. While the trade accounts payable and other accounts payable increased by only Baht 69.10 million,

The cash flow used in the investment activity for 2022 in the value of Baht 62.25 million is from the purchase of investment unit of mutual fund in the amount of Baht 58.56 million and intangible assets of Baht 7.22 million, receive dividend from investment equal to Baht 2.53 million and debt payment according to the lease contract in the amount of Baht 11.36 million.

The cash flows used for financing was from the dividend declaration at the rate of Baht 0.10 per share, representing Baht 58.45 million.

2) Capital Structure from the Financial Statement as of December 31, 2023

HARN has the total liabilities on the December 31, 2023 of Baht 370.85 million, a decrease of 63.63 million baht from the previous year, accounted for 14.65%. The decrease mainly from trade and other payables. Components of the liabilities were account payables and other payables income tax, deferred tax, employment benefits and lease liabilities etc. without debt burden in the form of interest expenses from financial institutions loan. With HARN's capital structure that does not to rely on any bank loans this results in HARN having no interest expense and HARN high liquidity and low debt to equity ratio, making HARN able to payout its dividends to shareholders consistently.

The operating results of 2022 - 2023, has the dividends were paid at Baht 0.13, and Baht 0.15 per share, the dividend payout ratio per net profit equal to 86.67% and 75.00% respectively. However, the annual dividend for the operating results for 2023 at Baht 0.15 per share, is not confirmed until the approved by the Annual General Meeting of Shareholders.

3) Important Financial ratios

Financial Ratio		2023	2022	Increase/(Decrease)	2021
Debt to equity (D/E ratio)	Times	0.27	0.32	(0.05)	0.28
Return on asset (ROA) ^{1/}	%	8.20	6.58	1.62	5.52
Return on Equity (ROE) ^{2/}	%	8.35	6.66	1.69	5.49

Note : ^{1/} Use EBIT in calculation

^{2/} Use net profit in calculation

HARN has important financial ratios as follow: Debt to Equity Ratio in 2022 and 2023 at 0.32 and 0.27 times, the return on assets ratio (ROA) in 2022 and 2023 at 6.58% and 8.20% and the return on equity ratio (ROE) of 2022 and 2023 equal to 6.66% and 8.35%, respectively. As can be seen, the liability-related ratio is low because HARN does not incur liability or rely on loans from any sources. Total liabilities appearing in the consolidated financial statements are mainly trade payable and other payables, and finance lease liability from office buildings, warehouses, and equipment renting, or accounting for 16.69% of total assets. Moreover, this year the company's profit efficiency has increased, with ROA increasing for 1.62% and ROE increasing for 1.69% compared to the previous year, respectively.

4.2 Factors That May Impact Future Operations

4.2.1 Factors on Environmental and Social Trends and Impacts

HARN frames and assesses material issues in Environmental, Social and Governance Dimension (ESG) that may impact the organization's operations and stakeholders. The process is informed by analysis of internal and external factors, impact analysis of its business on stakeholders throughout the value chain of all business units, along with global trends, directions and risks. These materiality inputs are then incorporated in strategy formulation and risk assessment. In 2023, climate change remains one of the key materiality issues. Particularly at COP 28 at Dubai, United Arab Emirates Thailand has become more aware of global warming and the government has improved the action plan to reduce greenhouse gases. According to the participation goals set in 2030 to cover all economic sectors. It is a step towards fully solving the problem of climate change. To make Thailand move towards a low carbon society.

Moreover, HARN recognizes that managing climate change is a material issue that brings forth both opportunity and challenge, and therefore mainstreaming it as a critical element in strategy and risk management to according organization's new vision and mission, as reflected in the consistent commitment to implement sustainability strategy of environmental driven by Go Green according to the economic model BCG (Bio-Circular-Green) or the bio-economy - circular economy - green economy, towards low-carbon society and sustainable business conduct. HARN's target of Carbon Neutrality by 2040, and Net Zero emission by 2050.

Details show in Section 1 "3.4.2 Environmental Performance" page 80-86.

4.2.2 Financial Support to Subsidiaries

Short-term loans

During 2023, HARN provided short-term loans to AIYARAHARN CO., LTD. (a subsidiary in Thailand, HARN holds 65% of shares) in the form of 5 promissory notes for Baht 1 million. The promissory notes have a term of 6 months, with interest rate at 6.8675% - 7.1175% per year. (Based on the MLR interest rate of 4 major commercial banks) with payment due scheduled for February to June 2024.

Long-term loans

As of March 12, 2020, HARN has signed a loan agreement with HARN Vietnam Co., Ltd. (a subsidiaries in Vietnam, HARN holds 100% of share) in the amount of 200,000 US Dollars, with an interest of 6.15% per year, repayment deadline within one year, and later, on March 11, 2021 which was the expiration date of the agreement, HARN extended the said loan agreement with the subsidiaries for another 5 years, with the expiration of the agreement to be on March 11, 2026 and with an interest of 5.85% per year.

Consent to utilize a joint bank guarantee

Furthermore, HARN has allowed its subsidiary, Aiyaraharn Company Limited (in which HARN holds a 65% stake), to utilize bank guarantee letters and a credit limit from HARN as collateral for business purposes, up to a maximum limit of Baht 5 million.

4.2.3 Policy and Term of Trade Credit

HARN has credit management criteria in order to achieve appropriate risk management of HARN. Management

policy concerning new customers is set starting from the customer selection process, credit analysis, debt collection and constant revision of loan provided to former customers.

4.3 Important Financial Information

Presented financial position and performance consist of financial performance for the year ended December 31, 2023 and 2022 audited by certified public accountant, Dharmniti Auditing Co., Ltd.

Year	Name	License No.	Auditing Company
2017 - 2023	Mr. Thanawut Piboonsawat	6699	Dharmniti Auditing Co., Ltd.,

Cumulative Effects of Changes in Accounting Policies

In 2023, there was no significant change in accounting policy on the financial statements.

Audit Report Summary

Financial statements for 2017 until 2023 were audited by Mr. Thanawut Pibulsawad, a licensed auditor with registration number 6699 of Dharmniti Auditing Co., Ltd., who is an approved auditor by the Securities and Exchange Commission. The said auditor expressed the view that consolidated financial statement and separate financial statement of HARN have shown financial status, performance and cash flow on the same day of the end of the year to be correct and appropriate in important substance according to the financial report standards. In addition, Key Audit Matters relating to revenue recognition from sales and services have indicated that in 2023, HARN has earned revenues from important business units of 5 product groups which are fire extinguishing system products and projects, sanitary and air conditioning system products, refrigeration system products, digital printing system products and IT solution for building system products. Each product group has different sale terms and conditions and price setting, including income from services according to the contract of fire extinguishing system installation project. Based on estimation of compliance with obligations according to the contract, this has effect on the income in which the Company's group recognized throughout a certain period. The Company has to recognize income according to the progress made in compliance with the obligations that must be completed, in which the auditor has responded to the risk by having formed an understanding and testing of the operation procedure and internal control relating to income recognition, revision of the design and compliance with the internal control regarding the said matter, auditing of the contents of terms and conditions of sales and services contract that occurred during the year and during the date near the end of accounting period, examination of credit notes issued by HARN after the end of the year, comparative analysis of statements and testing of details related to sales and services revenues.

Furthermore, HARN has audited impairment of goodwill from purchase and transfer of entire business of Chillmatch Co., Ltd. and a subsidiaries company, under the Entire Business Transfer criteria. Testing of the impairment is significant to the auditing because the said value is a significant amount to the financial statement. Testing procedures of the impairment by the executives are complicated and require judgment in establishing assumptions especially in the estimation of cash inflow and outflow in the future that the Company expect to receive from continuous operation of asset unit that creates cash and the use of appropriate discount rate. The said assumptions can change according to the economic situations and market conditions in the future. HARN has disclosed information regarding the accounting policy and important assumptions in the note of the financial statement. Auditor has responded to the risk by considering the reasonability of the assumptions and the procedures in which the executives used in the calculation of the estimation of future expected cash flow, auditing of supporting evidences, which demonstrate the best estimation of the executives, especially regarding the prediction of the revenue growth, gross profit and profit from operations of work section, the use of appropriate discount rate to discount the future cash flow, testing of the calculation of the expected received value, including giving importance to the sufficiency of disclosing information relating to assumptions, which would affect the most sensitive testing result of the impairment, and have the most significant impact on the determination of the recovery amount of the goodwill.

4.3.1 Statement of Financial Position

Statement of Financial Position	Consolidated financial statements As at December 31					
	2023		2022		2021	
	Audit		Audit		Audit	
	Million Baht	%	Million Baht	%	Million Baht	%
ASSETS						
CURRENT ASSETS						
Cash and cash equivalents	340.19	19.39	202.86	11.38	242.83	14.41
Trade and other current receivables	286.83	16.35	256.98	14.41	255.44	15.15
Current contract assets	23.19	1.32	13.15	0.74	10.22	0.61
Inventories	301.34	17.18	431.09	24.18	328.30	19.48
Other current financial assets	50.42	2.87	96.72	5.42	39.61	2.35
Other current assets	0.33	0.02	0.73	0.04	1.30	0.08
TOTAL CURRENT ASSETS	1,002.30	57.14	1,001.53	56.17	877.70	52.07
NON-CURRENT ASSETS						
Trade and other non-current receivables	11.00	0.63	16.98	0.95	9.18	0.54
Investment property	162.85	9.28	153.35	8.60	153.94	9.13
Property, plant and equipment	120.66	6.88	124.56	6.99	135.78	8.05
Right-of-use assets	64.11	3.66	83.24	4.67	94.25	5.59
Goodwill	334.67	19.08	334.67	18.77	334.67	19.85
Customer relationship	-	-	12.62	0.71	26.48	1.57
Intangible assets	11.51	0.66	11.82	0.66	15.99	0.95
Deferred tax assets	17.31	0.99	15.18	0.85	9.43	0.56
Other non-current assets	29.62	1.69	29.15	1.63	28.30	1.68
TOTAL NON-CURRENT ASSETS	751.73	42.86	781.57	43.83	808.02	47.93
TOTAL ASSETS	1,754.03	100.00	1,783.10	100.00	1,685.72	100.00
LIABILITIES AND SHAREHOLDERS' EQUITY						
CURRENT LIABILITIES						
Trade and other current payables	212.15	12.10	270.51	15.17	203.95	12.10
Current portion of lease liabilities	10.44	0.60	9.23	0.52	9.06	0.54
Short-term loan from related party	0.45	0.03	0.50	0.03	0.50	0.03
Corporate income tax payable	13.08	0.75	13.41	0.75	8.70	0.52
Other current provisions	1.73	0.10	2.31	0.13	2.10	0.12
Other current liabilities	1.92	0.11	2.68	0.15	1.41	0.08
TOTAL CURRENT LIABILITIES	239.77	13.67	298.64	16.75	225.72	13.39
NON-CURRENT LIABILITIES						
Lease liabilities	70.06	3.99	78.35	4.39	87.38	5.18
Deferred tax liabilities	-	-	-	-	0.05	0.00
Non-current provisions for employee benefit	34.04	1.94	30.76	1.73	27.97	1.66
Other non-current liabilities	26.97	1.54	26.73	1.50	26.07	1.55
TOTAL NON-CURRENT LIABILITIES	131.07	7.47	135.84	7.62	141.47	8.39
TOTAL LIABILITIES	370.84	21.14	434.48	24.37	367.19	21.78
SHAREHOLDERS' EQUITY						
Authorized share capital	292.25	16.66	292.25	16.39	292.25	17.34
Issued and paid-up share capital	292.25	16.66	292.25	16.39	292.25	17.34
Share premium on ordinary shares	776.42	44.26	776.42	43.54	776.42	46.06
Surplus on share-based payment transaction	5.00	0.29	6.03	0.34	6.40	0.38
Retained earnings						
Appropriated - legal reserve	29.23	1.67	29.23	1.64	29.22	1.73
Unappropriated	280.74	16.01	244.04	13.69	213.71	12.68
Other components of shareholders' equity	(0.21)	(0.01)	0.02	0.00	(0.04)	(0.00)
TOTAL EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT	1,383.43	78.87	1,347.99	75.60	1,317.97	78.18
NON - CONTROLLING INTEREST	(0.24)	(0.01)	0.63	0.04	0.57	0.03
TOTAL SHAREHOLDERS' EQUITY	1,383.19	78.86	1,348.62	75.63	1,318.54	78.22
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	1,754.03	100.00	1,783.10	100.00	1,685.72	100.00

4.3.2 Statement of Comprehensive Income

Statement of Comprehensive Income	Consolidated financial statements					
	For the year ended December 31					
	2023 Audit		2022 Audit		2021 Audit	
	Million Baht	%	Million Baht	%	Million Baht	%
Revenues from sales and rendering of services	1,299.62	100.00	1,219.66	100.00	1,025.98	100.00
Cost of sales and rendering of services	(908.61)	(69.91)	(873.26)	(71.60)	(713.71)	(69.56)
Gross Profit	391.01	30.09	346.40	28.40	312.27	30.44
Other income	26.61	2.05	22.63	1.86	20.15	1.96
Distribution cost	(113.85)	(8.76)	(113.16)	(9.28)	(107.57)	(10.48)
Administrative cost	(158.83)	(12.22)	(141.82)	(11.63)	(132.50)	(12.91)
Profit from operating activities	144.94	11.15	114.05	9.35	92.35	9.00
Finance cost	(2.92)	(0.22)	(2.30)	(0.19)	(2.31)	(0.23)
Profit before tax expenses	142.02	10.93	111.75	9.16	90.04	8.78
Tax expense	(28.85)	(2.22)	(22.90)	(1.88)	(17.81)	(1.74)
Profit for the year	113.17	8.71	88.85	7.28	72.23	7.04
Profit attributable to owners of the parent	114.04	8.77	88.78	7.28	72.27	7.04
Other comprehensive income						
Components of other comprehensive income that will be reclassified to profit or loss :						
Exchange differences on translating financial statement	(0.23)	(0.02)	0.06	-	0.42	0.04
Components of other comprehensive income that will not be reclassified to profit or loss:						
Gains (losses) on re-measurements of defined benefit plans, net of tax	(1.37)	(0.11)	-	-	0.83	0.08
Total comprehensive income for the year	111.57	8.58	88.91	7.29	73.48	7.16
Total comprehensive income attributable to owners of the parent	112.44	8.65	88.84	7.28	73.52	7.17
Basic earnings per share - profit attributable to owners of the parent	0.20		0.15		0.12	
Weighted average number of ordinary shares (shares)	584,500,000		584,500,000		584,500,000	

4.3.3 Statement of Cash Flows

STATEMENT OF CASH FLOWS	Consolidated financial statements		
	For the year ended December 31		
	2023	2022	2021
	Audit	Audit	Audit
	Million Baht	Million Baht	Million Baht
Cash flows from operating activities			
Profit for the year	113.17	88.85	72.23
Adjustments to reconcile profit for the period to cash received (paid)			
Bad Debt and Allowance for Doubtful Accounts (Reversal)	(3.54)	1.42	2.81
Loss on devaluation of inventories (Reversal)	(7.76)	5.75	3.92
Depreciation and amortization	29.17	31.26	30.17
Amortization of customer relationship	12.62	13.85	13.85
Loss on disposals of equipment	0.20	0.08	0.26
Unrealized (gain) loss on exchange rate	0.14	(0.14)	(1.46)
Unrealized (gain) loss on revaluation of other current financial assets	12.33	1.50	(2.86)
Loss on impairment of equipment	-	-	(0.05)
Interest income	(1.04)	(0.22)	(0.18)
Dividend income	(3.25)	(2.53)	-
Employee's benefit expenses	2.71	2.80	1.91
Employee Joint Investment Program expenses	3.60	4.56	7.22
Finance cost	2.92	2.29	2.31
Tax expense	28.85	22.90	17.81
Profit from operating before changes in operating assets and liabilities	190.12	172.37	147.95
(Increase) decrease in operating assets			
Trade and other current receivables	(19.69)	(10.44)	(4.83)
Current contract assets	(10.34)	(2.95)	2.58
Inventories	135.25	(109.12)	(78.31)
Other current assets	0.26	0.65	(0.91)
Other non-current assets	(0.17)	(0.61)	(3.12)
Increase (decrease) in operating liabilities			
Trade and other current payables	(59.04)	69.10	34.06
Other current provisions	(0.58)	0.21	0.35
Other current liabilities	(0.76)	1.27	(0.23)
Non-current provisions for employee benefit	(1.15)	-	(0.66)
Other non-current liabilities	0.25	0.66	1.13
Cash generated from operating	234.15	121.14	98.01
Employee joint investment program expenses paid	(5.49)	(4.92)	(4.56)
Income tax paid	(31.05)	(24.24)	(25.20)
Cash flows from investing activities	197.61	91.98	68.25
Cash payments for purchases of temporary investments			
Cash receipts from redemption of other current financial assets	(15.84)	(58.57)	(29.79)
Cash receipts from redemption of temporary investment	50.00	-	-
Cash payments for purchases of investment property	-	(0.06)	-
Cash payments for purchases of equipment	(7.99)	(6.70)	(14.10)
Cash receipts from disposal of equipment	0.61	0.90	0.17
Cash payments for purchases of intangible assets	(3.47)	(0.52)	(2.15)
Interest received	0.86	0.17	0.18
Dividend received	3.25	2.53	-
Net cash provided by (used in) investing activities	27.42	(62.25)	(45.69)
Cash flows from financing activities			
Cash receipt from short-term loans	0.70	0.60	-
Cash payments for short-term loans from financial Institutions	(0.75)	(0.60)	0.50
Cash payments for lease liabilities	(11.38)	(11.36)	(11.28)
Interest paid	(0.07)	-	-
Dividend paid	(75.98)	(58.45)	(75.98)
Net cash used in financing activities	(87.48)	(69.81)	(86.76)
Net increase (decrease) in cash and cash equivalents	137.55	(40.08)	(64.20)
Cash and cash equivalents at beginning of year	202.86	242.83	306.07
Effect of translation adjustment on foreign currency financial statements	(0.22)	0.11	0.96
Cash and cash equivalents at end of year	340.19	202.86	242.83

4.3.4 Financial Ratios

KEY FINANCIAL INFORMATION	UNIT	Consolidated financial statements		
		2023	2022	2021
FINANCIAL POSITION				
Total Assets	MB.	1,754.03	1,783.10	1,685.72
Total Liabilities	MB.	370.85	434.48	367.19
Equity Attributable to Parent Company	MB.	1,383.42	1,347.99	1,317.97
OPERATING RESULTS				
Sales and Services Revenues	MB.	1,299.62	1,219.66	1,025.98
Total Revenues	MB.	1,326.23	1,242.29	1,046.13
Costs of Sales and Services	MB.	908.61	873.26	713.71
Gross Profit	MB.	391.01	346.40	312.27
Net Profit : Shareholders of the parent company	MB.	114.04	88.78	72.27
Total Comprehensive Income : Shareholders of the parent company	MB.	112.44	88.84	73.52
FINANCIAL RATIOS				
Return on Equity ^{1/}	%	8.35	6.66	5.49
Return on Assets ^{2/}	%	8.20	6.58	5.52
Gross Profit Margin	%	30.09	28.40	30.44
Net Profit Margin ^{1/}	%	8.53	7.15	6.90
Debt to Equity Ratio	Times	0.27	0.32	0.28
Total Assets Turnover Ratio	Times	0.75	0.72	0.63
Per Share Data				
Par Value	Baht	0.50	0.50	0.50
Book Value	Baht	2.37	2.31	2.25
Dividend per share ^{3/}	Baht	0.15	0.13	0.10
Basic Earnings/(Loss) per Share	Baht	0.20	0.15	0.12

Note: Referring to consolidated financial statement of Harn Engineering Solutions Pcl.

1/ Net profit/ (Loss) used in calculation

2/ Earnings before interest and taxes used in calculation

3/ Not confirmed until the approved by the 2024 Annual General Meeting of Shareholders

5. General Information and Other Important Information

5.1 General Information

Company Name	Harn Engineering Solutions Public Company Limited
Abbreviation	HARN
Stock Exchange	mai
Registered Number	0107557000217
Industry Sector	Service
First Trade Date	November 13, 2014
Par Value	0.50 Baht
Type of Business	Import and distribution of products used in building engineering system, i.e. fire suppression system, air-conditioning system, sanitary system, refrigeration system and digital printing system, provide development IOT Products and Solutions, including the provision of consulting, designing services in projects and provision of engineering solutions complete
Authorized Capital	292,250,000 Baht
Paid-up Capital	292,250,000 Baht
Fully Paid-Up Common Shares	584,500,000 Share
Voting Right Ratio	1 : 1
Head Office	559 Soi Soonvijai 4, Rama 9 Road, Bangkapi, Huaykwang, Bangkok 10310 Phone (02) 318-9744 Fax (02) 318-9744 ext. 4000 Website www.harn.co.th
Subsidiary	Harn Vietnam Co., Ltd. 68 Nguyen Hue, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam. Aiyara Harn Co., Ltd. 559 Soi Soonvijai 4, Rama 9 Road, Bangkapi, Huaykwang, Bangkok 10310
Warehouse	The main warehouse, 888/14-16 Moo.21, Bang Phli Yai, Bang Phli, Samut Prakan 10540, Phone (02) 105-3295 The 2 nd warehouse, 509 Soi Soonvijai 4, Bangkapi, Huaykwang, Bangkok 10310, Phone (02) 318-9744 The 3 rd warehouse, 38/43, Moo 4, Lam Luk Ka Road, Lam Luk Ka, Lam Luk Ka, Pathum Thani 12150
Company Secretary	Miss Wasukan Boonmee Phone (02) 318-9744 ext. 4011 Email wasukan.b@harn.co.th
Investor Relations	Mr. Wirat Sukchai Phone (02) 318-9744 ext. 5001 Email wirat.s@harn.co.th
The person taking the highest responsibility in finance and accounting	Mr. Wisit Wachiralappaitoon Phone (02) 318-9744 ext. 4004 Email wisit.w@harn.co.th
The person supervising accounting	Miss Ananya Proyngoen Phone (02) 318-9744 ext. 4090 Email ananya.p@harn.co.th
References	Securities Registrar the Stock Exchange of Thailand Building 93 Ratchadaphisek Road, Dindaeng, Dindaeng, Bangkok 10400 Thailand Phone (02) 009-9999 Fax (02) 009-9991 Website http://www.set.or.th/tsd
Auditor	Dharmniti Auditing Co., Ltd. 178 Dharmniti Building 6-7th Floor, Soi Permsap (Pracha Chuen 20), Pracha Chuen Road, Bangsue, Bangkok, 10800 Phone (02) 596-0500 Fax (02) 596-0560

5.2 Other Important Information

- None -

5.3 Legal Disputes

HARN and its subsidiaries have a lawsuit in the Civil Court with a total amount of Baht 11.01 million. Later, on 11 July 2023, HARN entered into a reconcile agreement with the parties in the court. HARN agreed to pay compensation from termination of the labor contract of Baht 0.76 million within 30 days and the court found that the agreement was legitimate according to the reconcile agreement, and the case is closed. HARN has fully recognized the compensation as an expense in the statement of comprehensive income for the years ended of 31 December 2022 and 2023.

Section 2



Corporate Governance

6. Corporate Governance Policy and Corporate Governance Milestones

6.1 Overview on Corporate Governance Policy and Guidelines

HARN has a committed to be a leading provider of sustainable total of Fire Protection System, Refrigeration System, Digital Printing System, and biological 3D printing system, including provide development IoT Products and Solutions that meet customer needs to improve quality of life, society, and environment. Conducting an honest, transparent, and accountable business, sets its business on corporate governance principles and a code of conduct, recognized as basic requirements for efficient business operations and key foundation for building confidence from all stakeholders, to raise competitiveness, and to promote sustainable growth and can adapt to the changes of various environmental factors.

The Board of Directors (The Board) developed a Corporate Governance Policy, as well as code of conduct in business of all directors, executives, and employees, adhered to this as its guideline been practicing since 2013 has published through website, www.harn.co.th, which was reviewed related principles and practices regularly to improve the standard of operations to comply with Good Corporate Governance Principles (CG) of Securities and Exchange Commission (SEC) and Stock Exchange of Thailand (SET).

HARN has defined that corporate governance is part of the vision, mission, and values of the organization. The goal is to be a company with sustainable business of continuous growth, promotes the development of innovation and technology along with creating business cooperation based on corporate governance, transparency and sustainability.

Corporate Governance Policy Principles

To illustrate the commitment that adheres to as an operating framework application of such policy and code of conduct to their jobs. The Board's policy on Corporate Governance of HARN is as follows:



1. The Board of Directors, Executives and all employees must perform their duties with determination, commitment and responsibility to the best of their ability for the benefits of the HARN and to uphold the 5 international standard principle of corporate governance (REACT) with understanding to conduct business, and confidence, thus resulting in a corporate culture, as well as to executing their duties under applicable laws, regulations, and requirements strictly.
2. The Board of the Directors has a significant role together with the Executives to set the visions, strategies policies and important plans, including establishing the management structures that relates fairly between the Board of Directors, the Executives and the shareholders and to plan the management guidelines and the appropriate business operations including making sure that the accounting system, the financial report and the accounting audit are reliable.
3. The Board of Directors and the Executives must be the leaders in terms of ethics and be an example for working with honesty, fairness, transparently and accountable.
4. The Board of Directors, the Executives and all employees must uphold fairness by treating all stakeholders equally, including keeping watch, control and prevent anyway decisions or actions that may have conflict of interests with relating issues.
5. The Board of Directors must operate with the efficient anti-corruption system including reporting regularly to ensure that all directors, executives and employees is aware and emphasizes include follows the anti-corruption policies strictly.
6. Compliance with the corporate governance policy of HARN is considered an important key performance index in evaluating the business management of the Board of Directors and the Executives and to assess the performance of employees.

On March 29, 2023, the Board reviewed and approve improve its Corporate Governance Policies, Code of Conduct, Charter and Risk Management Policies to comply with the revised criteria, including reviewing the Anti-Corruption Measures manual, its information covers important practices, were announced within the organization and disclosed on HARN's intranet on April 3, 2023, and requires all directors, management, and employees to acknowledge and observe all policies in the course of their works, including disclosed on website, www.harn.co.th both Thai and English are for investor and stakeholders to use or use for reference.

6.2 Policy and Guidelines and Performance for the Board

The Board of Director shall comprise the person who has knowledge, expertise, and experience considered beneficial to HARN. They shall devote their time to their duties and endeavor to perform them well to oversee HARN operations, including the appointment of Board-Committees to responsible for the specific affairs assigned, and Company Secretary, to manage meetings and compliance with laws and regulations. The policy and guidelines and performance report for the Board are as follows:

1) Nomination Criteria of the Board and Independent Directors

HARN define Criteria and process for the Board members nomination in compliance with relevant laws and regulations the Public Company Limited Act, and the securities and exchange law, as well as other relevant notifications, stipulations and/or regulations, as described in CG Policy, that directors must hold qualifications that comply with laws and regulations, considering experience, knowledge, and skills that benefit the business. The criteria, in addition, opened to the diversity of gender, race, ethnicity, nationality, or country of origin. Also, values independence of the Directors, their conflict of interest, and their directors' diversity of expertise and has developed a Board Skill Matrix aligned with Nomination and Remuneration Policy to assist in the selection process. Include to create a wide range of expertise in line with strategic directions. Also searched and selected qualified Directors through the Thai Institute of Directors' list of professional directors (IOD) or other agencies provide that HARN deems appropriate.

HARN specifies the composition for appointing independent directors not less than one - third of all directors. and there are at least 3 independent directors. In case of any director and/or independent director vacating office before the end of the office term, the Board may appoint a new director with the required qualifications as a replacement. The replacing shall hold office only for the remaining term of office of the independent director whom he has replaced. **More details appear in Section 2 “7.2.1 Composition of the Board”, page 160 and “7.2.2 The Current Board of Directors”, page 162**

2) Nomination Criteria of the Board

1. Allowing minority shareholders to propose qualified names according to the law as per qualifications set by HARN in order to be a candidate of the Board, by announcing invitations on website www.harn.co.th at least 90 days in advance of the shareholders’ meeting. HARN set ratio of minimum shares to be qualified prior to the announcement and must have a minimum of 5% voting shares of HARN. However, nominations must include history of education and sufficient experience to helpfully decision.
2. The nomination and Remuneration Committee review rules and method of recruiting to the board prior to the end of term of office. If submit the former Board as a candidate, performance of that individual must be reviewed once again. However, the Nomination and Remuneration Committee, may appointed consultant to assist in the selection of directors.
3. The Nomination and Remuneration Committee selects and proposes to the Board for consideration of the names of qualified candidates prior to the Shareholders’ approval in the AGM. After the Board’s endorsement, the list of qualified candidates is proposed to the AGM, individually. In this process each director and/or independent directors must receive more than half of the total number of votes of Shareholders attending the AGM and having the right to vote.
4. The shareholders’ meeting shall elect the directors in accordance with the following criteria and procedure:
 - 4.1 The shareholders’ voting right of one share equals one votes, provided separate ballot for each of the Director, the majority votes of the shareholders who attend the meeting and have the right to vote.
 - 4.2 The shareholders right shall cast all the votes he has to elect one or several directors. In case of electing several directors, each shareholder may not divide his votes and allocate them to all such candidates in portions.

Furthermore, the Nomination and Remuneration Committee, provided an opportunity for shareholders to propose nominate Director Candidates, in which publicized on SET Link of SET’s electronic system and website, www.harn.co.th, from October 1 to December 31, 2022. When the deadline, none of the shareholders has proposed nominate Director Candidate to be elected as HARN’s Director. The Company Secertary has been reported in the Board meeting.

In 2023, the Nomination and Remuneration Committee, nominated and appointed 1 new director replacing directors who completed their terms at the Annual General Meeting (AGM): Mr. Pichet Sithi-Amnuai, Chairman of the Board. In addition, reappointed former 2 directors who completed their terms at the 2023 AGM to another term, namely Jain Charnnarong and Mrs. Sirima Iamsakulrat, Directors. HARN no advisor has been appointed of the Nomination and Remuneration Committee. The said directors qualified, knowledge, abilities and experience in the business. It will helpful in setting direction and in line with HARN’s business strategy.

3) Nomination Criteria the Chairman of the Board

The Board shall elect one of the Board members as Chairman of the Board to supervise and control meetings of the Board and meetings of the shareholders of HARN to ensure efficiency and compliance with relevant rules and regulations and to meet the meeting objectives.

To segregate policy-making duties from those of day-to-day management and to enable directors to look after and assess performance effectively, HARN has required that the Chairman of the Board and the Chief Executive Officer are always two persons. This is because the Chairman needs to define policy and oversee management's performance, guide, and assist it, but not to take part in or interfere with day-to-day management, which is the duty of the Chief Executive Officer under the authority delegated by the Board.

Board Meeting No. 1/2023 of February 24, 2023 the 2023 Annual General Meeting held on April 24, 2023, Mr. Mr. Pichet Sithi-Amnuai was appointed as an Independent Director and Chairman of the Board. Effective from April 24, 2023, which in accordance Corporate Governance guidelines. The current Chairman is an independent director. He exercises high-level leadership and ensures that directors do not fall under the influence of management by encouraging them to exercise their voting rights and strictly comply with the CG code. Does not repeat a position of Chief Executive Officer which is Mr. Thammanoon Tripetchr. He has no business relationship or bloodline with the CEO. Therefore, the position is suitable and balanced.

4) Qualifications of Directors

The Board must be a leader, have vision, able to monitor and system promote business operations to law and ethics with corporate governance. Control management to ensure the effectiveness of operations, achieving targets and adding value for shareholders, and other stakeholders, as qualifications follow:

1. Must not be over 80 years of age, which they may be re-elected for another year on year, taking into knowledge necessary for business. However, must be approved by the Board of Director meeting.
2. The Board must be duly qualified, without the prohibitions stated in the Public Limited Company Act and the securities and exchange law, Including not having characteristics indicating lack of suitability as specified in the notification of the Securities and Exchange Commission, must whose name be listed as directors of a company issuing securities according to the Notification of the Capital Market Supervisory.
3. Independent directors must command independence as required by SET's Notification on the qualifications and scope of work of the Audit Committee.
4. Must never been sentenced to imprisonment, except for violations of the law by negligence or a petty offence and never have been expelled, dismissed, or removed from a position because of malfeasance.
5. Must not be a political official, except for holding a directorial position under a provision of law and not hold any position in a political party or be an official of political party.
6. Have knowledge and experience be beneficial to the business, honesty, integrity, and ethics and perform duties for the fullest.
7. Representing of shareholders as a whole not representing any group.
8. Hold any position a maximum of 5 directorships in SET-listed companies, without exception.
9. Prohibited conducting business or become a partnership or being director, executive, authorized in other juristic with same business, which the benefit of oneself or another person, unless the Board meeting to the resolution of appoint.

5) Qualifications of independent directors

The Board, approved the definition of the independence of directors, with in line the criteria set by the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET) as follows;

1. Holding not more than 1% of the total shares with voting rights of HARN ^{1/}, which shall be inclusive of the shares held by any related person thereof. ("Person related" shall mean the person under Section 258 of the Securities and Exchange Act);
2. Neither being nor having been an executive director, an employee, a staff member, an adviser who receives a regular salary, or a controlling person of HARN ^{1/} unless the foregoing status has ended for no less than 2 years;
3. Not being a person related by blood or registration under law of other directors, major shareholder, controlling person or person to be nominated as an executive or a controlling person of HARN ^{1/} or its subsidiary company;
4. Neither holding nor having held a business relationship with HARN ^{1/}, in a manner which may interfere with his/her independent judgment; and neither being nor having been a substantial shareholder or a controlling person of any person having a business relationship with HARN ^{1/}, unless the foregoing relationship has ended for no less than 2 years;
5. Neither being nor having been an auditor of HARN ^{1/}, and not being a substantial shareholder, controlling person or partner of an audit firm which employs auditors of HARN ^{1/}, unless the foregoing relationship has ended for no less than 2 years;
6. Neither being nor having been any professional service provider including legal adviser or financial adviser who receives an annual service fee exceeding Baht 2 million from HARN ^{1/}, and not being a substantial shareholder, controlling person or partner of the professional service provider, unless the foregoing relationship has ended for no less than 2 years;
7. Not being a director who has been appointed as a representative of a director of HARN, major shareholder, or shareholder related to the major shareholder;
8. Not undertaking any business the nature of which is the same as that of HARN or subsidiary company and which, in any material respect, is competitive with the business of HARN or subsidiary company or not being a substantial partner in the partnership, a director who is involved in management, an employee, a staff member, an adviser who receives a regular salary, or a shareholder holding more than 1% of the total shares with voting rights of a company undertaking any business the nature of which is the same as that of HARN or subsidiary;
9. Not having any characteristics that prohibit the expression of independent opinion towards HARN's business undertakings.

Note : ^{1/} Including company principal, subsidiary, associated, major shareholder, or controlling person of HARN.

6) Appointment and Dismissal of Directors and Independent Director

1. The Board consists of least 5 directors are appointed at shareholders' meeting. In addition, the Board must consist of a minimum of 3 Independent Directors of all Directors and as Audit Committee, which at least half of the directors must reside in the Kingdom and the directors' executive not more half of the directors, by non-Executive Director must of at least 1 director in knowledge in main business and accounting. All directors must have qualifications as specified by law and the Articles of Association. However, as of December 31, 2023, the Board had 4 independent directors, 2 female directors, and all of them resided in Thailand. 2 non-executive directors have professional knowledge, and experience main business, namely Dr. Jain Charnnarong and Mrs. Sirima Iamsakulrat, and 4 directors are experts in accounting, namely Mr. Pichet Sithi-Amnuai, Mr. Prasert Deejongkit, Mrs. Sirima Iamsakulrat and Mrs. Valeeratn Chuerboonchai
2. The shareholders' meetings are to appoint qualified directors whom the Nomination and Remuneration Committee has elected and proposed to the Board.
3. At the General Meeting of Shareholders, one-thirds of the directors or if the number is not a multiple of three, then the number nearest to one-third - will retire from directorship. The directors retiring in the

first and second year after the after was listed are company registration to be drawn by lots. For subsequent years, those with the longest terms are to retire. Committees that retire from the position, may be elected as a committee once again with unlimited rights. However, the Board Stipulates a policy that Independent Directors may be in position not for more than 9 consecutive years, counting from the day of the appointment and counting from the day of HARN Listed on the stock exchange.

4. Any director who wishes to resign from directorship must tender his or her resignation to HARN. Such resignation will take effect from the date the resignation letter reaches HARN.
5. In case a director's seat is vacated for reasons other than term completion, the Board may elect a qualified person and without the prohibitions stipulated by HARN's Articles of Association to fill the vacancy at the next Board meeting unless the remaining term of the vacated director is less than two months. The acting director must secure at least three-quarters of the votes of the remaining directors. The personal can remain in position remain in the position of director for the remaining term of the predecessor.
6. For voting to remove any director from the directorship before the completion of his or her term, at least two-thirds of the vote of eligible shareholders present at the meeting is required as well as at least half of the total number of shares represented by the eligible shareholders present at the meeting.

7) Independence of the Board

The Board shall consider, express opinions on, and vote for activities under their authority. If a decision is made under pressure from work, family, or any conflict of interest, it may be made in bias to benefit the directors in question, their family, or other contacts. The independence of the Board must be emphasized in order to protect the shareholders and HARN's benefit. Therefore, any director who is not entirely independent shall not make decisions. At a given meeting in 2023, those with conflicts of interest with HARN must inform the meeting to and abstain from voting on each such matter.

Independent Directors shall be independent from major shareholders and executives. They shall also have adequate access to financial-related and business information in order to provide a free opinion to protect the best interest of minor shareholders, acting with care and honesty. In addition, being an Independent Director set a policy for independent directors to hold office continuously for **no more than 9 years** from the date of appointment or from the date HARN is listed on the stock exchange without exception. In 2023, **none** of the independent directors have been on the position for longer than 9 years. 4 are independent directors out of the total of 8 directors is more than one-third of all directors, which 1 independent directors serve 3 consecutive years namely; Mr. Prasert Dejongkit and 2 independent directors serve 2 consecutive years namely; Dr. Teerachai Pornsinsirak and Mrs. Valeeratn Chuerboonchai, and 1 independent directors serve 1 consecutive years namely; Mr. Pichet Sithi-Amnuai. In this regard, independent directors meet the standards of the Securities and Exchange Commission (SEC) and the Thai Stock Exchange. (SET) and does not violate or conflict, with other relevant laws, free to express opinions.

In this regard, the independent directors shall examine and certify their qualifications and independence at least once a year, also required to disclose independence on office-holding by independent directors of HARN, in the Annual Disclosure Statement / Annual Report (Form 56-1 One Report).

8) Serving as Directors in Other Companies of Directors

The Board set a policy to limit the number of listed companies in the Stock Exchange of Thailand. That each Director able to take which does not exceed **5 companies** no exception, to ensure that the Board dedicate sufficient time for the operation. Including, The Board are prohibited to become a partner or a director in a competing enterprise or business related to HARN's that may cause conflicts of interest. Details are in accordance with the policy and guidelines of the Board of Directors, **disclosed in the corporate governance and code of conduct policy and principles with a full version On HARN's website: <https://www.harn.co.th/corporate-governance/corporate-governance-policy/>**

In 2023, there is no directors to take of office for more than 5 companies, as follow; **more details appear in attachment 1, page 247 - 251**

Name		Position	Other listed companies in which the directors hold positions
Mr. Pichet	Sithi-Amnuai	Independent Director	- none -
Mr. Prasert	Deejongkit	Independent Director	1 company
Dr. Teerachai	Pornsinsirak	Independent Director	1 company
Mrs. Valeeratn	Chuerboonchai	Independent Director	- none -
Mrs. Sirima	Iamsakulrat	Director	- none -
Dr. Jain	Charnnarong	Director	- none -
Mr. Thammanoon	Tripetchr	Director, Chief Executive Officer and Chief Marketing Officer	- none -
Mr. Wirat	Sukchai	Director and Chief Marketing Officer	- none -

9) Orientation of New Directors

HARN requires an orientation for newly appointed directors every time. New directors will receive a handbook, documents and useful information, including policies and practices of good corporate governance.

For new directors, arranges an orientation session facilitated by Chief Executive Office with knowledge about the business and business direction as well as related laws and regulations and other information required for performing the director's duties, and hand over the Director's Manual to the new directors, along with a visit of the business, introducing business overview. The company secretary as the information prepared, including:

- Part 1 Structure of the board, executive and company secretary
- Part 2 Group structure, major shareholder structure
- Part 3 Company information and nature of business
- Part 4 Charter of the board of directors and board-committees
- Part 5 Schedule of management approval authority
- Part 6 Remuneration of the board of directors and board-committees
- Part 7 Meeting and Training Courses of the Board of Directors
- Part 8 Policy and principles of corporate governance and business ethics
- Part 9 Role of directors under general law
- Part 10 Certificate memorandum and HARN's articles of association
- Part 11 Consolidated and separate financial statements
- Part 12 Annual Registration Statement/ Annual report (From 56-1 One Report)

Therefore, in 2023, HARN appointed a new director, namely; Mr. Pichet Sithi-Amnuai as an Independent Director and Chairman of the Board. With on December 2, 2022, a new director orientation was held, attended by representatives of the Recruitment and Remuneration Committee, Chief Executive Office and Chief Operating Officer, to introduce and provide information on business nature, business strategy and practices, and hand over the Director's Manual to the new directors above, so as to provide useful information before starting to perform other duties. Additionally, on May 11, 2023, the executives of HARN met with the new directors again to gain a more comprehensive understanding of the operation of the strategic plan.

10) Director development

The Board encourages all directors to keep on learning as support for their improved performance. HARN directors underwent training with Thai Institute of Directors Association (IOD) and other leading entities and institutes. The Nomination and Remuneration Committee consider training curricula related and to foster their work knowledge to the Board application to HARN's businesses for sustainable growth. Detail the Board trainings in 2023, as follow:

Training course for the Thai Institute of Directors Association (IOD) of the Board

Currently, all directors have attended training courses related to IOD performance, accounting of 100%.

Name	Courses									
	DAP	DCP	SFE	FSD	RCP	ACEP	ACP	AACP	HRP	BNCP
Mr. Pichet Sithi-Amnuai		64/2005	2/2008		55/2023	2/2012	10/2005			
Mr. Prasert Deejongkit	184/2021									14/2022
Mrs. Valeeratn Chuerboonchai	SET/2012	205/2015		28/2015		14/2015		49/2023		14/2022
Mr. Wirat Sukchai	SET/2012	204/2015	24/2015		36/2015	14/2015			12/2017	
Mr. Thammanoon Tripetchr	116/2015	211/2015	24/2015	28/2015					31/2022	
Mr. Jain Charnnarong		173/2013	23/2015						8/2014	14/2022
Mrs. Sirima Iamsakulrat	SET/2012	211/2015	24/2015							5/2018
Dr. Teerachai Pornsinsirak		211/2015						50/2023		

Training courses at other leading institutions of the Board in 2023

Name of the Board	Courses
Mr. Pichet Sithi-Amnuai	Role of the Chairman Program, class 55/2023
Mr. Prasert Deejongkit	None
Dr. Teerachai Pornsinsirak	Advanced Audit Committee Program, class 50/2023 Member Fee – Annual Fee, class 1/2023 O-DB-Director Briefing, class 1/2023
Mrs. Valeeratn Chuerboonchai	Advanced Audit Committee Program, class 50/2023 Engaging Board in ESG: The Path to Effective Sustainability
Mrs. Sirima Iamsakulrat	None
Mr. Jain Charnnarong	None
Mr. Wirat Sukchai	Team Engagement for TOP Culture
Mr. Thammanoon Tripetchr	Team Engagement for TOP Culture

11) Board and Board-Committees Self-assessment

HARN arranges for performance assessment of the Board and Board-Committee on an annual basis according to the good practices of the Thai Stock Exchange, serve as a framework for reviewing and reviewing structures, qualifications, meetings, roles, and responsibilities. The responsibility of the board of directors and more effective performance development. The assessment is divided into two types:

1. Whole Board and Board-Committee Assessment
2. Individual Board and Board-Committee Assessment

11.1) Process and Criteria of Self-Assessment of the whole Board and Individual

The Board Meeting No. 5/2023 of October 6, 2023, approved the 2023 Board's performance assessment form, which was reviewed and improved to have diverse the roles, duties and responsibilities covered according the Board Charter. The assessment forms were sent to each individual director for assessment and returned to the Secretary Company for analysis, then, raised the assessment results together with comments to the Board for acknowledgment. Recommendations from the assessment shall be used to identify guidelines to develop and enhance performance efficiency.



Performance assessment of the Board and Board-Committees both whole and individual consists of such structure and qualifications, meetings, roles, duties and responsibilities. The assessment criteria are divided into 5 levels:



0 Need significant improvement

1 Partially meet expectations

2 Meet expectations

3 Exceed expectations

4 Exemplary best practices

The evaluation criteria are calculated as a percentage from the full score in each topic: more 90% is Excellent, 80-89% is Good, 70-79% is Relatively Good, 60-69% is Fair, below 60% Need improvement.

11.2) Results of Self-Assessment of the whole Board and Individual

Criteria of Self- Assessment of Board and Board-Committees Whole	2023 Board Evaluation Results - Whole				
	Board of Director	Audit Committee	Nomination & Remuneration Committee	Executive Committee	Risk management Committee
1. Structure and qualifications					
<ul style="list-style-type: none"> Diversity of directors in terms of number and experience Proportion of directors Qualifications of each Board 	90.10%	91.67%	96.67%	94.79%	84.62%
2. Roles, duties and responsibilities					
<ul style="list-style-type: none"> Spending adequate time to consider important matters etc. direction, strategy, action plan, transactions with conflict of interest, and internal control and risk management 	88.17%	87.12%	88.89%	82.64%	79.70%
3. Meetings					
<ul style="list-style-type: none"> Schedule meetings all year in advance The sufficiency of information for directors to make a decision Freedom of decision making and the expression of opinions of directors Time frame of meeting 	93.30%	91.67%	96.43%	84.52%	89.84%
4. Others					
<ul style="list-style-type: none"> Relationship with the board and management team Self-development of the board/Executive, Training 	87.50%	-	-	-	-
Total Results	89.77%	90.15%	93.99%	87.32%	84.72%

Measurement : more 90% = Excellent, 80-89% = Good, 70-79% = Relatively Good, 60-69% = Fair, below 60% = Need improvement.

Criteria of Self- Assessment of Board and Board-Committees Individual	2023 Board Evaluation Results - Individual				
	Board of Director	Audit Committee	Nomination & Remuneration Committee	Executive Committee	Risk management Committee
1. Structure and qualifications					
<ul style="list-style-type: none"> Qualifications, knowledge, experience suitable for business of company Assigned duties that are appropriate for role (Independent / Board-Committee) 	87.50%	91.67%	87.50%	87.50%	84.62%
2. Roles, duties and responsibilities					
<ul style="list-style-type: none"> Perform duties efficiently according the charter Time and dedication to perform duties Control and follow up the operations of management appropriately Does not interfere with the management function Develop and learn all the time 	86.88%	88.33%	88.33%	89.17%	86.54%
3. Meetings					
<ul style="list-style-type: none"> Attending the meeting Studying the information to meeting in advance Showing appropriate comments, to meeting Abstain from attending the meeting or voting in case of having conflict of interests 	89.58%	94.44%	97.22%	84.72%	82.05%
Total Results	87.99%	91.48%	91.02%	87.13%	84.40%

Measurement : more 90% = Excellent, 80-89% = Good, 70-79% = Relatively Good, 60-69% = Fair, below 60% = Need improvement.

In this regard, the overall performance evaluation results of the whole the Board, believe that most of the actions were done well and appropriately, with an average score of 89.77% is good, overall performance evaluation of individual, responsible for regularly fulfilling responsibilities, with an average score of 87.99% is good.

The performance evaluation results of the whole Board-Committee, are considered effective, with an average score of very good is Nomination & Remuneration Committee of 93.99%, Audit Committee of 90.15%, while score of good is Risk Management Committee of 84.72% and Executive Committee 87.32% respectively.

The performance evaluation results of the individual Board-Committee, are considered complete, with an average score of very good is Audit Committee of 91.48%, Nomination & Remuneration Committee of 91.02%, while score of good is Executive Committee of 87.13% and Risk Management Committee 84.40% respectively.

The Board has no external consultant to help formulate guidelines and make suggestions on the performance evaluation of the Board. HARN will analyze the evaluation topics to improve the performance of the board of directors and make an annual development plan to maximize the efficiency of performing functions and the benefits of corporate governance. The Board meeting has approved the plan.

12) Remuneration of the Board and Board-Committee

HARN fairly and sensibly specifies the remuneration of directors. The remuneration consideration criteria are related to the responsibilities and performance of the board of directors, overall economic circumstances while making comparisons with other companies in the same industry to come up with a comparable and motivating. The Nomination and Remuneration Committee set director's annual remuneration to the Board for agreed before presenting the AGM for approval.

The 2023 Remuneration of the Board and Board-Committee, following the comparison with companies of a similar size in the same industry and taking the business circumstances into consideration, it was found that the criterion structure and remuneration for the Board were still suitable. So, the remuneration of the same rate as that of 2022 was proposed, without bonus and no other benefits offered same as last year. The remuneration already received approval from the 2023 AGM and was **disclosed on the table "Compensation components" on page 135, and details of the remuneration of directors are on the table "summary of the remuneration all directors in 2023" on page 135 - 136**

Compensation Components

1.	Monthly remuneration: Director / Audit Committee / Risk Management Committee / Nomination and Remuneration Committee	
	• Chairman of the Board	30,000 Baht/Month
	• Board-Committees	25,000 Baht/Month
	• Directors / Independent Director	20,000 Baht/Month
	• Directors (2 working day/week)	80,000 Baht/Month
2.	Meeting allowances: Director / Audit Committee (Only directors attending the meeting)	
	• Chairman	20,000 Baht/meeting
	• Director	15,000 Baht/meeting
3.	Meeting allowances: Risk Management Committee / Nomination and Remuneration Committee (Only directors attending the meeting)	
	• Chairman	15,000 Baht/meeting
	• Director	10,000 Baht/meeting
4.	Bonuses	None
5.	Other Rights and Benefits	None

- Note :
- Principles of compensation for the Board of Directors and Board Committees are as follows:
 - The Nomination and Remuneration Committee is the person who determines and establishes the principles or policies "Remuneration for Directors" and propose to the Board of Directors for approval to propose to the Annual General Meeting of Shareholders which must comply with HARN's Articles of Association, Chapter 4, regarding the Board of Directors, including various factors related as follows:
 - Duties and responsibilities of each director.
 - To be appropriate when compared to other public companies that has the similar operating results and business operations.
 - To be fair and transparent to create incentives to maintain qualified directors as needed.
 - To be appropriate for the ability to get paid the compensation from HARN.
 - The Nomination and Remuneration Committee is summaries the annual remuneration and compensation which must not exceed the amount approved by the shareholders' meeting from the previous year and propose to the Board of Directors for approval to report to the shareholders' meeting to acknowledge the amount of money actually paid by considering the following factors:
 - Company performance previous year.
 - Determine the appropriate time to pay.
 - Details and conditions of payment such as annual remuneration for all directors who remain in office in the event that any director has recently held the position and has not yet completed a service year, annual remuneration will be paid in proportion referring to time appointment since joined.
 - Board and Committee members entitled to receipt of Directors' remuneration must not be HARN's employees.
 - Board member who also serve in another committee shall receive only one remuneration that pay the highest rate.

Summary of the remuneration all Directors in 2023

The remuneration directors in 2023 for period 12 months from 1 January to 31 December 2023 total Baht 3,292,000, **without bonus and no other benefits offered**, comprises monthly remuneration Baht 2,342,000 and meeting allowances Baht 950,000, accordance with the resolution of the 2023 AGM follow:

Name	Position	Total monthly remuneration	Total meeting allowances	Total remuneration
Mr. Pichet Sithi-Amnuai	Chairman of the Board	247,000	80,000	327,000
Mr. Prasert Deejongkit	Chairman of the Board-Committee	300,000	195,000	495,000
Dr. Teerachai Pornsinsirak	Chairman of the Board-Committee	300,000	210,000	510,000
Mrs. Valeeratn Chuerboonchai	Chairperson of the Board-Committee	281,000	205,000	486,000
Mrs. Sirima Iamsakulrat	Director	240,000	90,000	330,000
Dr. Jain Charnnarong	Director	860,000	110,000	970,000
Mr. Thammanoon Tripetchr	Director (executives)	-	-	-
Mr. Wirat Sukchai	Director (executives)	-	-	-
Directors who Complete the Term in 2023 AGM				
Dr. Thakol Nunthirapakorn	Chairman of the Board	114,000	60,000	174,000
Total		2,342,000	950,000	3,292,000

Name	Position	2023					2022				
		Monthly Remuneration	Meeting allowances				Monthly Remuneration	Meeting allowances			
			Board of Director	Audit Committee	Nomination and Remuneration Committee	Risk Management Committee		Board of Director	Audit Committee	Nomination and Remuneration Committee	Risk Management Committee
1. Mr. Pichet Sithi-Amnuai ^{1/}	Independent Director / Chairman of the Board	247,000	80,000	-	-	-	-	-	-	-	-
2. Mr. Prasert Deejongkit	Independent Director / Member of the Audit Committee / Chairman of the Nomination and Remuneration Committee	300,000	90,000	75,000	30,000	-	277,500	75,000	60,000	30,000	-
3. Dr. Teerachai Pornsinsirak ^{2/}	Independent Director / Chairman of the Risk Management Committee / Member of the Audit Committee	300,000	90,000	60,000	-	60,000	201,500	60,000	-	-	30,000
4. Mrs. Valeeratn Chuerboonchai ^{3/}	Independent Director / Chairperson of the Audit Committee / Member of the Nomination and Remuneration Committee	281,000	90,000	95,000	20,000	-	240,000	90,000	30,000	20,000	-
5. Mrs. Sirima Iamsakulrat	Director	240,000	90,000	-	-	-	240,000	90,000	-	-	-
6. Dr. Jain Charnnarong	Director / Member of the Executive Committee / Member of the Nomination and Remuneration Committee	860,000	90,000	-	20,000	-	680,000	90,000	-	20,000	-
7. Mr. Wirat Sukchai	Director / Chairman of the Executive Committee / Member of the Risk Management Committee / Chief Marketing Officer	-	-	-	-	-	-	-	-	-	-
8. Mr. Thammanoon Tripetchr	Director / Member of the Risk Management Committee / Member of the Executive Committee / Chief Executive Officer	-	-	-	-	-	-	-	-	-	-
Directors who Complete the Term in 2023 AGM											
1. Dr. Thakol Nunthirapakorn	Independent Director / Chairman of the Board / Chairman of the Audit Committee	114,000	40,000	20,000	-	-	360,000	120,000	80,000	-	-
Total		2,342,000	570,000	250,000	70,000	60,000	1,999,000	525,000	170,000	70,000	30,000

Note : ^{1/} Mr. Pichet Sithi-Amnuai was appointed as Independent Director and Chairman of the Board with effect from April 24, 2023 replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

^{2/} Dr. Teerachai Pornsinsirak was appointed as Member of the Audit Committee with effect from April 25, 2023 replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

^{3/} Mrs. Valeeratn Chuerboonchai was appointed as Chairperson of the Audit Committee with effect from April 25, 2023

13) Meeting attendance of the Board

Each year, the Board meetings are scheduled in advance so that the Board can make themselves available to efficiently attend the meeting follow:

1. The Boards and Board-committees determine yearly meeting schedules in advance by November of every year so that the Committees can arrange and be able to attend the meetings. At least 6 meetings must be taken place and may arrange an additional meeting 1 meeting prior to the Annual General Meeting. Special occasions of meeting may be taken place as seen necessary. However, to pursuit business as usual, in each month, The Executive Committees decisions in accordance whom delegated by the Board of Directors and report the approved topics to the Board.
2. The Company Secretary sends to each director meeting notices, agenda with complete details and rationale, and supplementary documents with enough essential details for decision-making at least 5 business days in advance ahead of each meeting to give them time to study these. Directors consider the agenda through an application to “Google Meet” the process of agenda delivery and the paperwork involved, thus speeding up directors’ work while efficiently providing them with adequate details for decision-making. Since 2018, for each meeting, the Board has required regular follow-up agenda on the updates of implementation of Board observations and comments to ensure implementation of HARN’s strategies.
3. The Board set a policy that requires no less than one-two (1/2) of the current Board members in attendance to make a quorum. In voting, the minimum quorum of directors is no less than two-thirds (2/3) of all attending directors. However, if the quorum does not comply with this guideline, the discretion of the Chairman will be sought.
4. Chairman of the Board serves as the Chairman of the meeting to proceed with the meeting and allocate sufficient time for each agenda item, encouraging all Directors to openly discusses and express their opinions. Top executives are invited to attend Board meetings to report useful information and allow the Board to see the attitude and practice of top executives, which will be useful for the consider of succession plans. The Board’s is that for a given agenda item, if any director has potential conflicting interests, who will not attend the meeting and abstain voting on such agenda item. Where the votes cast in descending order are tied, the chairman of the meeting shall have a casting vote. In case the directors disagree with a resolution, they may request the Company Secretary to record the points of their disagreement in the meeting minutes or submit a letter to the Board Chairman to express their disagreement.
5. For each agenda item, the Company Secretary has the duty to prepare the minutes, by the Board-certified minutes, signature of the Chairman of written are filed at head-office 4th floor Rama 9 road, for perusal by the directors and related parties.

In 2023, a total of 6 Board meetings were held in a Hybrid format (both Physical Meeting and E-Meeting), 1 strategic plan meeting included, were also held 2 nonexecutive directors meeting without executives on October 6, 2023 and November 13, 2023, to allow non-executive directors and independent directors to exchange views freely. The chairman of the board of directors conveyed the opinions of the meeting to the management for further deliberation. **Information on meeting attendance of individual directors is disclosed on the table ‘Meeting Attendance of Board of Directors, Board-Committees, and Shareholders’ Meeting in 2023’ on page 138**

Meeting Attendance of the Board of Directors, Board-Committees, and Shareholders' Meeting in 2023

In 2023, the whole committee attended the meeting an average of 100%, details as follow:

Name	Position	Board of Director (6 meetings)	Audit Committee (5 meetings)	Executive Committee (12 meetings)	Nomination and Remuneration Committee (2 meetings)	Risk Management Committee (4 meetings)	AGM) (1 times)
		Hybrid both Physical Meeting and e-Meeting formats					Physical Meeting
1. Mr. Pichet Sithi-Amnuai ^{1/}	Independent Director / Chairman of the Board	4/4 (100%)					N/A
2. Mr. Prasert Deejongkit	Independent Director / Member of the Audit Committee / Chairman of the Nomination and Remuneration Committee	6/6 (100%)	5/5 (100%)		2/2 (100%)		1/1 (100%)
3. Dr. Teerachai Pornsinsirak ^{2/}	Independent Director / Chairman of the Risk Management Committee / Member of the Audit Committee	6/6 (100%)	4/4 (100%)			4/4 (100%)	1/1 (100%)
4. Mrs. Valeeratn Chuerboonchai ^{3/}	Independent Director / Chairperson of the Audit Committee / Member of the Nomination and Remuneration Committee	6/6 (100%)	5/5 (100%)		2/2 (100%)		1/1 (100%)
5. Mrs. Sirima Iamsakulrat	Director	6/6 (100%)					1/1 (100%)
6. Dr. Jain Charnnarong	Director / Member of the Executive Committee / Member of the Nomination and Remuneration Committee	6/6 (100%)		12/12 (100%)	2/2 (100%)		1/1 (100%)
7. Mr. Wirat Sukchai	Director / Chairman of the Executive Committee/ Member of the Risk Management Committee / Chief Marketing Officer	6/6 (100%)		12/12 (100%)		4/4 (100%)	1/1 (100%)
8. Mr. Thammanoon Tripetchr	Director / Member of the Risk Management Committee / Member of the Executive Committee / Chief Executive Officer	6/6 (100%)		12/12 (100%)		4/4 (100%)	1/1 (100%)
9. Mr. Rattanaphan Mukhariwattananon	Member of the Executive Committee / Member of the Risk Management Committee			12/12 (100%)		4/4 (100%)	1/1 (100%)
10. Mr. Wisit Wachiralappaitoon	Member of the Executive Committee / Member of the Risk Management Committee			12/12 (100%)		4/4 (100%)	1/1 (100%)
11. Mrs. Varinkan Teraumranon	Member of the Executive Committee / Member of the Risk Management Committee			12/12 (100%)		4/4 (100%)	1/1 (100%)
12. Mr. Suchat Suwatnodom	Member of the Risk Management Committee					4/4 (100%)	1/1 (100%)
13. Mr. Kittiphong Kittimethawenun	Member of the Risk Management Committee					4/4 (100%)	1/1 (100%)
14. Mr. Vachiravit Akaraseranee	Member of the Risk Management Committee					4/4 (100%)	1/1 (100%)
15. Mr. Sukit Litikorn	Member of the Risk Management Committee					4/4 (100%)	1/1 (100%)
16. Mr. Withoon Thamee	Member of the Risk Management Committee					4/4 (100%)	1/1 (100%)
17. Mr. Prapas Rakpanya	Member of the Risk Management Committee					4/4 (100%)	1/1 (100%)
18. Miss Warangkana Jongnui	Member of the Risk Management Committee					2/2 (100%)	1/1 (100%)
Directors who Complete the Term in 2023 AGM							
1. Dr. Thakol Nunthirapakorn	Independent Director / Chairman of the Board / Chairman of the Audit Committee	2/2 (100%)	1/1 (100%)				1/1 (100%)

Note : N/A means not attend and Directors who Appoint during the Year 2023, and/or adhere to the necessary tasks planned in advance with prior notice to the company

^{1/} Mr. Pichet Sithi-Amnuai was appointed as Independent Director and Chairman of the Board with effect from April 24, 2023 replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

^{2/} Dr. Teerachai Pornsinsirak was appointed as Member of the Audit Committee with effect from April 25, 2023 replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

^{3/} Mrs. Valeeratn Chuerboonchai was appointed as Chairperson of the Audit Committee with effect from April 25, 2023

14) Governance of Subsidiaries

HARN determine policies to govern subsidiaries by setting way of conduct guidelines, internal control, disclosure of financial performance, transactions with connected persons, acquisition or disposition of property, other important, capital increase, capital reduction, and dissolution of subsidiaries, so that their work procedures in conformity according to the law and relevant regulations as a governance tool for companies in which HARN holds shares. All are required to practice and drive toward the same standard across HARN through HARN's representative(s) assigned as directors. This way, HARN commands unity in action, leading to synergy, enhanced capability and strength in competition to in turn lead to joint growth in a transparent and sustainable way.

Below is the scope of executives, which consists of governance principles:

- (1) Major joint venture is defined as has ratio of the voting shares between 20-50% and invest large amount of sum. In necessary circumstances, the Board must arrange Shareholder's' agreement or other agreement to clarify authority of management and decision, to use for financial statement of HARN according to the standards and timeline.
- (2) Rules, Regulations and Policy, including directives which form part of the governance designed to drive linkages between HARN's policy governance and its successful implementation driven toward a uniform standard throughout by HARN's representatives assigned to serve in these subsidiaries as directors.
- (3) Steering for management by defining objectives and goals, strategies, and policies, and allocating key resources for objective and goal achievement, including monitoring, assessing, and ensuring performance reporting. Must report implementation updates to the Board.

The Board of Directors, which supervises the subsidiaries as part of the operation, have a resolution to appoint a representative to take the position of director in Aiyarahan Company Limited ("Subsidiary"). To act in pushing for good corporate governance policies and practices, code of conduct, risk management and anti-corruption measures HARN's are of the same standard, along with setting annual goals and indicators and require monthly meetings between representatives and executives of subsidiaries, report to the Board every quarter.

HARN has operations to promote compliance with policies and guidelines for supervising subsidiaries. In 2023, a meeting was held between representatives and management of subsidiaries in order to consider financial status, performance and other important matters which have been already reported to the Board of Directors for acknowledgment. In summary, the Subsidiary has an appropriate and careful internal control process for its business operations. No misconduct that violates the conflict-of-interest prevention policy.

6.2 Policy and Guidelines and Performance for the Top Executives

1) Nomination the Chief Executive Officer

1. Top executives which refers to Chief Executive Officer ("CEO").
2. The Nomination and Remuneration Committee nomination personnel that are knowledgeable, skills, characteristics and experienced as the top executives to command and perform duties to drive the organization towards goals. Also, must fully qualified and without legal prohibitions, follow rules of succession policy, to results to the Board to approve.
3. The Nomination and Remuneration Committee report to the Board regularly on development and successor plan in order to prepare talents as successors in case the Chief Executive Officer retire, resign, or unable to retain in duties.

4. The Nomination and Remuneration Committee is the recruitment qualified personnel and review their background and information. Not discriminated against, diverse in gender, considering knowledge, abilities, experience, and professional knowledge related to business. Select according to the Human Resources Management Regulations and obtain approval from the Board of Directors.

2) Qualifications the Chief Executive Officer

The CEO must be knowledgeable, capable, experienced in business and management, experienced in business leadership, with high leadership quality, honest and trustworthy, and have no interest relationship with HARN, including prohibiting him from being a partner or director in any entity that may cause conflicts of interest or related to HARN business. In the case of holding a management position in other companies, it shall not violate the provisions of laws and regulations related to HARN's business operation, except for holding a director position in a non-profit charity.

3) Remuneration the Chief Executive Officer

The remuneration of the Chief Executive Officer complies with the policies and guidelines the CEO's remuneration set by the Nomination and Remuneration Committee and the Board. The consider remuneration structure and two types of performance evaluation criteria, namely, key performance indicators (KPI) and evaluation indicators (API), according to the annual business strategic objectives, and then submit them to the board meeting for approval. The annual performance remuneration and bonus in 2023 on the basis of the structure and criteria, which was approved at the 1/2023 meeting of the Board, show as in **Section 2 "7.4.2 Top Executive's Remuneration, page 170 - 171"**

4) Development the Top Executives

The Board has a policy to promote and facilitate the training of top executives are also required to enhance their knowledge, capability and skills in terms operation, and other courses that are beneficial to their operations. The details of the courses attended in 2023 are as follows:

Name	Courses
Mr. Wirat Sukchai	<ul style="list-style-type: none"> Team Engagement for TOP Culture
Mr. Thammanoon Tripetchr	<ul style="list-style-type: none"> Team Engagement for TOP Culture
Mr.Rattanaphan Mukhariwattananon	<ul style="list-style-type: none"> PEX and PPR pipeline knowledge Team Engagement for TOP Culture Basic knowledge of international goods export Inert gas fire extinguishing cleaner system Clean combustion agent system: [Novec-1230, FM-200]
Mr. Wisit Wachiralappaitoon	<ul style="list-style-type: none"> Team Engagement for TOP Culture Self-study CPD: Financial Reporting Standards for Non-Public Stakeholders (NPAES) The Art of CFO Leadership 2023
Mrs. Varinkan Teraumranon	<ul style="list-style-type: none"> Team Engagement for TOP Culture Managing personal finances with private pension funds Enhancing anti-corruption special review of resolution class 4/2023

5) Assessment the Chief Executive Officer

The Board arranges an annual evaluation of the Chief Executive Officer's performance to ensure the principles of good corporate governance, has process, criteria, and summary of performance evaluation of the Chief Executive Officer year 2023 as follow;

5.1) Performance evaluation criteria

Consider 2 types of performance indicators and change the weight of each KPI score for evaluation as appropriate, as follows:

1. KPI = Key Performance Indicator, weighted 70%, it is an evaluation from performance scores, according to the assigned mission which supports the main goals.
2. API = Appraisal Indicator, weighted 30%, it is an evaluation from performance consistent with the strategy, vision, mission and values by the non-executive committee, according to guidelines of the Stock Exchange of Thailand in 8 topics: strategy formulation / strategic execution / financial planning and performance / relationship with the Board / external relations / management and relations with personnel / leadership / personal attributes. There are 5 levels of evaluation criteria: 5 excellent / 4 very good / 3 good / 2 fair / 1 improvement.

5.2) Performance evaluation process

The Nomination and Remuneration Committee reviewed the annual performance appraisal form of the Chief Executive Officer, and presented to the Board of Directors for approval in accordance with the specified criteria. The non-executive committee is required to conduct independent performance appraisals. HARN's secretary was assigned to summarize and analyze the results of performance evaluation for consider by the Nomination and Remuneration Committee to providing additional opinions to develop plans and appropriate compensation adjustments to the Chief Executive Officer before presenting to the Board of Directors for further approval.

The Chief Executive Officer Performance evaluation results in 2023 are good, equivalent to 81.31%, which The Nomination and Remuneration Committee communicated to the Chief Executive Officer for improvement of work efficiency, according to the complete established goals and strategy.

6) Serving as Directors in Other Companies of Executives

The Board also established a policy to prohibit the Chief Executive Officer and executives from taking a directorship position at other companies outside the Group. In case the Chief Executive Officer and executives of HARN have to hold such directorship position in other companies, a prior written approval from the Executives Committee is required, this must not conflict with laws and rules related to the operation of HARN as well, and prohibited to become a partner or a director in a competing enterprise or business related to HARN's that may cause conflicts of interest. **Details in accordance with the policy and guidelines of the Board of Directors disclosed in the corporate governance and code of conduct policy and principles with a full version on website: <https://www.harn.co.th/corporate-governance/corporate-governance-policy/>**

However, in 2023, the Executive Committee approved the Chief Marketing Officer of the Refrigeration Business Unit, to serving as directors in other companies outside the group. This not conflict with laws and rules related to the operation of HARN, not engaged in business that competes with or is related to HARN business that may cause conflicts of interest. which has been approved by the Company's Board of Directors. **More details in attachment 1, page 250**

7) Succession Plan of the Top Executives

The Board must ensure that HARN has an appropriate nomination process for key management positions at all levels. The Top Executives will be selected through a nomination process that will consider both internal and external, however HARN has taken steps to develop its executives to lay down a succession plan for personnel when the time comes for assuming higher positions that become vacant, namely: the Chief Executive Officer, Chief Marketing Officer, Chief Financial Officer and Chief Operating Officer. **More details in Section 2 "7.4.1 (Succession Plan), page 170**

6.3 Policy and Guidelines and Performance Related to Shareholders and Stakeholders

HARN operates a fair business with awareness of impacts on stakeholders while treating all groups of stakeholders equally. Guidelines for treating each group of stakeholders are made and available in the CG policies and principles, which is accessible on website, www.harn.co.th for study and downloading.

6.3.1 Shareholders' Rights

The Board allocates the protection and respect of shareholders' rights, both as major shareholders minority shareholders or institutional investors thus provides opportunities for shareholders to exercise their fundamental rights as abide by law, such as to attend the shareholders' meeting, to express opinions, and to make decision on important issues, including approval of significant transactions having impact on business direction. HARN schedules an Annual General Meeting (AGM) within 4 months of the annual closing date of its accounting books. For urgent matters that affect or involve shareholders' interests or involve conditions, regulations, or laws that require shareholders' approval, however, it can call an extraordinary meeting of the shareholders (EGM).

However, HARN prepare to the shareholders an invitation notice indicating the venue, date, time, agenda items, supporting information thoroughly and sufficient for the rights of the shareholders, as well as the opinion of the Board on each agenda item indicated in the invitation notice and key supporting information for decision-making.

1) The 2023 Annual General Meeting

The Board of meeting no. 1/2023 on February 24, 2023, decided to call AGM on Monday, April 24, 2023 at 14.00 hrs. format of physical, HALL 31-32 floor 3rd, Harn Engineering Solutions Public Company, 559 Soi Soonvijai 4, Rama 9 Rd. , Bangkapi Sub-District, Huaykwang District, Bangkok 10310. Its decision, meeting date, and meeting agenda were disclosed in detail ahead of time by announcing on SET's website to notify shareholders.

In the AGM, HARN was organized in accordance with the AGM Checklist, prepared by the Thai Investors Association (TIA), Thai Listed Companies Association (TLCA), and Securities and Exchange Commission (SEC). In 2023, HARN received a full score of 100 points for the 6th consecutive year, reflecting its continual commitment in organizing its AGMs with highest Corporate Governance standards. Such practices include:

1. Disclose the invitation and documents for the AGM on the website, www.harn.co.th, and publish an announcement on SET's website, its disclosed ahead of 33 days before the meeting date on March 22, 2023.
2. Thailand Securities Depository Co., Ltd. (TSD), its securities registrar, to mail the invitation, accompanying documents, supplementary information for decision-making, opinions of the Board, the annual report 2022 (QR Code), meeting documents, and proxy forms B. with complete instruction for shareholders more than 14 days before the meeting date. HARN the meeting notices were sent of 24 days before the meeting date on March 31, 2023.
3. The invitation meeting was announced 3 days before the meeting, each for 3 consecutive days, between 12, 17 and 18 April 2023, to allow shareholders enough time to prepare themselves for the meeting.

2) On the AGM Date

On the meeting, the Chairman of the Board assigned The Company Secretary as that would conduct the meeting, introduced the directors, executives, the external auditor, and the legal advisers who served as a party, then elaborated on the voting and ballot counting for individual agenda items under HARN's Articles of Association as well as voting procedures for each item. Once the information had been provided on each item, gave a chance for all attendees to comment or provide recommendations and questions adequate time. This year, for good hygiene, provided paper question form another channel for shareholders instead of using microphones, which the Chairman and executives answered all questions clearly and precisely, treating all questions with due respect. For the election of directors, individual votes were required.

The meeting ensured that the meeting proceeded by the order of the agenda and did not add any item without notifying shareholders in advance. At the 2023 AGM, the order of the agenda was **not** changed, and there was **no** request to consider any other matter.

At every meeting, the minutes must be completely and accurately recorded with the vote tally on each applicable agenda item. As a rule, a shareholders' meeting lasts 2 hours. The 2023 AGM began at 2 p.m., with registration beginning at 12:00 p.m. At the meeting's opening, a total of 131 shareholders registered, of whom 35 were shareholders and 96 were proxy holders, holding a total of 397,969,769 shares, or 68.0872% of the total, which exceeded one-third of all subscribed shares of 584,500,000. Below is a description of meeting attendants and those responsible for issue clarification:

1. All 8 HARN directors attended the meeting. The Chairman of the Board, the Chairman of the Board-Committees, Chief Executive Officer, and Chief Financial Officer together provided supporting information on stage. Chief Marketing Officer, Chief Operating Officer, Director of Various Departments were attended at the front rows to provide information for relevant questions.
2. Auditors from Dharmniti Auditing Co., Ltd are Miss. Duangkaew Sriwongthai and Miss. Suteera Phanudomsak
3. Legal advisers from Bangkok Low Office and Associates Co., Ltd. (witnesses in charge of the examination of voting disputes throughout the meeting): Mr. Naves Narattharugsa

3) Practical Guidelines for Reporting Conflicts of Interest

As specified in HARN the Corporate Governance Policy and Principles, the directors and top executives must prepare reports on conflicts of interest, consisting of annual reporting forms and a new interim reporting format in case of changes. At a given meeting, those with vested interests or conflicts of interest with must inform the meeting to excuse themselves and abstain from voting on each such matter.

4) Disclosure of Shareholders' Meeting Outcomes

For the 2023 AGM, HARN submitted a summary of AGM resolutions to SET and SEC on the evening of the meeting date April 24, 2023. It also submitted the minutes of the AGM, each agenda clearly separated, the number of directors in attendance, questions raised by shareholders, and answers from directors, together with the voting tallies of each agenda item to SET and SEC within 14 days of the meeting. The minutes of meeting were published on website, www.harn.co.th on May 5, 2023.

6.3.2 Equitable Treatment of Shareholders

HARN treats all shareholders fairly despite their different shareholding proportions. Shareholders' fundamental rights are conserved restriction and regardless of their gender, age, race, nationality, religion, belief, social status, physical impairment, or political inclination. Include Directors with vested interests on any agenda item must excuse themselves from the meeting on that item. In addition, HARN information on the shareholders meeting was announced ahead of the meeting in Thai and English. All shareholders have equal rights to take part in HARN's activities.

1) Proposing Additional Meeting Agenda Items and Nominating Directors

For the 2023 AGM, HARN rights promotes of shareholders to fundamental rights, in which the provides opportunities for shareholders to propose agenda items for the AGM and to propose and nominate Director Candidates in advance, posted such criteria on its website and an announcement on SET's website and www.harn.co.th, from October 1 to December 31, 2022. However, this attracted no recommendation of such agenda items and nomination of directors, and the company secretary duly informed the Board meeting on the matter. In addition, informed shareholders to submit questions in advance for the 2023 AGM via 3 channels, mail, email, facsimile until April 17, 2023 and an announcement on www.harn.co.th. In the 2023 AGM no shareholders who sent questions in advance through the aforementioned channels.

2) Facilitating Shareholders at the Meeting

HARN did it best to facilitate all shareholders, though the AGM was convened during the COVID-19 pandemic, where the safety and health of attendees was crucial under social distancing measures, as follow:

1. The meeting venue was arranged can easily and conveniently travel to by private cars and public, also provide shuttle service, park in front of 7-Eleven, Rama 9 Road, Soi 13 form 11.00 am. Until the meeting closed.
2. Disclose HARN information around the meeting area and provided staff officers to welcome and answer questions of them
3. Provided sufficient drink water to the shareholders at outside area of meeting room
4. Provided staff officers to welcome and take care of them, photocopying services and verified accuracy documents.
5. Provided stamp tax in case the shareholders delegate a person to attend the meeting on their behalf
6. On the meeting day, registration opened 2 hours early and was extended until the period before the last meeting agenda without losing their rights. A barcode system facilitated registration and voting.
7. Prepare quality assessment of the AGM through QR Code to use the data to develop meetings with transparency and beneficial to the shareholders.

To maintain the rights of those who could not attend the 2023 AGM, HARN the provides opportunities for shareholders they could appoint proxies to any independent director any one as proxy on behalf of shareholders namely; Mrs. Valeeratn Chuerboonchai, Mr. Prasert Deejongkit and Dr. Teerachai Pornsinsirak, on proxy form B. which sent along with the invitation notice and discloses on its website, www.harn.co.th. Shareholders may make further inquiries about this by phone, website and email of company secretary.

6.3.3 Roles Toward Stakeholders

HARN accounts for all stakeholders' rights and interests by establishing guidelines for addressing the needs of each group in and outside the corporation, as well as its own responsibility for society and the environment. Stakeholders fall into 7 groups with a different mission targeted for each group in response to their different needs:

1) Employee

HARN attention to employee's well-being by promoting a corporate culture and providing fair compensation while observing human rights principles based on fairness and equality, which have been basing treatment for employees and stakeholders on human rights principles, while strictly observing labor laws and other related regulations. Each one of HARN employees is hired under conditions of related laws practice, with a remuneration package offered without any discrimination. All employees are given training that suit their respective nature of work. No complaint about human rights was lodged in 2023. **Detail in Section 2 "7.5 Information of the employees, page 171-174**

2) Customer

HARN is committed to conducting business under the policy of managing and developing responsibility towards customers. Realizing the importance of safe, quality and environmentally friendly products, meet customers' standards, includes innovation for product development to better respond to customers' demand. In addition to quality products, HARN values communication with customers and maintaining good sustainable relationship, with has various channels for receive customers' opinions, including the customer visits, seminars, satisfaction surveys, LINE Official, phone, e-Mail and website, www.harn.co.th etc. HARN is well aware of privacy and strives to protect customers' personal data and comply with the Personal Data Protection Act B.E. 2562 by announcing privacy notice for customers and all stakeholders on website, www.harn.co.th., as well as a customer satisfaction survey is held yearly, for the 2023 received an average score of as high as 93.09%. **Details in Section 1 "3.3.2 (5) Customer Relationship Management Plan)", page 78-79**

3) Trade Partners and/or Creditors

Recognizing business partners as key business associates, HARN established procurement procedures and complies strictly with them, exhibits, intention to treat all partners fairly, equally, and transparently, has a selection process that requires business partners to meet certain qualifications. Criteria for assessing business partners' capability have also been clearly defined, also gives support for business partners to raise their potential through various activities, and also promotes Green Procurement. **Detail in Section 1 "3.2.2 Stakeholder Analysis from the Business Value Chain, page 73**

HARN treats creditors responsibly and operates its businesses in accordance with conditions and guarantee terms strictly while making full, control timely and full payment, as well as honestly submitting accurate financial status report to creditors on time. Should there be any failure to comply with payment terms and conditions, HARN will inform creditors in advance and discuss to solve problems to prevent any possible damages.

To encourage trade partners and/or creditors conduct guidelines may be more in line with the sustainable business covering environmental issues, HARN has reviewed its policies and guidelines on promoting enhance the potential of partners and/or creditors subject to risk management processes and requirements according compliance its anti-corruption measures handbook.

1. To achieve the goal of "Leader in providing comprehensive sustainable engineering services" in 2023 sent executives and employees to attend training visits with foreign partners, to bring knowledge and experience to further develop the work to make progress, including transferring experiences through internal training to employees in other lines of work. And still use channels to communicate with trading partners and/or creditors both domestically and abroad through the VDO Conference system for greater convenience.

2. Appoint Innovation Committees to create innovative culture in the corporate to lead to new development and innovation for sustainability business consisting of optimizing with Digital Transformation, perspective design thinking and development of products and services, research and cooperation with partners.

4) Competitors

HARN treats all business competitors equally under laws concerning trade competition and within the extent of liberalized international competition. HARN adheres to fair competition and does not commit the following practices: seeking competitors' confidential information, defaming competitors using slander, entering into any agreement with competitors or any party that may lead to reduction or limitation of competition. In 2023, HARN **not any** advantage by seeking competitors' confidential information through dishonest or improper means, and do not defaming competitors using slander that led to reduction or limitation of trade competition. Resulting in **No** legal case between competitors. **Details in Section 1 "3.3.2, 2) Promote fair competition" page 76-77**

5) Investor

The Board of HARN protects shareholders and encourages them to exercise their rights while treating them equally, be they may major or minor shareholders or institutional investors. Remains committed to being an organization that the economic growth sustainable and improving the quality of life, develop innovation and technology in all sectors, consider account the three aspects are Environmental, Social and Governance to be assure that HARN will be a company that operating returns business, sustainable growth. HARN held on online activities as a channel to meet with shareholders, investors, and analysts. **Details in Section 2 "7.6.3 Head of Investor Relations and contact" page 176**

6) Public sector

HARN supports the government policies which adhere to economic development along with social, community, and environmental development, towards a low carbon society, announcing goals becoming carbon neutrality by the year 2040 and emission Net Zero by the year 2050. In addition, HARN's business operations comply with laws, rules, regulations, announcements, and government orders that bind to such business operations, and tracks such changes of government policies and new legislations for the timely management and compliance with the laws among employees and operators at all levels.

7) Community, Society and Environment

HARN define on occupational health, safety and environment policies, bolster the quality-of-life society and the environment, and conduct business with transparency, ethics, and social responsibility, focusing on reducing the risks and impacts of business operations, as well as fosters good relationships and raises the quality of life for people in neighboring and distant communities under its society, community and environment responsibility framework, it also focuses to reduce impacts of climate change and conserve the eco-system. **Details in Section 1 "3.4 Environmental Sustainability Management" page 79-86**

6.3.4 Disclosure of Information and Transparency

Disclosure of information is a key index of operating transparency, a crucial factor for confidence among investors and stakeholders. HARN values accurate, precise disclosure of assorted information and creates numerous channels of disclosure so that all stakeholders can gain easy access to information. It promotes awareness among directors, executives and employees of the importance of information disclosure and transparent operations, and creates appropriate avenues for complaints while providing fair treatment to whistleblowers and those complained against as follows:

Financial and Non-financial Reports

1. Disseminated its information of HARN to shareholders, investors through the channel and media of the Stock Exchange of Thailand and on the website www.harn.co.th. Its information is also compiled in the Annual Disclosure Statement / the Annual Report (Form 56-1 One Report)
2. Disclose information to investors and stakeholders on key matters that affects the price of HARN and decision making of investors and stakeholders, shall be accurate, complete, timely, reliable, transparent.
3. Disclose financial information will be considered thoroughly with the stated aspects at minimum:
 - The result of the assessment is sufficient for internal control.
 - Independent Auditor's Report, internal control recommendations and other recommendations (if any).
 - Comments of the Audit Committees.
 - Relevant to main objectives, goals, strategies and policies of HARN.
4. Disclose on Corporate Governance Policies and Principles, code of conduct, risk management policy, sustainability management policy, environment-occupational-health and safety policy, report results of implementation in compliance with such policies including also non-compliance cases together with reasons (if any) and climate change action report in the Form 56-1 One Report and on its website: www.harn.co.th.
5. Prepares management discussion and analysis (MD&A) to support its disclosure of its quarterly financial statements when changes of Net Income or Net Profit is higher than 20% in the same quarter of last year so that investors access information on changes to HARN's financial status and operating performance in each quarter.
6. Discloses in the annual audit fee and other service fees for the auditor. Which has been approved by the annual general meeting of shareholders.
7. Discloses information on the roles and duties of the Board and Board-Committees, number of meetings and number of meetings attended by each director in the previous year, as well as opinions in relation to performance of duties and directorship training and development for directors, in the Form 56-1 One Report.
8. Discloses remuneration policy of directors and top executives of HARN, that reflects their duties and responsibilities, including types or nature of the remuneration, also remuneration for any directorship on the director of subsidiaries (if any) in Form 56-1 One Report.
9. Disclosure of the information concern one of the directors in particular, that director should be aware of and able to reveal identity to ensure complete and proper compliance.

6.4 Corporate Governance Policy and Guideline Compliance Control

6.4.1 Prevent the Use of Insider Information

HARN has defined policy and guidelines in according Corporate Governance Policies to ensure director, executives and employees on best practices on the use of inside information and guarding of confidential information, in its good Corporate Governance Policies and Principles. Employees HARN they must guard inside information or confidential information not yet publicly available and must not share with other parties inside information learned during the course of their duties or use it to seek profit in a fraudulent way, or to cause damage to HARN's interests.

In addition, HARN has a policy for the Board and Executives including employees who are in a position to access to inside information to refrain from insider trading of HARN stocks within 30 days prior to the disclosure of quarterly and yearly financial statements to the public and until the period of 24 hours since disclosure to the public. Other than that, trading it normally, and requiring all directors and the first 4 top-ranking executives, including their spouses and children under the legal age, if trading HARN stock must report such trading to the Company Secretary at least 1 day in advance. And must report any changes in their HARN share ownership to report electronic the SEC under Article 59 of the Securities and Exchange Act B.E. 2535 (1992) and its amendments within three days of the date of trading, disposal, or receipt of such shares. HARN defines a policy of disclosing or reporting the trading, disposal, or receipt of such shares, changes in share ownership of the directors and the first 4 top-ranking executives to the quarterly Board meeting, contained in advance as a regular agenda item.

The company secretary will notify and a campaign against the use of insider information via e-mail to those involved to acknowledge them of the trading prohibition period and forbidding them to disclose such information to external parties or unrelated parties on a regular basis, so as to prevent insider trading. Including providing organized online learning media in HARN Academy system about the prevention of the use of inside information and prevention of conflicts of interest to educate directors, executives and all employees, operation follow:

1. The company secretary has prepared a schedule to notify prohibition period trading of securities year 2023 in advance notify by email to directors, executives including employees who are in a position to have access to inside information be aware, details are as; (1) fiscal year 2022, between January 24 to February 27, 2023 (2) financial statement Q1/2023 between April 14 to May 16, 2023 (3) financial statement Q2/2023 between July 15 to August 16, 2023 (4) financial statement Q3/2023 between October 13 to November 14, 2023, including their spouses and children under legal age, prohibition trading HARN stock within 30 days prior to the disclosure of quarterly and yearly financial statements to the public and until the period of 24 hours since disclosure to the public. Other than that, trading it normally.
2. Define all directors and the first 4 top-ranking executives to trade securities they must report such trading to the Company Secretary at least 1 day in advance. Must report any changes in their HARN share ownership to report electronic through the SEC under Article 59 within 3 days of the date of trading of such shares, in which the company secretary reports trading to the board of directors acknowledged every quarter.

Year 2023, directors and the first 4 top-ranking executives has practices in accordance to policies and regulation strictly, there were 2 reported transactions outside silent periods, which are not during the prohibited trading period or may have an impact HARN with reported changes to the SEC within the specified time. In addition, still learning and also passed and online knowledge test of prevent the use of inside information in the "HARN Academy" representing 100%, and all directors and the first 4 top-ranking executives, including employees who are in a position to access to inside information **no have** misused HARN's internal information

Shareholding information the Board, including related parties and persons with relationship as of December 31, 2023

Names of directors		No. of shares held	% of total shares	note
1. Mr. Pichet	Sithi-Amnuai ^{1/ 2/}	-	-	(no shareholding)
2. Mr. Prasert	Deejongkit (1) ^{1/}	-	-	(no shareholding)
3. Dr. Teerachai	Pornsinsirak (1) ^{1/}	-	-	(no shareholding)
4. Mrs. Valeeratn	Chuerboonchai (1) ^{1/}	5,671,700	0.970	-
5. Mrs. Sirima	Iamsakulrat (1)	81,884,151	14.009	-
6. Mr. Jain	Charnnarong (1)	68,953,030	11.797	-
7. Mr. Wirat Sukchai Group (2)				
7.1 Mr. Wirat	Sukchai	89,006,630	15.228	-
7.2 Mrs. Nopparat	Sukchai (spouse)	13,000,000	2.224	-
8. Mr. Thammanoon	Tripetchr (1)	23,260,187	3.980	-
Total		281,775,698	48.208	

Note : ^{1/} Independent director

^{2/} Directors who Appoint replacing, Mr. Thako Nunthirapakorn who retired by rotation at the 2023 Annual General Meeting (AGM)

- No HARN share was held by directors' mother, spouses and children under legal age except those of No. 7 which no stock trading during the year 2023

Shareholding information Executives, including related parties and persons with relationship as of December 31, 2023

Names of executives		No. of shares held	% of total shares	note
1. Mr. Rattanaphan Mukhariwattananon Group (2)				-
1.1 Mr. Rattanaphan	Mukhariwattananon	4,479,062	0.766	-
1.2 Mrs. Rabeab	Mukhariwattananon	10,000	0.002	-
2. Mr. Wisit	Wachiralappaitoon	816,045	0.140	-
3. Mrs. Varinkan	Teraumranon	1,512,912	0.259	-

Note : No HARN share was held by executives' mother, spouses and children under legal age except those of No.1 which no stock trading during the year 2023

Report summarizing change in shareholding HARN proportion of the Board compare as of 2022 and 2023

Names of directors		Number of shares At Date		Increase (Decrease)	note
		December 31, 2023	December 31, 2022		
1. Mr. Pichet	Sithi-Amnuai ^{2/ 3/}	-	-	-	(no shareholding)
2. Mr. Prasert	Deejongkit (1) ^{1/}	-	-	-	(no shareholding)
3. Dr. Teerachai	Pornsinsirak ^{1/}	-	-	-	(no shareholding)
4. Mrs. Valeeratn	Chuerboonchai (1) ^{1/}	5,671,700	5,671,700	-	-
5. Mrs. Sirima	Iamsakulrat (1)	81,884,151	81,884,151	-	-
6. Mr. Jain	Charnnarong (1)	68,953,030	68,953,030	-	-
7. Mr. Wirat	Sukchai	89,006,630	86,795,159	2,211,471	-
8. Mr. Thammanoon	Tripetchr (1)	23,260,187	22,779,886	480,301	-

Note : ^{1/} Independent director

^{2/} Directors who Appoint replacing, Mr. Thako Nunthirapakorn who retired by rotation at the 2023 Annual General Meeting (AGM)

- No HARN share was held by directors' mother, spouses and children under legal age except those of No. 7 which no stock trading during the year 2023

Report summarizing change in shareholding HARN proportion of the Board compare as of 2022 and 2023

Names of executives		Number of shares At Date		Increase (Decrease)	Note
		December 31, 2023	December 31, 2022		
1. Mr.Rattanaphan	Mukhariwattananon	4,479,062	4,262,883	216,179	-
2. Mr. Wisit	Wachiralappaitoon	816,045	642,437	173,608	-
3. Mrs. Varinkan	Teraumranon	1,512,912	1,328,322	184,590	-

Note : No HARN share was held by executives' mother, spouses and children under legal age except those of No.1 which no stock trading during the year 2023

6.4.2 Prevention of Conflict of Interest

HARN requires information disclosure to prevent conflicts of interest and illegal, improper activities. Under the Board's policy, business decisions made aligning our practices with good governance principles. The Board of Directors has established policies and guidelines for conflicts of interest with under Corporate Governance, and Code of Conduct for the directors, executives and employees follow on the principle that any decision It must be done for the best interest of HARN only and it is the duty of directors, executives and employees at all levels to avoid financial involvement and/or relationships with other third parties. This will result in HARN losing interest or creating a conflict of loyalty or interest or hindering its effective operations. Those Director, Executives and Employee person with interests or related businesses which may require HARN s review and decisions must report their relationships and connection with potential conflicts of interest. Including is to disallow such connected directors and related executives from participating in the decision making and having no authority to approve for and involvement in such transactions, operation follow:

1. HARN has required all directors and the first 4 top-ranking executives (as defined by the Securities and Exchange Commission (SEC)) must be disclose stakeholder and conflict of interest reports when taking office for the first time. They also have to report any changes on their conflicts of interest regularly, and within February for every year, as the foundation for supervising everyone's stakeholders. These include the disclosure of any suspected items of conflict of HARN's interests or any approvals. In such cases, there should be no principles, conditions, or special issues contrary to normal terms. Thus, this is considered as HARN's internal control process. In the meantime, the Audit Committee is required to oversee and resolve such conflicts of interest. Company Secretary retain this information to investigate and monitor conflicts of interest. In 2023, there were no transactions with conflicts of interests among the directors and the first 4 top-ranking executives, as well as related individuals.
2. The Board define at every board meeting, the Chairman or Company Secretary, reminds directors to conform to the policy on conflicts of interest on all agenda items, which requires those with vested interests to declare themselves to the meeting to abstain from voting or any opinions, and record it in the meeting minutes.
3. The Audit Committee reviews related transactions and those with potential conflicts of interest that could undermine HARN's businesses to ensure conformance to the law and SET's criteria. All of which must be reported to the board for approval.

In the year 2023, directors and the first 4 top-ranking executives all has submitted the report of the report of vested interest and the report conflicts of interest and signed the 100 % confirmation compliance with HARN's corporate governance principles and code of conduct. In addition, learned and passed the online knowledge test on preventing conflicts of interest through HARN Academy system 100% complete. Directors and the first 4 top-ranking executives, no misconduct that violates the conflict-of-interest prevention policy.

6.4.3 Right of Shareholders

HARN has defined guidelines on the rights of shareholders and equitable and fair treatment, the good corporate governance policy has been established and participation support guidelines, communication with shareholders, shareholders' rights and equitable treatment of shareholders for directors, executives, and employees to comply with under Corporate Governance, and Code of Conduct.

6.4.4 Anti-Corruption Policy and Guideline

1) Prevention Policy Relating to Anti-Corruption Matters

HARN defines and enforces through all the organization an explicit "Anti-Corruption Policy" comprising of definitions, responsibilities, implementations, and measures within Anti-Corruption Measures Handbook. The Board approved on May 10, 2018 which is an ISO 9001:2015 certified document. The Board, executives, employees, subsidiaries, joint ventures, other companies that control and agents (if any), are strictly required to acknowledge and comply with this policy.

Define Anti-Corruption Policy an explicit, all the Board, executives, employees, subsidiaries, joint ventures, and other entities that may have a control over including agents (if any), prohibited or commit or accept any kind of corruption at all means. For direct and indirect benefits to personal and relevant parties neither one is a receiver or a giver or an offer of bribe both monetary and non-monetary to the government or private, and partners that HARN exercise business, it has continuous operations and development as follows:

1. HARN enlisted in the declaration of intention to join Thailand Private Sector Collective Action Coalition against Corruption (CAC), with from March 21, 2018, organized by the Thai Institute of Directors (IOD), which won certification membership in the 3rd quarter of 2018 and won continuously certification for the first in the second quarter of 2021, demonstrate its firm intention in anti-corruption. HARN is committed to good governance, code of conduct, and business ethics that are responsible for the community, society, and environment, including all stakeholders in the entire supply chain.
2. Since 2018, HARN has begun enforcing Anti-Corruption Policies as part in Anti-Corruption Measures Handbook. The policies, revised in 2021, to be contain essential principles and guidelines embracing resistance to fraud, by defining as part of the way of Corporate Governance and Code of Conduct so that may observe the same standards and management approaches.
3. HARN's Anti-Corruption Policy forbids HARN's director, executives and employees to carry out or participate in corrupt practices as well as all forms of bribery offer or acceptance direct and indirect. They must seriously observe the Anti-Corruption Policy, which covers various processes, including donation to charities, human resources administration, supply procurement, and internal control, etc.

2) Guidelines for Overseeing the Compliance with Anti-Corruption Practices

To be in accordance with the latest anti-corruption policy HARN adopted, provides guidelines for overseeing the compliance, as follows:

1. Assign directors management and staff to assess the compliance with corporate governance policies and principles, business ethics and the Anti-Corruption Measures Manual every year.
2. Follow up to regularly review and improve the anti-corruption policy every year in order to ensure that HARN's operations comply with changes in business, regulations and relevant legal requirements. It must be presented to the Audit Committee and reported to the Board of Directors on a quarterly basis.
3. Assign the Quality System Management Department to inspect and monitor the implementation of anti-corruption policy measures by various departments through internal quality audits and report to the Chief Operating Officer, Chief Financial Officer, and the management review meeting every month by presenting to the Risk Management Committee. It must be reported to Board of Directors on a quarterly basis.
4. If from information from the audit or complaints found by the investigation there is reasonable evidence to believe that there are transactions or actions that may have a significant impact on the financial status and

HARN's performance, including any breach of the law, the Code of Business Conduct/Ethics, guidelines for corruption prevention, or questions about financial report or internal control system, the Audit Committee will report to the Board of Directors in order to take corrective action within the period the Audit Committee deems appropriate. An investigation will be conducted without disclosing the whistleblower's name in order to protect the potential impact on the whistleblowers of the complaint or allegation.

3) Communication, Training, and Task Highlights

In order to strictly guide the behavior of directors, executives and all employees, including subsidiaries, joint ventures, other companies controlled by the company, including business representatives (if applicable) and other relevant external, require communication and training. The anti-corruption actions are as follows:

1. Communicates its Anti-Corruption Policy and guidelines to its subsidiaries, associates, and other HARN-controlled companies, business partners, and stakeholders as well as the public through assorted channels including letters, e-mails, website, HARN intranet, signage and LINE Official so that all stakeholders may acknowledge and conform to guidelines.
2. Communicates with its Director, Executives Employees and provides training to ensure their understanding of fraud anti-corruption measures, and disciplinary actions for non-compliance. The training includes an orientation session, and HARN Academy E-learning etc.

4) Oversight and Monitoring of Performance

To demonstrate commitment to countering corruption, as a listed company, it is the company's responsibility to foster confidence among shareholders and stakeholders, define has oversight and monitoring of performance, as follow:

1. The Board ensures that HARN commands an efficient system for anti-corruption to ensure that executives recognize and values anti-corruption and cultivates it as a corporate culture.
2. The Audit Committee supervises internal control, financial reporting, and other procedures concerning anti-corruption measures, steers conformance to anti-corruption measures, and reviews applicable measures and internal control to ensure that the measures are adequate and effective. The reviews risk assessment and provides recommendations to the Board on suggested practices to mitigate such risks.
3. The Audit Committee annually defines and reviews the Anti-Corruption Policy, provides recommendations and guidelines, monitors, and assesses performance, and steers and advocates risk management practices concerning anti-corruption and process-level corruption by assessing fraud and corruption risk and review anti-corruption measures for adequacy and suitability.
4. Top Executives establish risk assessment for business processes that may lead to corrupt practices, review the suitability of processes and measures, and personify proper behavior as well as communicating it to all employees and related parties.
5. Developed Risk & Control Self-Assessment for all units to apply as guidelines for assessing corruption risks in their respective business processes and for defining suitable internal control processes.
6. The Quality Management Division inspect and monitors the use operational on process the Anti-Corruption measures and monthly report on compliance outcomes to the Chief Operating Officer, Chief Financial Officer and the management meeting.
7. Internal Audit reviews items of potential the likelihood of corruption, and corporate efficiency for managing risks arising from corporate corruption and those at the operating level. Also reports to the Audit Committee and top executives when encountering items or actions that could undermine performance outcomes, including corruption.

Furthermore, the Boards review policies suitability and Anti-corruption Measures on March 29, 2023, was no significant change, remains consistent and suitable for changes of the business environment, rules, regulations, and the provision of laws. Details of the information on Policy Anti-Corruption are shown in <https://www.harn.co.th/corporate-governance/corporate-governance-policy/>

6.4.5 Whistleblowing Policy and Guideline and Monitoring

1) Implementation Measures Whistleblowing

The Board provide process and channels for complaints and whistleblowing and/or all forms of all complaints of all stakeholders through the following channels:

Channels and Methods of Whistleblowing

Complaints must explicitly spell out “confidential” to the Chairman of the Audit Committee which is an Independent Committee, through these channels.

Chairman of the Audit Committee



Harn Engineering Solutions Public Company Limited

559 Soi Soonvijai 4, Rama 9 Road, Bangkok,
Huaykwang, Bangkok 10310



chairac@harn.co.th



www.harn.co.th/
corporate-governance/
corruption-report/

Channels for Advice

Employees or others whom has inquiries and seek for advice on anti-corruption policy may contact through these channels.

Chief Financial Officer



Harn Engineering Solutions Public Company Limited

559 Soi Soonvijai 4, Rama 9 Road, Bangkok,
Huaykwang, Bangkok 10310



+(66)2 318-9744 ext.4004



visit.w@harn.co.th

Channels Contact to HARN

Stakeholders can express their opinions, suggestions, and other complaints which are not an issue of anti-corruption through communication channels as follows:

Company Secretary



email: wasukan.b@harn.co.th



Tel: (02) 318-9744 ext.4011

Investor Relations



email: wirat.s@harn.co.th



Tel: (02) 318-9744 ext.5001

Mail



Harn Engineering Solutions Public Company Limited,
559 Soi Soonvijai 4, Rama 9 Road, Bangkok, Huaykwang, Bangkok 10310

1. Once the chairman of the Audit Committee receives a clue, or the company secretary or investor relations or any other channels receive clues and complaints from the stakeholders of HARN, a preliminary consideration will be made regarding the category of which the matter of the complaint received falls into. The cases will be collected to present to the sub-committees or related directors and all suggestions and issues will be summarized to present to the Board of Directors quarterly. Except for complaints and whistleblowing directly sent to the chairman of the Audit Committee, the chairman of the Audit Committee will personally open those letters.
2. Employee complaints or suggestions, HARN has a process for dealing with such by considering whether the employee's complaint is a matter that may be an offense and at what level in order to determine the penalties for the action with fairness and accuracy. To build confidence in the measures to protect and maintain the confidentiality of complainants, employees can complain and express opinions through a variety of channels such as through a comment box, LINE Official account of HARN, or direct notification via e-mail to the Human Resources Department. All employees are obligated to acknowledge the available complaint channels since their orientation as new employees.
3. HARN has established a suitable and fair process for punishing violators of anti-corruption measures. Any violation of this policy, direct or indirect, calls for disciplinary review under HARN's regulations, consisting of fact-finding, investigation, punishment, and appeal. They could also lead to punishment by law. Employees must therefore master and strictly conform to the Anti-Corruption Policy in every step of their work.

2) Actions when receiving complaints and reporting clues

The Audit Committee will consider the complaints received and inform the relevant authorities in order to investigate the facts of the complaints and take appropriate corrective action. The Audit Committee will periodically monitor the progress. The relevant departments will notify the results within a reasonable period of time to the complainants. The Audit Committee will report to the Board of Directors.

3) Protection Measures Complainants and Whistleblowers

In order to protect the rights of whistleblowers with good intention, HARN will not disclose names, addresses or any other information that can identify the complainant or the whistleblower and keep the information of the complainant and whistleblower confidential. Only those responsible for the investigation of complaints will have access to such information. In this regard, the person receiving information from performing duties related to complaints have a duty to maintain information, complaints, clues and documentary evidence of the complainant and whistleblower confidential. No information is to be disclosed to any other person who does not have a relevant duty unless it is a disclosure in accordance with the duty required by laws. Measures, scope, and tools for whistleblower protection, as follow:

1. HARN's human resources administration process echoes its commitment to anti-corruption measures. Although refusal to take part in corruption may deprive HARN of business opportunities, its policy is not to demote, punish, or harm those that do so.
2. HARN's employees should not ignore actions in potential conflicts with anti-corruption measures. HARN has established channels for whistleblowing and protection of whistleblowers or those that need advice about conformance to anti-corruption measures.
3. HARN has established whistleblowing on corruption, Code of Conduct and non-compliance with laws and corporate regulations to define applicable criteria and guidelines that are suitable and uniform throughout the corporation. Protective measures and fair treatment are in place for whistleblowers or those that provide information, to overcome corruption seriously, strictly, and more efficiently.

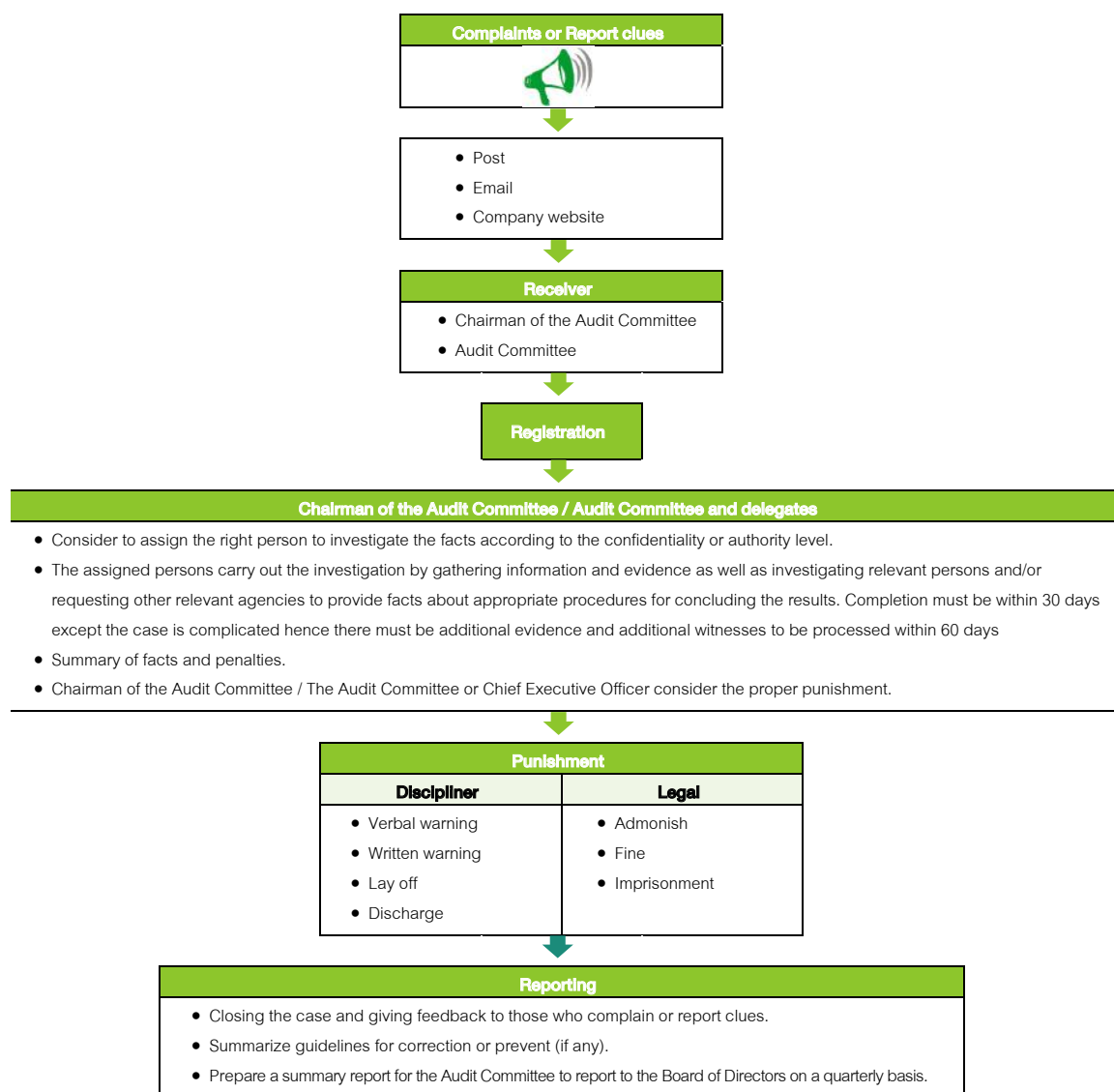
Assigned by the Board of Directors, the Audit Committee acts as the main contact point for reporting incidents and clues, following up on incident reports, protecting and providing fairness to complainants or those who

provide clues related to corruption within the organization, and reporting the results of the investigation and punishment to the Board of Directors. In 2023, there were **no cases** of fraud or violations of HARN regulations. In addition, it communicates acknowledged to all Board, Executives and Employees to the Good Corporate Governance, Code of Conduct and Anti-Corruption Measures o prevent complaints/whistleblowing of such issues.

Complaint and whistleblowing statistics

	Reporting	Monitoring	Closing complaints
1. Code of Conduct	0	0	0
• Anit-Corruption	0	0	0
• Conflict of interest	0	0	0
• Compliance	0	0	0
2. Environment, Health and Safety	0	0	0
3. Society, Community, and Public Relations	0	0	0

Diagramed of the process of receiving complaints or report clues, investigation, punishment and reporting



6.5 Code of Conduct

HARN has its written policies and guidelines for Code of Conduct, based on international standards. The compiles the format, scope of standard behaviors and actions that the directors, executives and employees must comply with during the course of business and in their duties with ethics, integrity, fairness and equality. The maintain HARN's image as an organization of sustainable growth. Furthermore, supervisors are responsible for the monitoring and promotion of Code of Conduct compliance among their subordinates. Violators of the code are subject to disciplinary action.

The essential aspects of the code of conduct are included below:

1. Compliance with relevant laws and regulations
2. Conduct
3. Perform duties with responsibility, honesty, diligence and discipline
4. Confidentiality of company confidential information
5. Maintaining company assets
6. Exercise of social and political rights
7. Treat stakeholders fairly
8. Respect universal human rights
9. Compliance with applicable laws, rules, regulations and regulations and respect for culture customs and traditions of each locality
10. Confidentiality and use of inside information
11. Marketing communications
12. Intellectual Property
13. Use of information and communication technology
14. Anti-Corruption

The Board reviewing of Code of Conduct in the Board Meeting no. 2/2023 on March 29, 2023. Details of the complete information on Corporate Governance and Code of Conduct of HARN are shown in <https://www.harn.co.th/corporate-governance/corporate-governance-policy/>

6.6 Performance of Corporate Governance Policy

6.6.1 Review CG Policy, Guidelines and System

The Borad regularly reviewed its policies, principles, and practices in relevant to corporate governance. In 2023, Reviewed good corporate governance policies, principles, and guidelines based on the criteria of the SEC and SET, as well as corporate governance assessment have been developed from various institutions. On March 29, 2023, HARN reviewed and update guidelines Corporate Governance Policy the following:

1. Amended the Corporate Governance Policies and Principles, improving to in line with Corporate Governance Principles of the Office of the Securities and Exchange Commission (SEC), and the Personal Data Protection Act B.E. 2562, including consistent with the charter of the Board and Board-Committees
2. Amended the Board Charter, Audit Committee Charter, Risk Management Committee Charter, Executives Committee Charter and Nomination and Remuneration Committee to ensure fulfill responsibilities is appropriate and in line with guidelines Corporate Governance Principles of the Office of the Securities and Exchange Commission (SEC).
3. Reviewed the Code of Conduct, the Anti-Corruption Measures, Risk Management Policy and Sustainable Development policies, to be up-to-date, in accordance comprehensive and sufficient operational guidelines.

6.6.2 Performance under CG Code

HARN communicates and abides by corporate governance principles to all directors, executive directors and employees every year, and in 2023, following results:

1. 100% delivery of HARN's corporate governance policy to newly appointed directors Communicate and emphasize adherence to business code of conduct, such as using insider information, conflicts of interest, and conflicts of interest, in continuous the Board meetings.
2. Assessed operational risks, compliance with laws, safety, health and environment, corporate reputation and corruption covering all parties involved. The risk control results were reported to the Risk Management Committee, Audit Committee and the Board every quarter. The results of the risk assessment of corruption and unethical actions in use of Inside Information, conflict of interest and ethics of the Board, Executives and Employees were at a satisfactory level **without any** wrongdoing found.
3. Communicate policies good corporate governance, code of conduct, measures anti-corruption, prevention of conflict of interest and prevention use of Inside Information to the Board, Executives and all employees which counts as 100% through e-mail, Intranet and Digital Signet to cultivate awareness and promote transparent, fair and verifiable operation behavior.
4. Organized internal training on Corporate Governance Policy and Principles, Code of Conduct and Anti-Corruption for new employees, including requiring a knowledge test. There were 25 employees in total who attended the training and passed the tests at 100%.
5. Organized E-Learning in the HARN Academy system as a learning medium on the good corporate governance, code of conduct, Anti-Corruption, prevention of conflict of interest and prevention use of Inside Information by yourself to knowledge for directors, executives and all employees in all areas thoroughly to cultivate and raise awareness, including requiring the comprehension test through online tests. There summary was 8 out of 8 directors who passed the tests, representing 100%, and 5 out of 5 executive who passed the tests, representing 100%, 235 out of 235 employees who passed the tests, representing 100%.
6. In 2023, HARN has announced information under material events within the timeframe specified by the authorities, this is to keep the securities trading in order, liquid, fair, and orderly. However, HARN and the Board, including Executives, **were not** fine or civil actions by regulatory corporate such as the SEC, SET or NACC etc., regarding corruption, good corporate governance, code of conduct, compliance with relevant laws, violation/non-compliance with the guidelines on share repurchase/deprivation of communication between shareholders/non-disclosure of agreements between shareholders, and violation/non-compliance with the guidelines on equity trading or asset trading, include there was **no case** where an independent director or a non-executive director resigned due to the issue of corporate governance of HARN.

6.6.3 Other Implementation under CG Code

The Board reviewed Corporate Governance Policies and Principles, complied with CG Code 8 items year 2017 principles and adapt to HARN's business context, but may did not cover the criteria under the CGR in 5 items, which can be explained follow. However, overview in 2023, a survey on corporate governance conducted by the Thai Institute of Directors (IOD) under the Corporate Governance Report of Thai Listed Companies for 2023 has ranked HARN as "Excellent" or 5 stars with an average score overall of 106%, which a higher score than 2022 as and higher than the average score of all listed companies.

1) Voting to elect directors by cumulative voting

HARN's articles of associations require that directors be elected by majority votes and that each shareholder shall have the number of votes as the shares held. In addition, HARN has defined methods to protect the rights of shareholders, including the rights of minor shareholders to propose meeting agenda and nominate directors.

2) Sustainability Report

At present, disclosed information related to compliance with laws, ethics, anti-corruption policy, treatment of employees and stakeholders including fair treatment and respect for human rights including social and environmental responsibility only the importance that affects the main business and report on in policies of Corporate Governance and Driving Business for Sustainability in the Form 56-1 One Report.

3) Independent directors should consist not less than half of the total Board

At present, the proportion of independent directors is 4 persons from 8 person. The proportion of independent directors is 50% which the products that HARN distributes are various and need to have knowledge in products, markets, competitive conditions and customers' needs.

4) Consider appointing the Corporate Governance Committee

Delegating the Chief Operating Officer to oversee and present to the Board of Directors for acknowledgment of the implementation at least once a year. In 2023, reviewing of Corporate Governance in the Board Meeting no. 2/2023 on March 29, 2023. However, not any violation of good corporate governance, code of conduct and compliance with relevant laws, rules and regulations, has safety and legal management standards.

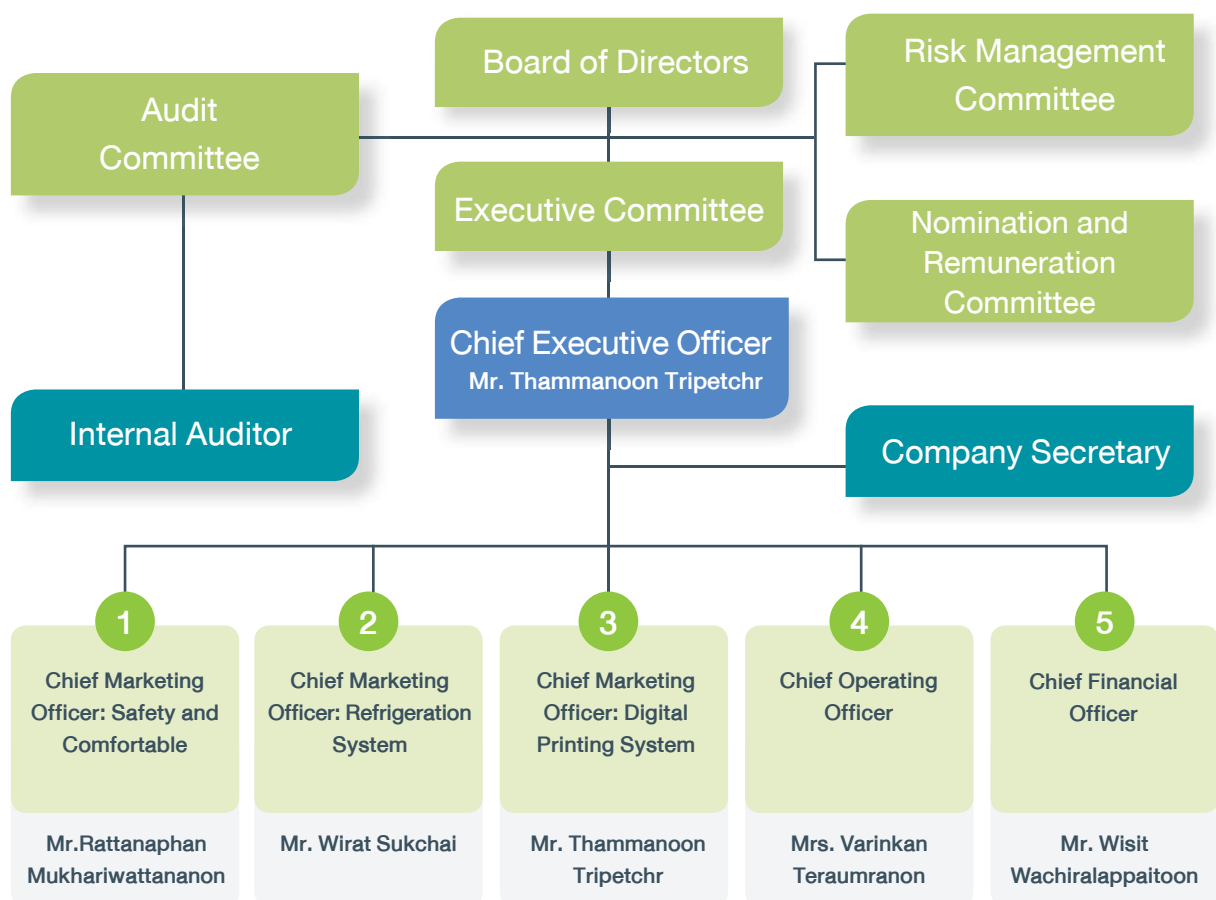
5) Consider appointing the Corporate Sustainable Committee

The Executive Committee is assigned to oversee and present to the Board of Directors for acknowledgment of operations at least once a year. In the Board of Directors' meeting no. 2/2023 on March 29, 2023. HARN set strategic plans and goals for sustainable business operations, with balance in the environment, society, and governance towards the goals of becoming carbon neutrality by the year 2040 and emission Net Zero by the year 2050.

7. Governance Structure and Key Information of the Board, Board-Committees, Executives, Employees and Others

7.1 Governance Structure

Harn Engineering Solutions Public Company Limited's management structure or "HARN" as of December 31, 2023, comprises of the Board of Directors and 4 Board-Committees supporting matters: the Audit Committee, Nominating and Remuneration Committee, Executive Committee, and Risk Management Committee. Composed of qualified individuals under Section 68 of the Public Companies Act B.E. 2535 (1992) (as amended) and the Securities and Exchange Act B.E. 2535 (1992) (as amended). The Chief Executive Officer is the top executive of HARN.



Note : Management no. 1 - 5 is Company executives according to the Notification of the Securities and Exchange.

7.2 Board of Directors

7.2.1 Composition of the Board

Under of HARN articles of association, the Board consists of:

- Least 5 directors.
- At least half of the directors must reside in the Kingdom.
- Must consists of Independent Directors of at least one-thirds of all Directors and the number must be at least 3 directors.
- The Independent Directors must as Audit Committee the number must be at least 3 directors.
- Non-Executive Director must of at least 1director in knowledge engineering in main business and at lest 1 director must in knowledge of accounting.
- Must consists of Executive not more half of all Directors.

According to the certification of the Ministry of Commerce at December 31, 2023, the HARN Board consisted:

- 6 non-executive directors at 75% of the entire Board.
 - 4 independent directors at 50% of the entire Board, which exceeds the legal limit.
 - 2 female directors at 25% of the entire Boar.
 - 2 executive director at 25% of the entire Board. Including 1 Chief Executive Officer and 1 Chief Marketing Officer.
 - Non-independent directors meet the fair proportion of controlling shareholders' investment.
 - Board Expertise at December 31, 2023, Each Board, reviewed expertise in according Board Skill Matrix.
- In summary, the Board has the diversity of gender, age, education background, experience, expertise in specialized beneficial matters.



		Knowledge, Expertise and Experience							
		Core Business	Strategy, Marketing and Competition	Accounting and Finance	Technology and IT	Legal related to business	Risk Management	Human Resources	Responsibility and Sustainable Development
1.	Mr. Pichet Sithi-Amnuai	Independent Director Chairman of the Board	●	●	●	●	●	●	●
2.	Mr. Prasert Deejongkit	Independent Director Member of the Audit Committee Chairman of the Nomination and Remuneration Committee	●	●		●			
3.	Dr. Teerachai Pornsinsirak	Independent Director Chairman of the Risk Management Committee/ Member of the Audit Committee	●		●		●	●	●
4.	Mrs. Valeeratn Chuerboonchai	Independent Director Chairperson of the Audit Committee/ Member of the Nomination and Remuneration Committee		●				●	
5.	Mr. Wirat Sukchai	Directors Chairman of the Executive Committee/ Member of the Risk Management Committee / Chief Marketing Officer	●	●			●		●
6.	Mr. Thammanoon Tripetchr	Directors/ Member of the Executive Committee/ Member of the Risk Management Committee/ Chief Executive Officer/ Chief Marketing Officer	●	●	●	●	●	●	●
7.	Dr. Jain Charnnarong	Directors Member of the Executive Committee/ Member of the Nomination and Remuneration Committee	●		●				●
8.	Mrs. Sirima Iamsakulrat	Directors	●	●					●

7.2.2 The Current Board of Directors

The Board of Directors as of December 31, 2023, there are 8 members. Consisted of: 4 Directors and 4 Independent Directors. All independent Director is able to express opinions freely according to the relevant laws and must have qualifications that completely fulfill the requirements stipulated by the Notification of the Capital Market Supervisory Board No. Thor.Jor. 28/2551 regarding application for and Approval of Offer for Sale of Newly Issued Shares (and the amendments).

	Name		Position	Appointed Date
1.	Mr. Pichet	Sithi-Amnuai ^{2/}	Independent Director (Non-Executive)	April 24, 2023
			Chairman of the Board	April 24, 2023
2.	Mr. Prasert	Deejongkit	Independent Director (Non-Executive)	April 23, 2021
			Member of the Audit Committee	April 23, 2021
			Chairman of the Nomination and Remuneration Committee	May 15, 2022
3.	Dr. Teerachai	Pornsinsirak ^{3/}	Independent Director (Non-Executive)	April 25, 2022
			Chairman of the Risk Management Committee	May 15, 2022
			Member of the Audit Committee	April 25, 2023
4.	Mrs. Valeeratn	Chuerboonchai ^{4/}	Independent Director (Non-Executive)	May 15, 2022
			Chairperson of the Audit Committee	April 25, 2023
			Member of the Nomination and Remuneration Committee	May 15, 2022
5.	Mr. Wirat	Sukchai	Director (Executive)	September 5, 2012 ^{1/}
			Chairman of the Executive Committee	March 1, 2018
			Member of the Risk Management Committee	May 15, 2022
			Chief Marketing Officer	March 1, 2022
6.	Mr. Thammanoon	Tripetchr	Director (Executive)	November 1, 2016
			Member of the Risk Management Committee	November 11, 2016
			Member of the Executive Committee	December 1, 2016
			Chief Executive Officer	March 1, 2022
7.	Dr. Jain	Charnnarong	Director (Non-Executive)	April 5, 2017
			Member of the Executive Committee	March 1, 2017
			Member of the Nomination and Remuneration Committee	May 15, 2022
8.	Mrs. Sirima	Iamsakulrat	Director (Non-Executive)	September 5, 2012 ^{1/}

With Miss. Wasukan Boonmee is the Company Secretary

Note : ^{1/} HARN was listed on the Stock Exchange of Thailand in 2014, causing the directors to continuously hold positions

^{2/} Mr. Pichet Sithi-Amnuai was appointed as Independent Director and Chairman of the Board with effect from April 25, 2023 replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

^{3/} Dr. Teerachai Pornsinsirak was appointed as Member of the Audit Committee with effect from April 25, 2023, replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

^{4/} Mrs. Valeeratn Chuerboonchai was appointed as Chairperson of the Audit Committee with effect from April 25, 2023

7.2.3 Authorized Director to Sign and Bind for HARN

According to HARN's Articles of Association, The Board Two (2) authorized directors shall sign to represent HARN, which the Shareholder's Meeting or the Board Meeting has the power to determine the list of authorized directors sign to represent HARN. Through the Board of Directors Meeting No. 1/2021 on February 25, 2021, the Board has approved directors having authority to sign on behalf of HARN, namely Mr. Wirat Sukchai, Mr. Thammanoon Tripetchr, Mrs. Sirima Iamsakulrat and Mr. Jain Charnnarong any 2 of the 4 representative directors jointly sign.

7.2.4 Roles, Duties and Responsibilities of the Board

The board shall act professionally on behalf of the shareholders with high responsibility and accountability in order to steer HARN in the right directions, define framework of strategies according to vision and mission, to ensure that business is operated under code of conduct complies with laws and regulations, make decisions on important matters with care and loyalty, and monitor to the communication of short and long-term strategies into practice at the operational level. Also, protect the benefits of all stakeholders. Therefore, the Board must perform their duties independently from management, for overseeing management's operations and results, managing risks and determining remuneration.

Currently, Mr. Pichet Sithi-Amnuai is the Chairman of the Board, and Mr. Thammanoon Tripetchr is the Chief Executive Officer of HARN is a different person, has clearly separate roles and responsibilities of the Board and the Executives, in line with the Corporate Governance Policy and Code of Conduct.

Roles, Duties of the Chairman of the Board

1. The chairman is independent from the management and not the position of Chief Executive Officer, and has not been involved in routine management with clear segregation of roles between the Chairman and the executives, to balance the power in the administration.
2. Calls for the Board meeting according to the articles of association or in case of emergency by delivered to Directors at least 5 business days in advance of the Board meeting date. In urgent cases, the Chairman of the Board is the head of the meeting and in the Annual General Meeting including determines agenda of the meeting with the Chief Executive Officer.
3. Ensures the efficiency of each meeting by allocating enough time for the executives to present information, encouraging and allowing directors' queries and expression of free views, controlling the issues under discussion, and summarizing the meeting's resolutions. The Chairman shall also promote constructive relations among directors as well as between the Board and the executives.
4. Encouraging the Board's conformance to authorities, responsibilities, law and corporate governance principles, code of conduct. The Chairman shall also advocate directors' efforts for promoting a corporate culture of ethics, and good corporate governance, including identifying themselves, refraining from voting, and leaving the meeting in case of having conflicts of interest in any agenda.
5. Control and oversee the Board and Board-Committee to perform on duty efficiency and achieve the stated objectives.
6. Having power deciding cast vote, in case the votes of both parties are equal.

Roles, Duties of the Board

1. Define HARN's vision, policies, code of conduct, strategies, directions, annual budget, management structure and major plans and consider potential risks so as to ensure that management can effectively drive plans into practice. HARN is running its businesses with transparency responsibility to stakeholders, society and environment.
2. Assess the performance of the Chief Executive Officer (CEO) and decide suitable remuneration, to induce short-term and long term motivation.

3. Oversee an accounting systems, financial reporting and auditing, as well as the efficient and effective internal control and internal audit systems. Define comprehensive risk management, have a mechanism for complaints and providing protection for complainants' guidelines, as well as ensure an efficient risk management system or process and follow up every quarterly.
4. Oversee and supervise issues regarding related-party transactions and manage potential conflicts of interest and reports to the Board on a regular.
5. Oversee that appropriate are reviewed and communicated Corporate Governance Policies and Principles and Code of Conduct at least once a year.
6. Oversee to have a Policies and Anti-corruption Measures to comply with the requirements of the law related, including communicate to the Board, management, employees and related third parties, and promote it as a culture.
7. Monitor and supervise the performance of the management with the specified policies, plans and budget in an efficient manner, and ensure that HARN's business management is in line with the corporate governance policy.
8. Approval for long-term investment, loans or other as appropriate.
9. Approve employee development and executive succession plan, and oversee procedures there is an effective.
10. Approve and/or give opinion on related transactions, acquisition or disposition of assets, investment and any other of HARN and subsidiaries with the laws, notifications, requirements, rules and regulations, unless it is prescribed by law to seek approval from the shareholders' meeting.
11. Authorized to appoint the Chief Executive Officer and Board-Committees who has been nominated under the nomination process and procedures under relevant laws and regulations, including assign duties and responsibilities.

In case the Board's assignment of the Chief Executive Officer, Managing Director or any other person to perform duty on behalf, must the scope of power and duties of the authorized person clearly specified and shall be clearly recorded minutes as a resolution of the Board meeting,

However, the authority and duties stated above must no any conflict of interest with HARN or subsidiary, unless the approval of such transactions is in line with the policy and criteria duly approved by the Board

12. Appoint the Company Secretary who has appropriate experience and qualifications in the roles and responsibilities specified in the Securities and Exchange Act.

7.3 Information on Board-Committees

The appointment of Director as Member of the Board-Committees, the Nomination and Remuneration Committee considers qualified Director as a Member of the Board-Committee to fill vacancies. This must be done in accordance with the Board-Committees' Charters. The names of selected Directors are to be proposed to the Board for consideration and approval.

However, the Board appointed of the 4 Board-Committees supporting matters: the Audit Committee, Nominating and Remuneration Committee, Executive Committee, and Risk Management Committee which clearly defining duties and responsibilities, to consider specific issues, scrutinize and propose the Board for consideration.

7.3.1 The Audit Committee

Each quarter the Audit Committee, together with the Chief Financial Officer which as audit committee secretary and the external auditor (Dharmniti Auditing Co., Ltd.), reviews financial reports. The Board is accountable for HARN's and consolidated subsidiary financial statements as well as other financial information presented in the annual report. The financial reports are prepared under generally accepted accounting principles and are audited and certified by Mr.Thanawut Piboonsawat, C.P.A. No. 6699, of Dharmniti Auditing Co., Ltd. Material information, financial and non-financial, is accurately, completely and consistently disclosed.

The Board approved the appointment of the Audit Committee on September 5, 2012, which appointed from independent director of HARN's with the qualifications specified by SEC laws and SET must consist of at least 3 directors and at least 1 of whom must be adequately qualified and experienced in reviewing the credibility of financial statements. As of December 31, 2023, composed of three independent directors all members of the Audit Committee have sufficient knowledge and experience to review the credibility of the financial statements according to applicable laws, opinions are freely expressed as follows:

Name		Position
1. Mrs. Valeeratn	Chuerboonchai ^{1/}	Chairperson of the Audit Committee (Independent Director) (who has accounting knowledge)
2. Mr. Prasert	Deejongkit	Member of the Audit Committee (Independent Director)
3. Dr. Teerachai	Pornsinsirak ^{2/}	Member of the Audit Committee (Independent Director)

With Mr. Wisit Wachiralarpaitoon, Chief Financial Officer as secretary of the Audit Committee.

Note : ^{1/} Mrs. Valeeratn Chuerboonchai was appointed as Chairperson of the Audit Committee with effect from April 25, 2023
^{2/} Dr. Teerachai Pornsinsirak was appointed as Member of the Audit Committee with effect from April 25, 2023, replacing Dr. Thakol Nunthirapakorn, who retired by rotation at the 2023 AGM

Duties and Responsibilities of the Audit Committee

1. Review financial reporting to ensure its accuracy and adequacy.
2. Review the efficiency and effectiveness of internal control, risk management and internal audit processes and consider on the appointment, transfer and dismissal of the internal audit and review annual audit plan, fees and personnel.
3. Review compliance with laws, SET requirements, SEC and law relevant to HARN's businesses.
4. Review for compliance with the self-assessment and documents to anti-corruption measures.
5. Review and opinions on transactions to cause fraud that may affect operations, to comply with anti-corruption measures to the Board's for acknowledgment.
6. Oversee complaints, whistleblowing and investigate fact, report to the Board's for punishment or solve the problem according to the anti-corruption policy
7. Consider select, nominate and dismissal of an independent of the external auditor of HARN's and offer the fees, as well as review financial reporting process to ensure accuracy and credibility, including a meeting with the external auditor in the absence of management at least once a year.
8. Review connected transactions or transactions of potential conflicts of interest under SET's laws and requirements.
9. Disclose a report on its annual performance and the fees of the auditor in the annual report of HARN.
10. Perform other tasks as required by the law or as assigned by the Board within the committee's scope of duties and responsibilities.
11. Prepare a charter that is compatible with scope of work and responsibilities. The charter must be approved by the Board and revised at least once a year.
12. Report internal audit performance to the Board for acknowledgment.

In 2023, the committee held 5 meetings and duly reported its findings to the Board. In addition, it participated in quarterly audits along with the external auditor and the Chief Financial Officer. Disclosed its annual performance in the Report of the Audit Committee.

7.3.2 Nomination and Remuneration Committee

The Board approved the appointment of the Nomination and Remuneration Committee on December 17, 2018, by appointing 3 directors, which are fully qualified in accordance charter.

As of December 31, 2023, it consisted of 2 Independent Director and 1 Non-Executive Director: as follow;

Name		Position
1. Mr. Prasert	Deejongkit	Chairman of the Nomination and Remuneration Committee (Independent Director)
2. Mrs. Valeeratn	Chuerboonchai	Member of the Nomination and Remuneration Committee (Independent Director)
3. Dr. Jain	Charnnarong	Member of the Nomination and Remuneration Committee

Mrs. Varinkan Teraumranon, Chief Operating Officer as secretary of the Nomination and Remuneration Committee.

Duties and Responsibilities of the Nomination and Remuneration Committee Nomination

1. Review qualification of the Board and Board-Committees consideration due regard for the composition: knowledge, expertise, experience, talents are independent according to the established criteria.
2. Consider qualification of Chief Executive Officer as suitable for HARN's business management, compatible with business strategies, due regard for the composition: education, experience, knowledge, expertise and into consideration important business environment.
3. Select, set process and criteria for nominating directors in accordance with the structure set in 1 and 2 in compliance with HARN's Board Skill Matrix to ensure transparency.
4. Propose directors for Board-Committees duties with due regard for the committees' compositions, qualifications, expertise, and competencies, including Chief Executive Officer. Then propose the Board to consider when their vacancy.
5. Oversee the orientation and provide documents useful for the performance of duties to the newly appointed directors.
6. Prepare and review with HARN's top executive succession plans to enable continued business.
7. Opportunity for minority shareholders to propose names of persons to be nominated as directors.
8. Review a charter at least once a year, assess its own performance outcomes and report the findings to the Board for acknowledgment, disclose its own performance in the annual report, perform other tasks as assigned by the Board.

Remuneration

1. Define policy and define the criteria for remuneration to be appropriate with the duties and responsibilities and propose fair, sensible remuneration at monetary and other benefits for the Board and Board-Committees' for the Board's and the shareholders' approval.
2. Define criteria for assessing performance outcomes and remuneration for the Chief Executive Officer to the Board's for approval.
3. Review the Nomination and Remuneration Committees charter at least onec a year.
4. Assess its own performance outcomes and report the findings to the Board for acknowledgment, disclose its own performance in the annual report, perform other tasks as assigned by the Board.

In 2023, the committee held 2 meetings, with all committee members at the time in attendance, the Nominating and Remuneration Committee disclosed its annual performance in the Report of the Nominating and Remuneration Committee.

7.3.3 Executive Committee

The Board approved the appointment of the Executive Committee, appoint among directors and/or top executives, who are competent in business management and prepare policy, business plan, budget, management structure, and check and follow up performance to the policy by the Board.

As of December 31, 2023, it consisted of 6 the Board and top Executive, as 1 Non-Executive Director, 2 Executive Director and 3 Top Executive: as follow;

Name		Position
1. Mr. Wirat	Sukchai	Chairman of the Executive Committee
2. Mr. Thammanoon	Tripetchr	Member of the Executive Committee
3. Dr. Jain	Charnnarong	Member of the Executive Committee
4. Mr.Rattanaphan	Mukhariwattananon	Member of the Executive Committee
5. Mr. Wisit	Wachiralappaitoon	Member of the Executive Committee
6. Mrs. Varinkan	Teraumranon	Member of the Executive Committee and Secretary

Duties and Responsibilities of the Executive Committee

The Executive Committee scrutinize and prepare policy, business plan, budget, management structure, and various management, to be in with the economic conditions, propose the Board for approve: as follow;

1. Propose policies, strategies, targets, operation plan, annual budget, establishment of a new business/ dissolution/ merger/ transfer of business, joint venture (with participation in management), prepare financial plan, organizational structure, as well as consider and scrutinize the proposals of the executive, to the Board's for approval.
2. Oversee the HARN's business and follow up operation to comply with the policies, targets and budget tasks as assigned by the Board and regularly report the performance to the Board in meeting.
3. Approve significant investment in budget tasks as assigned by the Board.
4. Approve off-budget investment an amount not more Baht 10 million, to the Board's for approval.
5. Approve loans, acquisition of credit lines of HARN an amount not more Baht 10 million and total amount not more Baht 30 million, in case of must the HARN's assets are used as collateral, to the Board's for approval.
6. Propose payment an interim dividend or annual dividend for the Board's and the shareholders' approval.
7. Assign the power of attorney or delegate specific tasks to other persons, provided that the action complies with the document on the power of attorney or rules, regulations, or directives of the Board or HARN, or both.

The authority and duties of the Executive Committee stated above are invalid for any conflict of interest with HARN in any form resulting from the Executive Committee exercise of the authority. In 2023, no action taken is beyond the scope of such.

8. Perform other tasks as assigned by the Board.

In 2023, the Executive Committee held 12 meetings, with all committee members at the time in attendance, and the disclosed its annual performance in the Report of the Executive Committee.

7.3.4 Risk Management Committee

The Board approved the appointment of the Risk Management Committee on November 11, 2016, by appointing directors and top executive, prepare risk management policy of business and oversee process, to appropriately reduce the impact of variable factor on the HARN's.

As of December 31, 2023, it consisted of 13 the Independent Director, Chief Executive Officer, Chief Marketing Officer, Chief Financial Officer, Chief Operating Officer and Director each Department: as follow;

Name		Position
1. Dr. Teerachai	Pornsinsirak	Chairman of the Risk Management Committee (Independent Director)
2. Mr. Wirat	Sukchai	Member of the Risk Management Committee
3. Mr. Thammanoon	Tripetchr	Member of the Risk Management Committee
4. Mr. Rattanaphan	Mukhariwattananon	Member of the Risk Management Committee
5. Mr. Wisit	Wachiralappaitoon	Member of the Risk Management Committee
6. Mr. Prapas	Rukpanya	Member of the Risk Management Committee
7. Miss.Warangkana	Jongnui	Member of the Risk Management Committee
8. Mr. Suchat	Suwatnodom	Member of the Risk Management Committee
9. Mr. Kittiphong	Kittimethawenun	Member of the Risk Management Committee
10. Mr. Vachiravit	Akaraseranee	Member of the Risk Management Committee
11. Mr. Sukit	Litikorn	Member of the Risk Management Committee
12. Mr. Withoon	Thamee	Member of the Risk Management Committee
13. Mrs. Varinkan	Teraumranon	Member of the Risk Management Committee and Secretary

Duties and Responsibilities of the Risk Management Committee

1. Define and review the risk management policy and guidelines of HARN, in both operational risks and the risk anti-corruption policy, to the Board's for acknowledgment.
2. Define risk management strategies in line with the risk management policy to assess, monitor and control to be at appropriate.
3. Oversee the implementation of the risk management policy tasks as assigned by the Board.
4. Define risk measurement criteria and acceptable risk limit.
5. Define measures to manage risks in alignment with the prevailing circumstances.
6. Review adequacy of the risk management system and compliance in line with the defined policy.
7. Report to the Board on a quarterly, implement and risk status, as well as changes and improvement actions in line with the defined policy and strategy.
8. Oversee a risk management working group as necessary.
9. Support working group in respect of personnel, budget and other resources required, in line with the defined scope.
10. Support risk management, as well as promote the development internal risk management culture.
11. Review and report risk management outcomes to the Board at least once year and disclosed in annual report. For factors or events with potential significant impacts on HARN or stakeholders, the Board must be notified immediately.

In 2023, the Risk Management Committee held 4 meetings, with all committee members at the time in attendance, and the disclosed its annual performance in the Report of the Risk Management Committee.

7.4 Information of the Top Executives

7.4.1 Top Executives Team Members

As of December 31, 2023, there are 5 Top Executives members: as follow; (HARN's organizational chart reported under 7.1 Governance Structure), **profile details in Attachment 1, page 250-252**

This regard, the top executives of HARN is the persons who are defined under the Securities and Exchange Act., who have the top position at the management level from the four lists following by the Chief Executive Officer level.

Name		Position
1. Mr. Thammanoon	Tripetchr	Chief Executive Officer And Chief Marketing Officer: Digital Printing System
2. Mr. Wirat	Sukchai	Chief Marketing Officer: Refrigeration System
3. Mr. Rattanaphan	Mukhariwattananon	Chief Marketing Officer: Safety and Comfortable
4. Mr. Wisit	Wachiralappaitoon	Chief Financial Officer
5. Mrs. Varinkan	Teraumranon	Chief Operating Officer

Roles, Duties of the Chief Executive Officer

The Chief Executive Officer is authorized and responsible for managing the Board-assigned and HARN's overall business, which must be strictly and prudently managed with integrity under the Board-approved plans or budget in the best interests of HARN and its shareholders: as follow;

1. Leader in define short and long-term business strategies, policies and plans.
2. Oversee the overall operating results to strategic and policy.
3. Support the Board and Board-Committees to corporate governance act as targeted.
4. Oversee employee development projects in line with growth of HARN, as well as maintain corporate image.
5. Monitor, inspect, control and reporting performance outcomes on plan to the Board every quarterly.
6. Ensuring implementation of the Board-approved policies, plans, and budget.
7. Hiring, appointing, removing, transferring, promote, suspend from work, dismissing, punishing, set the salary or others compensation, increase salary or wages and bonuses on rules.
8. Issue, amend, add, improve or revoke orders, rules, memorandum and work regulations procedure to ensure compliance with the policy and maintain work discipline within the HARN.
9. Perform other tasks as assigned by the Board.
10. Assign the power of attorney or delegate specific tasks to other persons, provided that the action complies with the document on the power of attorney or rules, regulations, or directives of the Board or HARN, or both.

Succession Plan

The Board appoint the Nomination and Remuneration Committee to act a succession policy of top executive and to nominate persons with appropriate knowledge, capability, experience, visionary, leadership, ability to communicate to be clearly and point, communicate and create participation in the same direction to fill the positions of HARN Executives. They must be legitimately qualified with no prohibited characteristics. In addition, recruitment, employee training and development plan must be prepared in advance before top executives retire or resign. At least 2 years.

The Board reviewed policy and plan succession plan the top executives annually. In addition, HARN has been grooming top executive to become qualified candidates to replace the top executive due to retire in the next 3 - 5 years. There are processes in order to set up a Succession Plan to develop a for potential leaders to assume higher positions that become vacant, namely: Chief Executive Officer, Chief Marketing Officer, Chief Financial Officer and Chief Operating Officer. Report progress to the Board at least once a year.

In addition. HARN has selection group members of potential executives, including a of 5 group's top executives, 5 group's directors department, included manager groups level in advance when the position becomes vacant. In 2023, no additional top executives were appointed. However, a group of director-level executives, has been appointed as general sales department of the safety and comfortable business unit 1 person: Miss. Warangkana Jongnui

7.4.2 Top Executive's Remuneration

This regard, the top executives of HARN is the persons who are defined under the Securities and Exchange Act., who have the top position at the management level from the four lists following by the Chief Executive Officer level.

The Board has designated the Nomination and Remuneration Committee. Determines the compensation of the Chief Executive Officer. The criteria are in accordance with the recruitment and compensation policy for the Chief Executive Officer. As for the remuneration of other top executives the lists by the Chief Executive Officer level, it complies with the policies and guidelines set by the Chief Executive Officer that is linked to HARN's performance by defining key performance indicators and setting KPI goals about annual objective-based performance and results of short-term and long-term strategic objectives. In terms of finance, society, and the environment, according to the Balanced Scorecard, these indicators cover the following items: performance, sales growth, market shares, marketing expansion into foreign markets, employee satisfaction, continuous development of work systems, and business management processes toward excellence, increased competitiveness, and long-term business operations to lead to sustainable success under transparency. Relevant risks are also evaluated, including its vision, goal, and strategy, as well as its shareholders continued added-value generation.

In addition, we aim to keep compensation competitive in the relevant business sectors in order to ensure that HARN can attract and retain skilled employees to work and continue production for HARN.

Top executives remuneration as expenses represents the benefits paid to HARN and its subsidiaries are Chief Executive, Officer Chief Marketing Officer, Chief Operating Officer, Chief Financial Officer include remuneration in both monetary include in benefits according other forms to the regals of HARN as well as the director of each department, consists; Salary, Bonuses, EJIP and Other benefit (provident fund, life and health insurance, scholarships) etc., Except incentives based on performance. This regard, HARN's Top Executives means a person designated under the Securities and Exchange Act (SEC). Is the first four executive positions after the Chief Executive Officer. The remuneration paid to executives: as follows;

Remuneration Paid to CEO and Top Executives

In 2023, HARN payment of remuneration for Mr. Thammanoon Tripetchr Chief Executive Officer, including Top Executives of HARN, designated under SEC, namely the first four executive positions after Chief Executive Officer, and Top Executives of subsidiaries as follows:

Remuneration	2023		2022		2021	
	Number (person)	Amount (MB.)	Number (person)	Amount (MB.)	Number (person)	Amount (MB.)
Salary, Bonuses and Other such as social security contributions and Employee Share Accrual Program (EJIP)	7	22.79	7	19.89	7	17.90
Provident fund contributions	7	0.75	7	0.69	7	0.61
Total	7	23.54	7	20.58	7	18.51

Note : Remuneration Top Executives to consolidated financial statement of HARN

Additional information on the Top Executive:

Records have shown no violation of the law within the past 10 years regarding:

- 1) Being sentenced for criminal charges except for violations of traffic laws, petty charges, or similar charges.
- 2) Being sentenced to bankruptcy or having assets controlled.
- 3) Serving as an executive or an authority in a company or partnership sentenced to bankruptcy or whose assets are controlled.

7.5 Information of the Employees

7.5.1 Total Employees

HARN has policy which focuses on equity, no limitation or discrimination on gender, race, religion, and culture, stresses the development of human resources management systems compatible with technological advancement. It not only promotes both competence among its employees, but also encourage them to actively take part in public service on its development into a sustainable corporate to elevate competitiveness and respond to internal changes of a corporation.

As of December 31, 2023, HARN had 240 employees and its subsidiaries had 5 employees, with 5 employees of Aiyaraharn Co., Ltd. and no employees of Harn Vietnam Co., Ltd., as follows:

Department	Employees (persons)		
	2023	2022	2021
Top Executives	5	5	5
Project Sales	36	31	28
Fire Protection, Air Conditioning & Sanitary System Sales	24	31	28
Project Sales (Petrochemical)	4	5	3
Refrigeration System Sales	15	14	15
Engineering Support	9	9	9
Digital Printing System Sales	23	24	27
Service	31	32	33
Special Product Sales	12	13	14

Department	Employees (persons)		
	2023	2022	2021
Operating	41	45	44
Financial	40	37	36
Total	240	246	242
Subsidiaries	5	5	7

Employees	Number of employees by age (persons)					
	Number of female employees			Number of male employees		
	2023	2022	2021	2023	2022	2021
Younger than 30 years old	27	56	32	42	79	56
30-50 years old	62	34	55	89	58	83
Over 50 years old	8	7	6	12	12	10
Total number of employees	97	97	93	143	149	149

Employees	Number of employees by position (persons)					
	Number of female employees			Number of male employees		
	2023	2022	2021	2023	2022	2021
Operation level	83	85	80	117	123	120
Executive level	13	11	12	22	22	25
Top Executives	1	1	1	4	4	4
Total number of employees	97	97	93	143	149	149

7.5.2 Performance evaluation

HARN create an accurate understanding about fair performance evaluation, promoted the participation of supervisors and workers to define the goals and Key Performance Indicators (KPIs) altogether which led to the cooperation and promotes relationship between supervisors and their subordinates. To promote career advancement, it was arranged to conduct the performance appraisal a 2 year, dividing the results into 3 parts as follows;

- 1 KPI**
Key Performance Indicator
Evaluate according to the task performance score supporting the main objectives of HARN
- 2 API**
Appraisal Indicator
Evaluate the work behavior consistent with the ability according to HARN's position, culture and values
- 3 ATI**
Attendance Indicator
Evaluate according to work discipline

The evaluation results will be analyzed to determine the annual compensation of employees, and determine a plan employee potential and abilities to be ready drive business according to the strategic for sustainability in social dimension, by communicating with employees, find common development methods between supervisors and employees. **Detail in Section 1 “3.5.2, 4) Employees Development, page 89-92**



In 2023, all employees were evaluated as

100%

7.5.3 Remuneration for Employees of HARN

(Excluding CEO and Top Executives designated under SEC)

Remuneration	2023			2022			2021		
	Number (person)	Amount (MB.)	%	Number (person)	Amount (MB.)	%	Number (person)	Amount (MB.)	%
Salary, Bonuses and Other such as social security contributions and EJP									
Female	96	60.92	38%	96	54.41	37%	92	50.77	35%
Male	139	100.2	62%	145	95.30	63%	145	95.66	65%
Total	235	161.14	100%	241	149.71	100%	237	146.43	100%

HARN has the fair remuneration policies of employees can be competitive in the market, including creating stability in the career opportunity for fair career in line with the strategic direction both the short and long-term. Drive performance to meet planned objectives, which will receive remuneration in both monetary, Including salary, bonus, overtime, brokerage fee, incentive, EJP and other benefits according to the regals of HARN and with the law.

7.5.4 Provident Fund

In 2023, HARN has 233 executives and employees have joined the Provident Fund from its total 240 employees as 97.08%, contributed to the Provident fund Baht 4,762,463 and managed by an authorized UOB Asset Management (Thailand) Co., Ltd. which disclosed related information in compliance with the Investment Governance Code to be compliant with the provisions of Provident Fund Act B.E. 2542 (1999) with employee savings rate to go up in line with the increasing years of service of the respective employee.

Remuneration	Unit	2023	2022	2021
Total number of employees	Person	240	246	242
Number of employees joining the provident fund	Person	233	238	240
Proportion of employees joining the provident fund	%	97.08%	96.75%	99.17%
Amount paid by the company to the provident fund	Million baht	4.76	4.57	4.46

Moreover, HARN also allows the employees to select or change their investment policy as considered proper for them with acceptable risk level, choice can be made no more than 4 times a year. Including changing in the contribution rate, to encourage employees to have financial planning after retirement.

7.5.5 Other Remunerations

HARN has instituted employee welfare and remuneration programs apart from salary, bonus, overtime, commission, incentives, EJP and provident fund contributions for management and all employees. This is to keep up with economic conditions, the cost of living, and other standards peer companies' as well as HARN's performance.

1. Annual staff health check, Group life and health insurance is taken out to insure the employees, with coverage amount varied to job position and level of risk associated with nature of job performance.
2. The Employee Joint Investment Program (EJP). The period of May 1, 2020 to April 30, 2025, with a total duration of 5 years for employees and director on the voluntary basis and own HARN, which will be regarded as savings for the employees' long-term financial security.
3. Physical and mental care, such as medical expenses for illness and dental care, staff visit baskets, allowance for the funeral/cremation of a death in the employee's family, including vaccination at a special price.
4. Support of learning and development, such as trainings, seminars both inside and outside the organization, as well as trainings abroad or scholarships for both bachelor and master's degrees, including language skills.

Moreover, HARN also promotes and support employees to have good compensation and welfare in various things, such as uniforms to facilitate and ensure safety according to the nature of work or provide assistance such as travel expenses, fuel, phone, allowances, marital benefits, and child benefits. The first housing welfare etc.

7.6 Other Information's

7.6.1 Company Secretary

The board appoints a Company Secretary, to take responsibilities in providing advices to the Board regarding the applicable laws, regulations and good corporate governance principles for HARN which the Board must know and practice, responsible for arranging board meetings and the shareholder's meetings to ensure that they are organized in a transparent way and in compliance with applicable laws and gelation's, including a monitor and coordinate to ensure that the Board and shareholders' resolutions are fully complied, including to keep HARN's important documents as required by the laws, including directors' registration, Board meeting notices and minutes, annual reports; issue shareholders' meeting notices and minutes; and keep reports on vested interests reported by directors or management.

To comply with the CG principles of listed companies under the category of directors' responsibility and the terms of the Securities and Exchange Act B.E. 2535 (1992) (and the amendments). The Board meeting held 4/2021 resolved to appoint of Miss Wasukan Boonmee as Company Secretary since August 11, 2021.

HARN has set qualifications of Company Secretary as regards age, education, communication skills, interpersonal skills, capability in coordinating with internal and external parties etc. In the case that the Company Secretary vacates office or is unable to perform duty, the Board shall appoint the new Company Secretary within 90 days from the date on which the existing Company Secretary vacates office or can no longer perform duty, and during the lapse of which, the Board shall assign any one of the directors to perform Company Secretary duty as per the Securities and Exchange Act B.E. 2535 (1992) (and the amendments), **profile details in Attachment 1, page 253**

7.6.2 The person supervising accounting

The Chief Financial Officer, is assigned by position to be responsible for the highest responsibility in finance and accounting. Mr. Wisit Wachiralappaitoon has been holding the position since March 16, 2016.

The Account Manager, is assigned by position to be responsible for supervising accounting. Miss Ananya Proyngoen has been holding the position since December 1, 2016 is directly in charge of accounting management, she is a qualified as an accountant under the criteria set by the Department of Business Development.

However, the person taking the highest responsibility in finance and accounting and the person supervising accounting of HARN, is a qualified as an under the criteria set by the SEC and SET, consists; qualifications, education, experience, and undergone at least 6 hours of continuous accounting knowledge development training per year. **Profile details in Attachment 1, page 252-253**

Course summary Orientation and Refresh

Course ^{1/}	the person taking the highest responsibility in finance and accounting (CFO)	the person supervising accounting ^{3/}
Orientation 12 hour	✓	✓
Accounting knowledge (Refresh) 6 hours per year ^{2/}	✓	✓

Note : ^{1/} The hours for Orientation and Refresh training is as specified by the SEC.

^{2/} Refresher course that is consistent and beneficial to HARN

^{3/} The person supervising accounting is an accountant who has the qualifications and conditions of being an accountant in accordance with the rules prescribed in the Notification of the Department of Business Development.

CPD hours of the highest responsible person in accounting and finance (CFO) for 2023

Year	Training Institute	Course / Activity Details	Number of CPD hours		
			Account	Other	Total
2023	Federation of Accounting Professions	Self-study professional Knowledge Development Plan No. 11/2023 Non-Public Stakeholder Financial Reporting Standards (NPA)	19	1	20
2023	The Stock Exchange of Thailand	The Art of CFO Leadership 2023	9	0	9
Total Number CPD hours			28	1	29

Number of CPD hours of the accounting supervisor for 2023

Year	Training Institute	Number of CPD hours		
		Account	Other	Total
2023	Summary of Revised Accounting Standards and Financial Reporting Standards for 2023	6	0	6
2023	Accounting Information	5	0	5
2023	Accounting standards related to land, buildings, and equipment	6	0	6
2023	Code of Conduct for accounting professionals	0	1	1
2023	Financial statement analysis	5	0	5
2023	Accounting information	3	0	3
2023	Financial reporting framework	2	0	2
2023	Cash flow	3	0	3
2023	Income, accounting, and tax differences	5	1:30	6:30
2023	Cost accounting theory	5:30	0	5:30
2023	Improve the level of paper and conduct professional review to combat corruption class 4/2023	12	0	12
Total Number CPD hours		52:30	2:30	55:00

7.6.3 Head of Investor Relations and contact

The Chief Executive Officer, is assigned by position to be Investor Relations. Mr. Wirat Sukchai has been holding the position since November 13, 2014, and can be contacted at Investor Relations, HARN, Tel. 0-2318-9744 ext. 5001 Email: wirat.s@harn.co.th or website: www.harn.co.th and profile details in Attachment 1, page 250

The role to facilitating effective communication with the shareholders and investors, including institutional shareholders, minor shareholders, analysts, and relevant regulatory authorities to ensure that information disclosed are correct, reliable, and adequate information in a fair, transparent, and comprehensive matter such as corporate strategy and direction, company information, quarterly financial information.

During 2023, HARN executives met with shareholders and investors on various occasions, detailed below:



met and shared information	1 times, Online 2 times
SET's Opportunity Day	Online 4 times
Information provided via telephone	6 times
Facebook newsletter	4 times

Apart disclosure of information according to the rules and channels of The Stock Exchange of Thailand (SET), Annual Disclosure Statement / the Annual Report (Form 56-1 One Report). HARN disclosed modernize information in both Thai and/or English via website www.harn.co.th and Facebook: Harn Engineering Solution Pcl.

7.6.4 Audit Fee

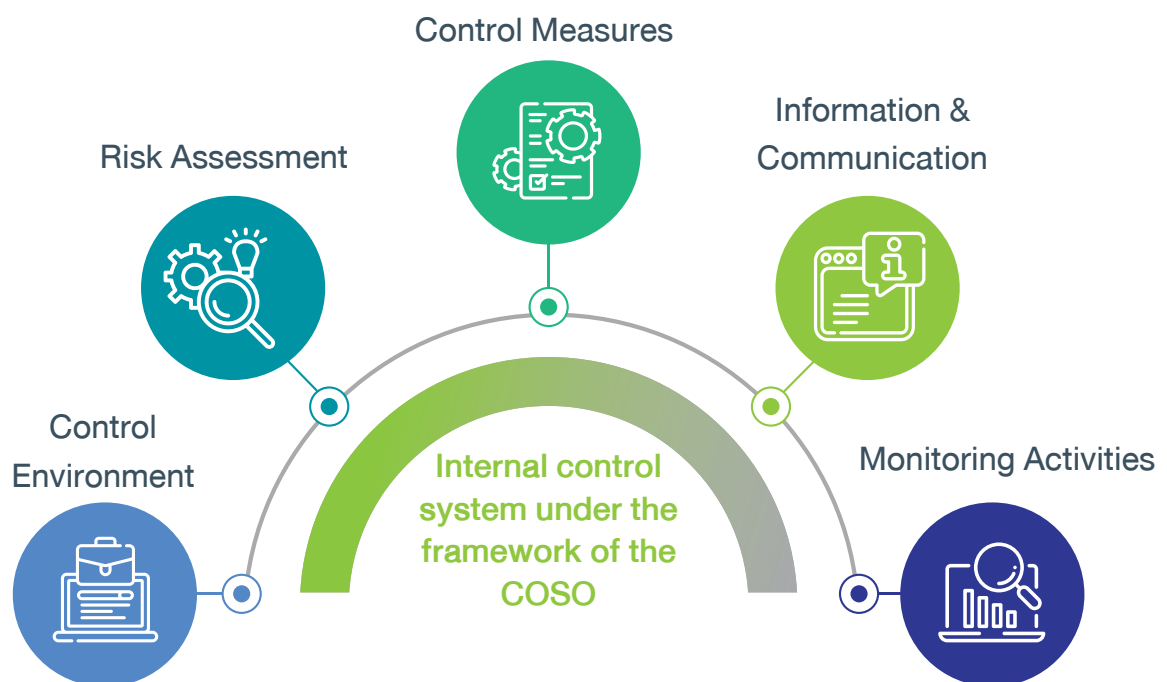
HARN and its subsidiaries paid a total of Baht 1,684,160 in audit fees to the Dharmniti Auditing Co., Ltd., and auditing of the subsidiary in Vietnam, for 2023. It's the audit fees of HARN paid of Baht 1,537,000 and of the subsidiaries paid of Baht 147,160. In addition, HARN has non-audit fee namely; a service fee observing the destruction of product total Baht 30,000 however excluding other expense such as overtime, allowance, traveling, and telephone etc.

8. Internal Control and Connected Transaction

8.1 Internal Control

HARN realizes the importance of the internal control system under the framework of The Committee of Sponsoring Organizations of Treadway Commission (COSO) to attain the aspects of the corporate risk management and internal control both efficient and effective structure design and process, credibility of financial and other reports, and full compliance with laws and regulations prescribed by the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC). The Board of Directors assigns the Audit Committee to review results of internal control assessment, while the internal auditors take charge of monitoring and reviewing the adequacy of internal control system on a quarterly basis, which is an external service provider (Outsource), with Mr. Wisit Wachiralappaatoon, Chief Financial Officer who is the Secretary of the Audit Committee responsible for coordinating within the company.

In 2023, the Board examined the assessment internal control according the Securities and Exchange Commission, Thailand (SEC)'s form and risk management to plan on a quarterly, and is prepared by the internal audit and subsequently reviewed by the Audit Committee, and concluded that HARN's internal control system was indeed adequate and suitable for its business operations to accomplish the objectives the development of operations and working systems to support the five aspects of internal control system under COSO, are as follows:



8.1.1 Control Environment

HARN commands a sound overall control environment that is adequate for business efficiency and effectiveness under the principles of good corporate governance and code of conduct. Its executives have promoted a corporate culture focusing on integrity and ethics as a role model with the following implementations:

1. Defining written policies under the good corporate governance, code of conducts and anti-corruption, to provide a framework for the performance of various. For the Board of Directors, executives and employees to adhere to as a practical guideline resulting in HARN has undergone the annual assessment of Corporate Governance Report of Thai Listed Companies (CGR) by Thai Institute of Director Association (IOD) for the 5th consecutive year, scored top marks at excellent level.
2. Arrange for the directors and the first 4 top-ranking executives to report conflicts of interest and requiring the Board and top executives within February annually reporting their conflicts of interest and stresses its code on giving and accepting gifts, assets, or other benefits so as to remind the Board, executives and employees to comply with the defined guidelines and code of conduct. Importantly, preparation has been made for Personal Data Protection Act, which will come into effect on June 1, 2022.
3. Raise awareness and understanding on code of conduct among executives and employees through internal training courses, employee orientation and e-mails to promote good corporate governance. Also, the information about good corporate governance and code of conduct has been published on HARN's website to encourage related parties, such as business partners, joint ventures and company representatives, to acknowledge business ethics. In 2023, knowledge and testing through the electronic system of HARN Academy were provided to directors, executives and employees in order to realize their roles and responsibilities, according to the business ethics and code of conduct.
4. The Board of Directors is independent from the executives, has roles duties and responsibilities involve the review and endorsement of major strategies and policies, including objectives, financial targets, risks, plans, and budgets. The Board also exercises supervision to ensure legal compliance and efficient and effective business operation
5. Devised human resource development plan that enhances employees' competency in a systematic, duly embracing aspects of personnel attraction, development, and retention, with a succession plan of key positions readily prepared. Also values the process of fair performance management that reflects the ability to perform against Key Performance Indicators (KPIs). Including a long-term strategy was identified for personnel recruitment to support of the prevailing business needs.

8.1.2 Risk Assessment

HARN values risk management and incorporates it into the entire organization to drive the business towards both short-term and long-term goals with confidence, there are the Risk Management Committee (RMC) appointed by the Board of Directors, consisting of independent director and executives supervising of risk management for the organizational, functional, and operational levels of HARN and Subsidiaries, to ease impacts on businesses and business continuity management to ensure that they are in line with the corporate risk management policy and that such management is efficient suitable and ensure corporate objective achievement. The operating results of which shall be reported to the Board on a quarterly basis.

To this end, HARN devised the risk management plan embracing risk assessment, analysis, and review in line with its strategic and business plans to pursue objectives and goals. The plan takes into account corruption probability as well as external and internal factors that may influence both current and future business. Moreover, Risk Appetites Framework and Key Risk Indicators (KRIs) are defined to facilitate performance monitoring and reporting of each unit against the defined goals.

In addition, in 2023, although the COVID-19 has improved, HARN continue to assess the risks and impacts so that timely response can be made. Regarding cyber security, risk was assessed and a business continuity plan

was drawn. Each year, process owners are to assess prevailing parameters affecting internal control and further develop an improvement plan or enhances control to ensure alignment and up-to-datedness.

8.1.3 Control Measures

Efficient and effective control activities help HARN mitigate risks within risk appetite. The key control measures are as follows:

1. Internal control policies, including work procedures, manuals, and work instruction, and administration authorization define fund limits and approval authority hierarchy, including budgets, personnel administration, material purchase and procurement, contract, finance and accounting, and amortization.
2. Internal control measures with due regard for sound control principles, including segregation of duties, approval, review, and document filing, ensure efficient and effective conduct, credible reports and compliance with applicable laws and regulations. In 2023, HARN follow up the implementation of control plans under a given timeframe to monitor the adequacy and suitability of internal control.
3. Control measures for regularly monitoring transactions involving of the Board and executives, provide guidelines for informing the intention to purchase and/or sale of HARN securities, both their own purchase or sale and related persons, to the Company Secretary at least one working day before the actual transaction and the change of HARN security holding to SEC within three working days.
4. Preventive measures of the ongoing COVID-19 pandemic, which has prompted to make work standards, to cover potential risks and repercussions along with has defined cost management measures to support its performance outcomes affected by economic volatility and the COVID-19 pandemic.
5. The development of technology-related control activities helps clearly define IT policy are IT development policies and plans, which has cybersecurity framework by Information Communication and Technology Department (ICT) to define the direction and policy and efficiently drive digital management, thus accommodating future growth. Also staged the annual business continuity drill for cyber-attacks, designed to handle cyber-threats, emergencies in process operating.
6. The steer HARN management in the same directions through joint deliberation and decision-making on critical matters and regular monitoring subsidiaries' businesses. To this end, has appointing a representative as directors of subsidiaries. As a result, HARN has regularly participated in setting policy, acknowledging information, and monitoring performance outcomes against KPIs.

8.1.4 Information & Communication

HARN values information and communication technology systems that systematically support business execution, operation, management, and financial reports to accommodate the Board and executives' decision making. And to support efficient and effective internal control. HARN has defined information and communication technology policy and plan appropriately.

In 2023, In order to ensure appropriate internal communication for employees to receive prompt, complete, and accurate. HARN has defining efficient guidelines for managing contents and practical communication channels. To this, has clearly define responsible parties for each internal communication channel, including the intranet, e-mail, line official and digital signage as well as key communication channel to properly accommodate the Board's decision making, such as sent to the Board at least 5 business days prior to the meeting date.

As for external communication, HARN provides accurate and adequate business updates through website and Facebook. Moreover, opportunity meeting to announce operating results was arranged online to allow stakeholders to access key information more conveniently and timely, which benefits their decision making on investment. HARN has defined complaint-filing and whistleblowing measures in writing, which include complaint handling, fact investigation, conclusion, clear identification of complaint-filing channels, and whistleblowers and related parties' protection. This is to enable employees and third parties to report or provide related information on unlawful acts, fraud, or pursuit of illegal benefits.

8.1.5 Monitoring Activities

It is HARN executives' duty and responsibility to supervise and audit internal work systems to ensure efficiency and conformance to policies, requirements, and work regulations under the concise internal control system. HARN equally values the management of Security, Safety, Occupational Health and Environment, in which energy management and social responsibility are currently and to revise their operation as required. This will prevent and minimize losses concerning safety and occupational health of employees.

HARN, on an annual basis, monitors results of internal control. To elaborate, at the corporate and operational level, executives conduct an assessment using the SEC's internal control adequacy assessment forms. Should any change in tasks or work processes take place during the year, the Management Section is to duly update work procedures and control measures. In addition, also internal control to each month monitoring of any non-compliance, with a report submitted to process owners and the management meeting on a regular basis, to ensure that all parties realize the importance of compliance with business processes and internal control mechanisms. At the same time, the Internal Audit formulates annual audit plans based on key risks, changes or increase in work processes or systems, and requirement from executives and the Audit Committee to verify the adequacy and suitability of each activity.

8.2 Connected Transactions

8.2.1 Related party transaction approval measure or process

The Board meeting no. 3/2014 on May 15, 2014 resolved to establish a policy and process for approving related party transactions between HARN and individuals who have or may have conflict of interest on or beneficial interest in the transaction, such as the major shareholders, directors, executives, persons with controlling power, connected persons, or related persons, etc. HARN will comply with the securities and exchange law, provisions or notifications or stipulations of the Office of the Securities and Exchange Commission, Capital Market Supervisory Board, and the Stock Exchange of Thailand regarding such matters, as well as the regulations regarding disclosure of information on related party transactions according to the Thai Accounting Standards and Thai Financial Reporting Standards set forth by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King. In this regard, persons with conflict of interest or beneficial interest in the transactions shall not be entitled to take part in consideration of or to vote on the transactions.

In case prescribed by law to seek approval of such transactions from the Boards' or the shareholders' meeting, HARN will designate the Audit Committee to attend the meeting to consider and give opinion on the necessity and reasonableness of the transactions.

Making of the related party transactions that are under general commercial conditions and transactions that are not under general commercial conditions shall be subject to the following criteria:

1) Related party transactions with general commercial conditions

For related party transactions with general commercial conditions done between HARN and persons that have or may have conflict of interest or beneficial interest, at present or in the future, HARN has set a scope for doing such transactions, which has been reviewed and endorsed by the Audit Committee and approved in principle by the Board. Within such scope, when any of such transactions is to be made, approval may be sought only from the management, subject to the conditions that such transaction shall carry commercial conditions similar to those under which a person of ordinary common sense would do with a general counterparty under the same situation, having the bargaining power without any influence from the status of being directors, executives or persons otherwise on an arm's length basis, and being commercial transaction to be done in general by HARN for business operation, or commercial transaction generally done by HARN in the same business to support its own normal business, with fair prices and conditions, and would not result in the transfer of benefits, including the following commercial conditions:

1. Prices and conditions offered to HARN or offered by HARN to persons in general
2. Prices and conditions offered by related persons to persons in general
3. Prices and conditions proven by HARN that companies of similar nature of business would offer to persons in general

However, when there is any transaction made on an arm's length basis as stated above, the management will make decision thereon. After an approval is given, a report on such related party transaction will be prepared and submitted to the Board for information. In case that the Audit Committee and the Board find out that such transaction has not been undertaken in compliance with the policy in place, they may jointly discuss to find a solution.

2) Related party transactions with non-general commercial conditions or other transactions

For related party transaction with non-general commercial conditions or other transactions made between HARN and the persons that have or may have conflict of interest or beneficial interest, at present or in the future, HARN shall present to the Audit Committee to weigh the necessity and reasonableness in making the transaction as well as fairness of the price and conditions by comparing with a third party or the market price, before presenting to the Board and/or the shareholders' meeting, as the case may be, for approval. In case that the Audit Committee does not have the specialized knowledge on such transaction, HARN will engage an independent expert or HARN's auditor to provide an opinion on such related party transaction to support the consideration and decision of the meeting of the Audit Committee, the Board, and/or the shareholders' meeting, as the case may be. The Board/Committee members or the shareholders who have conflict of interest or beneficial interest in such transaction shall not be entitled to take part in consideration of or to vote on the transaction.

HARN will disclose the related party transactions made by HARN in the Notes to Financial Statements audited by the auditor. As shown in **Sector 3 (Notes to the Financial Statements) page 213-217**

8.2.2 Connected Transactions between HARN and Individuals and Company with Potential Conflicts

As at 31 December 2023 accounting period, HARN conducted significant business transactions with its subsidiaries and related companies with common shareholders and/or Directors. Connected transactions with other entities which may result in conflicts of interest are based on market or contractual prices (the prices agreed in previous contracts), if there are no reference market prices. Details of the relationships with these companies are as follows:

Individuals / Company	Type	Relationship (As of December 31, 2023)
1. Harn Vietnam Co., Ltd., in Vietnam ("Harn Vietnam")	Distribution of printing equipment	Subsidiary, 100% owned by HARN
2. Aiyaraharn Co. Ltd., ("Aiyaraharn")	Production, purchase, sale, hiring, installation, service provider, and development of "IOT Products and Solutions"	Subsidiary, 65% owned by HARN. 2.1 HARN's shareholder: as follow; 2.1.1 Mr. Jain Charnnarong (younger brother of Mrs. Sirima Iamsakulrat), holding 11.79% of HARN, and holding 0.00005% of Aiyaraharn 2.2 HARN's Director: as follow; 2.2.1 Mr. Jain Charnnarong
3. Harn Engineering Co. Ltd., ("Harn Engineering")	Assets for rent, such as office space and warehouses	3.1 HARN's shareholder: as follow; 3.1.1 Mrs. Sirima Iamsakulrat, holding 14.01% of HARN, and holding 33.32% of Harn Engineering 3.1.2 Mr. Jain Charnnarong (younger brother of Mrs. Sirima Iamsakulrat), holding 11.79% of HARN, and holding 33.32% of Harn Engineering 3.1.3 Miss Nopporn Charnnarong (younger sister of Mrs. Sirima Iamsakulrat), holding 4.50% of HARN, and holding 33.32% of Harn Engineering 3.2 HARN's Director: as follow; 3.2.1 Mrs. Sirima Iamsakulrat 3.2.2 Mr. Jain Charnnarong

Individuals / Company	Type	Relationship (As of December 31, 2023)
4. Phraboriban Co., Ltd. ("Phraboriban")	Assets for rent, such as warehouses	4.1 HARN's shareholder: as follow; 4.1.1 Mrs. Sirima Iamsakulrat, holding 14.01% of HARN, and holding 99.99% of Phraboriban 4.1.2 Mr. Jain Charnnarong (younger brother of Mrs. Sirima Iamsakulrat), holding 11.79% of HARN, and holding 0.001% of Phraboriban 4.2 HARN's Director: as follow; 4.2.1 Mrs. Sirima Iamsakulrat 4.2.2 Mr. Jain Charnnarong
5. Mr. Jain Charnnarong	-	Mr. Jain Charnnarong is the younger brother of Mrs. Sirima Iamsakulrat, and as the Director holding 11.79% of HARN
6. Jainnopsiri Co., Ltd. ("Jainnopsiri")	Investment, development, and management of real estate and land and buildings, including trading and auction	6.1 HARN's shareholder: as follow; 6.1.1 Mrs. Sirima Iamsakulrat, holding 14.01% of HARN, and holding 50% of Jainnopsiri 6.1.2 Mr. Jain Charnnarong (younger brother of Mrs. Sirima Iamsakulrat), holding 11.79% of HARN, and holding 50% of Jainnopsiri 6.2 HARN's Director: as follow; 6.2.1 Mrs. Sirima Iamsakulrat 6.2.2 Mr. Jain Charnnarong
7. Thawiphasura Co., Ltd. ("Thawiphasura")	Investment, development, and management of real estate and land and buildings, including trading and auction	7.1 HARN's shareholder: as follow; 7.1.1 Mrs. Sirima Iamsakulrat, holding 14.01% of HARN, and holding 50% of Thawiphasura 7.1.2 Mr. Jain Charnnarong (younger brother of Mrs. Sirima Iamsakulrat), holding 11.79% of HARN, and holding 40.99% of Thawiphasura 7.2 HARN's Director: as follow; 7.2.1 Mrs. Sirima Iamsakulrat 7.2.2 Mr. Jain Charnnarong
8. Nutrix Public Company Limited ("Nutrix")	Factory manufacturing and distributing all types of animal feed products	Mrs. Valeeratn Chuerboonchai, holding 0.97% of HARN, and no shares held of Nutrix 8.1 HARN's Director: as follow; 8.1.1 Mrs. Valeeratn Chuerboonchai
9. Aiyarafun Co., Ltd. ("Aiyarafun")	Service provider for software design and development, information technology, and computers	9.1 HARN's subsidiaries Director: as follow; 9.1.1 Mr. Prasertsak Detudom

8.2.3 Sensibility of Connected Transactions

For fiscal years 2023 HARN and Subsidiaries engaged in key business transactions with subsidiaries with related parties. The transaction is necessary and reasonable as it is a normal business operation to support HARN's normal business. All related party transactions are based on market prices wherever available or in fair price comparable to transactions with other third parties. For transactions of employee benefit receivables, the price is referred to the employee benefit valuation by the actuary, when accepting employee transfers based on continuous years of service. The connected transactions the aforementioned, The Audit Committee considered, the opinion is needed and reasonable with fair price as well as being beneficial to HARN, as follow;

Connected transactions between HARN and Subsidiaries for Individuals and Company with Potential Conflicts in 2023

Potential Conflicts	Type	Year 2023 (Unit : Baht)	Needed and Sensibility of Connected Transactions
1. Harn Vietnam Co., Ltd., ("Subsidiary")	1.1 Connected Loan transactions • Long-term loans to related parties • Accrued interest income • Interest income	6,811,800 322,067 399,114	List of products related to printing equipment and the sales price set according to the sales policy <u>Loans</u> On March 12, 2020, HARN entered into a short-term loan agreement with Harn Vietnam in the amount of USD 200,000, and interest is charged at the rate of 6.15% per annum, with a one-year repayment. Later, on March 11, 2021, at the expiration of the agreement, HARN changed the condition of the loan term to the subsidiary for a period of 5 years. The agreement expires on March 11, 2026, with an interest rate of 5.85% per annum.

Potential Conflicts	Type	Year 2023 (Unit : Baht)	Needed and Sensibility of Connected Transactions
2.Aiyaraharn Co. Ltd., ("Subsidiary")	2.1 Deposit payment for purchases property		HARN purchases humidity controller from Aiyaraharn and pays the first 50% deposit. The transaction price is determined based on sales policy. This item appears in the consolidated financial statements.
	• Deposit paid	14,696	
	2.2 Connected Loan transactions		<u>Loans</u> During 2023, HARN provided Aiyaraharn with a 6-month promissory note short-term loan at an interest rate of 6.8676% - 7.1175% (based on MLR rates of four major commercial banks)
	• Short-term to related parties	1,000,000	
	• Accrued interest income	12,665	
	• Interest income	12,665	
	2.3 HARN for renting an office		<u>Office Building Rental and Service Contract</u> 1.HARN agreed to rent the space on the 2nd floor, Room 211 of the office building no. 559 Soi Soonvijai 4, Rama 9 Road, Bangkok Subdistrict, Huaykwang District, Bangkok, with a total area of 52 square meters, at the rental rate of Baht 15,600 and a service fee of Baht 10,400 per month. The rental period is from November 22, 2020, to October 31, 2022. On the contract date, the lessee paid the security deposits for the rental and service contract in the amounts of Baht 46, 800 and Baht 31,200, and the contract be renewed for 2 years from November 1, 2022 to October 31, 2024, the rate same as the original agreement.
	• Lease office income	187,200	
	• Office service income	124,800	
	• Utilities income	43,483	
	• Rental security deposit	46,800	
	• Service security deposit	31,200	
	• Accrued utilities income	2,658	
	2.4 HARN provides HR and accounting services in accordance with financial reporting standards		<u>Service Contract</u> 1.HARN agreed to provide staffing services, preparing salary and employee welfare, submitting documents according to the regulations of the Social Security Office, contacting government agencies related to personnel work, and preparing accounting records and financial statements in accordance with the financial reporting standards and the relevant provisions of the Revenue Code, including filing tax returns, VAT, withholding tax, and corporate income tax. These services are charged at 25,000 baht per month.
	• Service income	300,000	
3.Harn Engineering Co. Ltd., ("Harn Engineering")	HARN receives employee benefits transfer from Harn Engineering		In 2014, HARN had personnel restructuring by accepting the transfer of employees from HARN Engineering to be ones of HARN, for which the employee asset transfer contract was made between them and HARN agreed to count the length of continuous employment according to the labor law. Moreover, HARN accepted the transfer of all employees' rights and obligations, and HARN Engineering agreed to accept the employee benefit obligations during the time of being employees of HARN Engineering until the date of transfer to HARN.
	• Other receivables	1,371,116	From the purchase and acceptance of the entire business transfer of Chillmatch Co., Ltd. and its subsidiaries on November 29, 2016, it results in HARN taking over some additional rights in employee benefit debtors of HARN Engineering and the conditions of accepting the transfer of employees, which is the same as the transaction in the previous paragraph. <u>Pricing:</u> The price is based on the independent expert's employee benefit obligation assessment. <u>Trend of Future Transaction:</u> It is a continuous transaction because HARN has to record the change in employee benefits that change every year according to the conditions of transaction calculation. <u>The Audit Committee's Opinion:</u> The transaction was caused by the personnel restructuring of HARN, resulting in the transfer of obligations and expenses related to the employees of HARN Engineering to HARN, which was considered a reasonable transaction.
4. Phraboriban Co., Ltd. ("Phraboriban")	HARN rented a warehouse form Phraboriban		<u>Warehouse Building Lease Agreement</u> 1HARN agreed to pay the rent for the warehouse space for use as a place for goods storage, assembly, and maintenance of printers and equipment. The total area is 356.38 square meters with the rental rate of Baht 64,080 per month, for the period from November 1, 2020 to October 31, 2023. The security deposit under the contract was placed in the amount of Baht 150,000. Later, the lease agreement was extended from November 1, 2023 to April 30, 2024, the returned some of the space, remaining an area equal to 305.55 square meters, rent is Baht 60,895 with HARN is responsible for property insurance.
	• Security deposit for building rental	150,000	
	• Interest expenses	29,223	
	• Lease liabilities	2,156,489	
	• Building-related expenses	595	
	• Accrued building-related expenses	2,070	
			<u>Pricing:</u> The market price by the rental rate is comparable to the rental price of nearby areas. <u>Trend of Future Transaction:</u> It is the transaction to be continued and in line with the office building lease agreement. <u>The Audit Committee's Opinion:</u> Such transaction is the rental of warehouse building space, which is necessary for HARN's business, and the rental rate is reasonable as the rental is comparable to the rental price of nearby areas.

Potential Conflicts	Type	Year 2023 (Unit : Baht)	Needed and Sensibility of Connected Transactions
5. Jainnopsiri Co., Ltd. ("Jainnopsiri")	5.1 Revenue from rendering of services		Aiyarahan Co., Ltd. (a subsidiary of HARN) provides the management for HARN office building and sales price set according to the sales policy as shown in the notes to consolidated financial statements.
	• Unearned revenue	188,033	
	5.2 HARN rented an office from Jainnopsiri		
	• Rental deposit	2,000,000	<p><u>Office Building Rental Contract</u></p> <p>HARN agreed to lease and pay the rent for the office building no. 559 Soi Soonvijai 4, Rama 9 Road, Bangkapi Subdistrict, Huaykwang District, Bangkok, with a total Net Leasable Area of 6,579.43 square meters at the rental rate of Baht 195.93 per square meter per month or equal to 857,220 baht per month. The rent term under the lease contract started from January 1, 2021 to December 31, 2023 (3 years), and renew the short-term lease agreement with a monthly rent of Baht 942,942 until April 30, 2024.</p> <p>The said price is the rental rate close to the market price of renting office spaces with similar nature in nearby areas, which have a rental price of about Baht 500-550 per square meter per month. The security deposit for renting the building under this contract was placed in the amount of Baht 2,000,000.</p> <p>HARN is responsible for paying land and building taxes and maintaining buildings. and get property insurance.</p> <p><u>Pricing:</u> The market price by the rental rate is comparable to the rental prices of nearby areas.</p> <p><u>Trend of Future Transaction:</u> It is the transaction to be continued and in line with the building lease contract.</p> <p><u>The Audit Committee's Opinion:</u> Such transaction is the space rental of the office building. The transaction is necessary to operate HARN's business and to serve as the location of HARN's office. The rental rate is also reasonable and comparable to the rental prices of the space in nearby areas.</p>
	• Interest expense	1,984,097	
	• Lease liabilities	77,899,900	
	• Building-related expenses	597,347	
	• Accrued building-related expenses	597,133	
	5.3 HARN office space for lease		<p><u>Office Space Lease Agreement</u></p> <p>HARN has rented the office space at the office building no. 559 Soi Soonvijai 4, Rama 9 Road, Bangkapi Subdistrict, Huaykwang District, Bangkok, with a total area of 13.5 square meters at the rental rate of Baht 500 per square meter per month or equal to Baht 6,750 per month. The lease term starts from May 1, 2021, onwards.</p> <p>The said price is the rental rate close to the market price of the rental of office space of similar office buildings in nearby areas</p>
	• Office income	81,000	
6. Thawiphasura Co, Ltd. ("Thawiphasura")	6.1 Electricity revenue	47,005	HARN charges Thawiphasura for electricity usage in warehouse areas owned of Thawiphasura at a rate is Baht 7.5 per unit, excluding value-added tax, which may increase based on future electricity costs.
7. Nutrix Public Company Limited ("Nutrix")	7.1 Revenue from sales	6,000	HARN sells products of the digital printing system business unit.
8. Aiyarafun Co., Ltd. ("Aiyarafun")	8.1 Interest expenses	10,911	Aiyaraharn Company Limited (a subsidiary of HARN) has taken on a short-term loan in the form of promissory notes from Aiyarafun Co., Ltd., valid for 3 months, in the amount of Baht 250,000, with interest at the rate of 3% (referring to the interest rate of commercial banks, MRR-3% per annum). The loan is an unsecured loan. <u>These items related to short-term loans are reflected in the consolidated financial statements.</u>
	8.2 Accrued interest	4,089	
	8.3 Short-term loans	250,000	
9. Mr. Sathit Wanitchakit	9.1 Interest expenses	537	Aiyaraharn (subsidiary of HARN) borrowed short-term a loan from Mr. Satit Wanichakij in the form of a promissory note, with a term of 1 year Baht 200,000 is charged interest at a rate of 2%. The loans are unsecured loans. <u>These items related to short-term loans are reflected in the consolidated financial statements.</u>
	9.2 Accrued interest	537	
	9.3 Short-term loans	200,000	

8.2.4 Opinion of Independent Director

The Independent Directors agreed with the Board of Directors.

8.2.5 Policy Relating to Future Connected Transactions

Future connected transactions between HARN and connected companies will be conducted as part of the normal course of business as before i.e., rent of office building space and warehouse building and employee's benefit with no special favors and no transfer of benefits. For the pricing policy between HARN and connected companies, the price of products or feedstock purchased will be set in agreement and or linked to market prices. The Audit Committee shall review and give opinions on the related party transactions with general commercial conditions or in support of the normal business on a quarterly basis.

For the lease agreements of office and warehouse buildings expiring on 30 April 2024, it is proposed to present to the shareholders meeting for approval the renewal of the lease agreements for the aforesaid buildings. This proposal includes comparing the rental rates with the assessed rental rates determined by two approved independent property appraisers appointed by the Securities and Exchange Commission (SEC) which the asset acquisition transaction and large connected transaction, references will be made to the opinions of independent financial advisors approved by the Securities and Exchange Commission (SEC), such as Welcap Advisory Company Limited.

To enter into related party transactions in future, HARN shall comply with the securities and exchange law, provisions or notifications or stipulations of the Capital Market Supervisory Board and the Stock Exchange of Thailand, and abide by the regulations regarding disclosure of related party transaction information of HARN or Subsidiary according to the Thai Accounting Standards and Thai Financial Reporting Standards by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King.

8.2.6 Appraisal Price for Related Transactions

The methodologies used for the determination of the rental rate value are market comparable and cost methods, respectively, reference the asset appraisal report no.1 the appraised value of the warehouse building lease rent is Baht 200 per square meters and the office building lease rent is Baht 500 per square meters. The asset appraisal report of the lease agreement above, was done by CPM Capital Company Limited on January 23, 2024, No. A66GEN2662, and the asset appraisal report no.2 the appraised value of the warehouse building lease rent is Baht 200 per square meters and the office building lease rent is Baht 550 per square meters according the asset appraisal report of the lease agreement above, was done by Bangkok Property Appraisal Company Limited on February 2, 2024 No. BKK-B-67-002, and January 30, 2024 no. BKK-B-67-003, which is a company that assesses the value of assets in the capital market and has been approved by the Securities and Exchange Commission according to the Notification of the Securities and Exchange Commission No. SorChor. 24/2555 regarding approval of asset valuation companies and major appraiser for capital market transactions.

Section

3



Financial Statements

Board of Directors' Responsibility on Financial Reports

The Board is responsible for the financial report of Harn Engineering Solutions Public Company Limited ("HARN") (previously known as Fire Victor Public Company Limited) and Subsidiary including financial information prepared in accordance with The Thai Accounting Standards and Thai Financial Reporting Standards under Accounting Act, B.E. 2543 (2000) and accounting interpretations and practices enforced by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King, and pursuant to the regulations of the Securities and Exchange Commission (SEC) regarding preparation and presentation of financial report under the Securities and Exchange Act, taking into consideration appropriate and consistent accounting policies and accordance Financial Reporting Standards, as well as careful judgments and reasonable reporting in the preparation of the financial report, including adequate disclosure of important information in the Notes to Financial Statements according to the Report of Independent Auditor, for transparent use by shareholders and investors at large.

The Board has established and maintained good corporate governance and an effective risk management and internal control systems to reasonably ensure that the accounting information is correctly, completely and timely recorded, and adequate to sustain HARN assets and prevent fraud and material act of irregularities.

The Board has appointed an Audit Committee comprising Independent Directors to oversee and review the reliability of the accuracy financial reports and the adequacy of internal control, risk management and internal audit to ensure effectiveness. The Audit Committee opinions on these issues. **Details in Attachment 6 Performance Report of the Board-Committees (Report of the Audit Committee), page 268-271**

The Board is of the opinion that the HARN's overall internal control system is satisfactory and can reasonably ensure that the financial statements of Harn Engineering Solutions Public Company Limited and Subsidiary for the year for the year ended December 31, 2023 exhibit its financial position, operating results and cash flows accurately and appropriately in material aspects in accordance with the Thai Accounting Standards and Thai Financial Reporting Standards, and the audit of which has been performed by the Independent Auditor according to the auditing standards with opinion given unconditionally to the financial statements in the Report of Independent Auditor presented in this Annual Registration Statement / Annual Report 2023 (Form 56-1 One Report).



Mr. Pichet Sithi-annual

Chairman of the Board



Mr. Thammanoon Tripetchr

Chief Executive Officer

INDEPENDENT AUDITOR'S REPORT

To The Shareholders and Board of Directors of
Harn Engineering Solutions Public Company Limited

Opinion

I have audited the consolidated financial statements of Harn Engineering Solutions Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2023, and the consolidated statement of comprehensive income, consolidated statement of changes in shareholders' equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and I have audited the separate financial statements of Harn Engineering Solutions Public Company Limited (the Company), which comprise the statement of financial position as at December 31, 2023, and the statement of comprehensive income, statement of changes in shareholders' equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying financial statements present fairly, in all material respects, the consolidated financial position of Harn Engineering Solutions Public Company Limited and its subsidiaries as at December 31, 2023, and its consolidated financial performance and its consolidated cash flows for the year then ended and the separate financial position of Harn Engineering Solutions Public Company Limited as at December 31, 2023, and its financial performance and its cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further describe in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Group in accordance with Code of Ethics for Professional Accountants including Independence Standards issued by the Federation of Accounting Professions (Code of Ethics for Professional Accountants) that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code of Ethics for Professional Accountants. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in my audit of the consolidated financial statements and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated financial statements and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

1) Revenue from sales and service

Risk

The Group and the Company had revenue from sales and service derived from five main business segments which are fire protection and projects, sanitary and air-conditioning systems, cold storage devices digital printing system and building-IoT solutions, for the year ended December 31, 2023 amounting to Baht 1,299.62 million and Baht 1,291.17 million, respectively, which have different terms and pricing conditions, including revenue from services under the fire protection installation project and building-IoT solutions, amounting to Baht 109.59 million and Baht 107.70 million or 8.43% and 8.34% of the Group's and the Company's total revenue from sales and service, respectively. The estimate of a performance obligation under the project agreement has an effect on the revenue that the Group and the Company recognized over time, which it has to recognize by the measuring progress towards complete satisfaction of a performance obligation as at December 31, 2023. I have identified that accuracy and completeness of revenue recognition from sales and service carries significant risk and requires special attention in the audit. The Group and the Company had disclosed its accounting policy of revenue from sales and service recognition and detail of revenue from sales and service in the notes to the financial statement No. 3.16 and 26, respectively.

Risk response by auditor

My audit approach on such matter includes understanding the revenue recognition process and internal control related to the revenue recognition, reviewing the design and implementation of the internal control procedures for such matter, performing the operating effectiveness testing over the internal control procedures around revenue recognition process, and performing substantive testing which consists of examining terms and conditions of the sales and services agreements and examining the related supporting documents of those revenues, examining the supporting documents for the revenue from sales and services transactions that occurred during the year and near the end of the accounting period, examining credit notes issued after the end of the accounting period, and performing analytical review and test of detail relating to the revenue from sales and services.

2) Goodwill

Risk

The Group and the Company had goodwill of Baht 334.67 million and Baht 334.67 million or 19.08% and 19.05% of total assets as at December 31, 2023, respectively, which is the goodwill arising from the acquisition and transfer of the entire business, which is the cold storage devices segment and digital printing system segment. The Group and the Company have to test goodwill for impairment annually in accordance with the Thai Financial Reporting Standards. The test of impairment is significant to the audit as the amount has materiality to the financial statements. In addition, the procedure of impairment testing by the management is complex and requires using considerable judgment as well as relying on assumptions, especially the estimates of future cash flows to be received and paid that are expected to generate from the continuing operation of the cash generating unit, and the use of appropriate discount rate in order to discount future cash flow which can change according to the economic conditions and market conditions in the future. The Group and the Company have disclosed goodwill in the notes to the financial statements No. 3.10 which describes the accounting policies and No.14 which describes the amount and key assumptions that may affect the impairment in the future.

Risk response by auditor

In my audit approach, I have considered the reasonableness of the assumptions and methods used by the management in calculating the estimates of future cash flows to be received and paid that are expected to be generated by auditing the supporting evidence which presents the best estimate of the management, especially on the revenue forecast and gross profit and profit from operation of the business segments of the Company, the use of appropriate discount rate to discount future cash flow, as well as testing the calculation of the recovery amount. In addition, I have paid attention on the adequacy of the information disclosure relating to the assumptions which are most sensitive that may affect the testing result of impairment and has significant effect on the measurement of recovery amount of goodwill.

Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance in order for those charged with governance to correct the misstatement.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements and separate financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements and separate financial statements, management is responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's and the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the consolidated financial statements and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and separate financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated financial statements and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements and separate financial statements, including the disclosures, and whether the consolidated financial statements and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

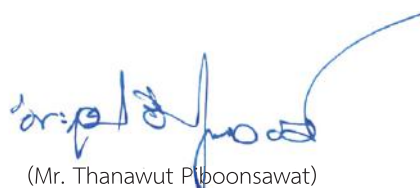
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the consolidated financial statements and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner responsible for the audit resulting in this independent auditor's report is Mr. Thanawut Piboonsawat.



(Mr. Thanawut Piboonsawat)

Certified Public Accountant

Registration No. 6699

Dharmniti Auditing Company Limited

Bangkok, Thailand

February 28, 2024



HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENT OF FINANCIAL POSITION

AS AT DECEMBER 31, 2023

		ASSETS			
		Baht			
		Consolidated financial statements		Separate financial statements	
Note		2023	2022	2023	2022
CURRENT ASSETS					
Cash and cash equivalents	5	340,189,630	202,861,271	334,819,240	196,195,700
Trade and other current receivables	4.4, 6	286,826,047	256,976,034	286,790,474	256,996,182
Current contract assets	7	23,195,655	13,155,701	22,734,305	10,920,240
Short-term to related company	4.4	-	-	1,000,000	-
Inventories	8	301,345,225	431,088,369	300,407,270	429,557,747
Other current financial assets	9	50,418,163	96,725,564	50,418,163	96,725,564
Other current assets		329,992	725,779	216,248	454,535
TOTAL CURRENT ASSETS		1,002,304,712	1,001,532,718	996,385,700	990,849,968
NON-CURRENT ASSETS					
Investment in subsidiaries	10	-	-	2,357,444	2,357,444
Trade and other non-current receivables	6	11,002,883	16,980,743	11,002,883	16,980,743
Long-term loans to subsidiary	4.4	-	-	6,811,800	6,878,260
Investment property	11	162,846,042	153,346,577	162,846,042	153,346,577
Property, plant and equipment	12	120,656,466	124,556,265	120,542,263	124,396,756
Right-of-use assets	13	64,108,777	83,242,037	64,108,777	83,242,037
Goodwill	14	334,672,061	334,672,061	334,672,061	334,672,061
Customer relationship	15	-	12,622,934	-	12,622,934
Intangible assets	16	11,510,844	11,819,566	11,510,844	11,819,566
Deferred tax assets	17	17,309,262	15,183,585	17,117,516	14,921,144
Other non-current assets	4.4	29,615,095	29,146,836	29,240,172	28,992,420
TOTAL NON-CURRENT ASSETS		751,721,430	781,570,604	760,209,802	790,229,942
TOTAL ASSETS		1,754,026,142	1,783,103,322	1,756,595,502	1,781,079,910

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF FINANCIAL POSITION (CONT.)
AS AT DECEMBER 31, 2023

LIABILITIES AND SHAREHOLDERS' EQUITY

		Baht			
		Consolidated financial statements		Separate financial statements	
	Note	2023	2022	2023	2022
CURRENT LIABILITIES					
Trade and other current payables	4.4, 18	212,149,656	270,510,021	211,345,895	267,150,862
Current portion of lease liabilities	4.4, 19	10,443,166	9,228,565	10,443,166	9,228,565
Short-term loan from related parties	4.4	450,000	500,000	-	-
Corporate income tax payable		13,083,477	13,407,998	13,083,477	13,407,998
Other current provisions		1,728,985	2,311,150	1,573,192	2,258,762
Other current liabilities		1,919,163	2,682,007	1,919,163	2,682,007
TOTAL CURRENT LIABILITIES		239,774,447	298,639,741	238,364,893	294,728,194
NON-CURRENT LIABILITIES					
Lease liabilities	4.4, 19	70,061,352	78,348,031	70,061,352	78,348,031
Non-current provisions for employee benefit	20	34,035,439	30,765,106	33,699,992	30,518,395
Other non-current liabilities		26,974,935	26,725,725	26,974,935	26,725,724
TOTAL NON-CURRENT LIABILITIES		131,071,726	135,838,862	130,736,279	135,592,150
TOTAL LIABILITIES		370,846,173	434,478,603	369,101,172	430,320,344
SHAREHOLDERS' EQUITY					
Share capital					
Authorized share capital					
584,500,000 ordinary shares of Baht 0.50 each		292,250,000	292,250,000	292,250,000	292,250,000
Issued and paid-up share capital					
584,500,000 ordinary shares of Baht 0.50 each		292,250,000	292,250,000	292,250,000	292,250,000
Share premium on ordinary shares	21	776,416,427	776,416,427	776,416,427	776,416,427
Surplus on share-based payment transaction	22	4,999,496	6,028,004	4,999,496	6,028,004
Retained earnings					
Appropriated					
Legal reserve	23	29,225,000	29,225,000	29,225,000	29,225,000
Unappropriated		280,738,360	244,050,922	284,603,407	246,840,135
Other components of shareholders' equity		(212,689)	22,368	-	-
TOTAL EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT		1,383,416,594	1,347,992,721	1,387,494,330	1,350,759,566
Non-controlling interest		(236,625)	631,998	-	-
TOTAL SHAREHOLDERS' EQUITY		1,383,179,969	1,348,624,719	1,387,494,330	1,350,759,566
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		1,754,026,142	1,783,103,322	1,756,595,502	1,781,079,910

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENT OF COMPREHENSIVE INCOME

AS AT DECEMBER 31, 2023

	Note	Baht			
		Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Revenues					
Revenues from sales	4.5	1,135,583,135	1,073,327,753	1,129,146,555	1,068,960,390
Revenue from rendering of services	4.5	164,038,155	146,333,356	162,023,010	138,500,147
Other income	4.5	26,606,013	22,628,622	27,432,163	23,820,820
Total revenues		1,326,227,303	1,242,289,731	1,318,601,728	1,231,281,357
Expenses					
Cost of sales		770,126,334	753,407,017	765,704,110	749,538,739
Cost of rendering of services		138,481,485	119,849,153	137,104,572	113,761,686
Distribution cost		113,843,036	113,160,858	112,042,720	111,009,372
Administrative expenses	4.5	158,832,219	141,824,544	156,936,929	140,005,341
Total expenses		1,181,283,074	1,128,241,572	1,171,788,331	1,114,315,138
Profit from operating activities		144,944,229	114,048,159	146,813,397	116,966,219
Finance cost	4.5	2,918,295	2,294,299	2,906,847	2,279,299
Profit before tax expenses		142,025,934	111,753,860	143,906,550	114,686,920
Tax expenses	28	28,853,423	22,904,881	28,789,582	23,187,501
Profit for the year		113,172,511	88,848,979	115,116,968	91,499,419
Other comprehensive income					
Components of other comprehensive income that will be reclassified to profit or loss:					
Exchange differences on translating financial statement		(235,057)	60,586	-	-
		(235,057)	60,586	-	-
Components of other comprehensive income that will not be reclassified to profit or loss:					
Gains on re-measurements of defined benefit plans, net of tax	20	(1,368,904)	-	(1,368,904)	-
		(1,368,904)	-	(1,368,904)	-
Other comprehensive income (expense) for the year, net of tax		(1,603,961)	60,586	(1,368,904)	-
Total comprehensive income for the year		111,568,550	88,909,565	113,748,064	91,499,419
Profit (loss) attributable to					
Owners of the parent		114,041,134	88,783,953	115,116,968	91,499,419
Non-controlling interest		(868,623)	65,026	-	-
		113,172,511	88,848,979	115,116,968	91,499,419
Tot: Owners of the parent		112,437,173	88,844,539	113,748,064	91,499,419
Non-controlling interest		(868,623)	65,026	-	-
		111,568,550	88,909,565	113,748,064	91,499,419
	29				
Basi Profit attributable to owners of the parent		0.20	0.15	0.20	0.16
Weighted average number of ordinary shares (shares)		584,500,000	584,500,000	584,500,000	584,500,000

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

AS AT DECEMBER 31, 2023

Baht

	Note	Consolidated financial statements									
		Equity attributable to owners of the parent						Non-controlling interest	Total shareholders' equity		
		Issued and paid-up share capital	Premium on ordinary shares	Surplus on share-based payment transactions	Retained earnings	Other components of equity	Total equity attributable to owners of the parent				
					Appropriated legal reserve	Unappropriated	Exchange differences on translating financial statements				
Beginning balance as at January 1, 2022											
Dividend	24	-	-	-	-	(58,449,860)	-	-	(58,449,860)	-	(58,449,860)
Employee joint investment program expenses	22	-	-	4,556,090	-	-	-	-	4,556,090	-	4,556,090
Treasury shares	22	-	-	(4,924,465)	-	-	-	-	(4,924,465)	-	(4,924,465)
Total comprehensive income for the year											
Profit for the year		-	-	-	-	88,783,953	-	65,026	88,848,979	-	88,848,979
Other comprehensive income for the year		-	-	-	-	-	60,586	-	60,586	-	60,586
Ending balance as at December 31, 2022		292,250,000	776,416,427	6,028,004	29,225,000	244,050,922	22,368	631,998	1,348,624,719	-	1,348,624,719
Dividend	24	-	-	-	-	(75,984,792)	-	-	(75,984,792)	-	(75,984,792)
Employee joint investment program expenses	22	-	-	4,462,558	-	-	-	-	4,462,558	-	4,462,558
Treasury shares	22	-	-	(5,491,066)	-	-	-	-	(5,491,066)	-	(5,491,066)
Total comprehensive income for the year											
Profit for the year		-	-	-	-	114,041,134	-	(868,623)	113,172,511	-	113,172,511
Other comprehensive income (expense) for the year		-	-	-	-	(1,368,904)	(235,057)	-	(1,603,961)	-	(1,603,961)
Ending balance as at December 31, 2023		292,250,000	776,416,427	4,999,496	29,225,000	280,738,360	(212,689)	(236,625)	1,383,416,594	-	1,383,416,594

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY (CONT.)
AS AT DECEMBER 31, 2023

		Baht					
		Separate financial statements					
		Issued and paid-up share capital	Premium on ordinary shares	Surplus on share-based payment transactions	Retained earnings		Total shareholders' equity
	Note				Appropriated legal reserve	Unappropriated	
Beginning balance as at January 1, 2022		292,250,000	776,416,427	6,396,379	29,225,000	213,790,576	1,318,078,382
Dividend	24	-	-	-	-	(58,449,860)	(58,449,860)
Employee joint investment program expenses	22	-	-	4,556,090	-	-	4,556,090
Treasury shares	22	-	-	(4,924,465)	-	-	(4,924,465)
Total comprehensive income for the year		-	-	-	-	91,499,419	91,499,419
Ending balance as at December 31, 2022		292,250,000	776,416,427	6,028,004	29,225,000	246,840,135	1,350,759,566
Dividend	24	-	-	-	-	(75,984,792)	(75,984,792)
Employee joint investment program expenses	22	-	-	4,462,558	-	-	4,462,558
Treasury shares	22	-	-	(5,491,066)	-	-	(5,491,066)
Total comprehensive income for the year							
Profit for the year		-	-	-	-	115,116,968	115,116,968
Other comprehensive income (expense) for the year		-	-	-	-	(1,368,904)	(1,368,904)
Ending balance as at December 31, 2023		292,250,000	776,416,427	4,999,496	29,225,000	284,603,407	1,387,494,330

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENT OF CASH FLOWS

AS AT DECEMBER 31, 2023

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Cash flows from operating activities</u>				
Profit for the year	113,172,511	88,848,979	115,116,968	91,499,419
Adjustment to reconcile profit for the year to				
net cash provided by (used in) operating activities :				
Bad debt and expected credit losses (reversal)	(3,544,895)	1,417,212	(3,877,577)	1,420,913
Loss on devaluation of inventories (reversal)	(7,759,627)	5,745,331	(7,094,073)	4,760,466
Depreciation and amortization	29,167,983	31,254,999	29,126,448	31,217,484
Amortization of customer relationship	12,622,934	13,854,860	12,622,934	13,854,860
Loss on disposals of equipment	200,682	76,690	184,498	76,690
Unrealized (gain) loss on exchange rate	141,922	(135,596)	208,382	(292,793)
Unrealized (gain) loss on revaluation of				
other current financial assets	12,327,829	1,501,203	12,327,829	1,501,203
Interest income	(1,040,089)	(219,464)	(1,446,093)	(616,604)
Dividend income	(3,246,677)	(2,530,932)	(3,246,677)	(2,530,932)
Employee's benefit expenses	2,705,870	2,797,011	2,617,134	2,725,924
Employee Joint Investment Program expenses	3,602,782	4,556,090	3,602,782	4,556,090
Finance cost	2,918,295	2,294,299	2,906,847	2,279,299
Tax expense	28,853,423	22,904,881	28,789,582	23,187,501
Profit from operating before changes in operating assets and liabilities	190,122,943	172,365,563	191,838,984	173,639,520
(Increase) decrease in operating assets				
Trade and other current receivables	(19,689,766)	(10,437,759)	(19,928,548)	(13,076,076)
Current contract assets	(10,343,712)	(2,947,229)	(11,817,261)	(2,609,972)
Inventories	135,249,637	(109,123,518)	133,984,046	(108,941,144)
Other current assets	255,575	646,627	238,286	658,739
Other non-current assets	(169,750)	(608,048)	(247,750)	(686,048)
Increase (decrease) in operating liabilities				
Trade and other current payables	(59,035,646)	69,100,616	(56,101,231)	67,832,802
Other current provisions	(582,165)	213,665	(685,571)	161,277
Other current liabilities	(762,844)	1,271,094	(762,844)	1,271,094
Non-current provisions for employee benefit	(1,146,667)	-	(1,146,667)	-
Other non-current liabilities	249,210	658,508	249,210	658,508
Cash generated from operating	234,146,815	121,139,519	235,620,654	118,908,700
Employee joint investment program expenses paid	(5,491,066)	(4,924,465)	(5,491,066)	(4,924,465)
Income tax paid	(31,048,545)	(24,235,256)	(30,968,250)	(23,885,509)
Net cash provided by operating activities	197,607,204	91,979,798	199,161,338	90,098,726

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENT OF CASH FLOWS (CONT.)

AS AT DECEMBER 31, 2023

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Cash flows from investing activities</u>				
Cash payments for short-term loan to related company	-	-	(1,000,000)	-
Cash payments for purchases of other current financial assets	(15,838,353)	(58,562,577)	(15,838,353)	(58,562,577)
Cash receipts from redemption of other current financial assets	50,000,000	-	50,000,000	-
Cash payments for purchases of investment property	-	(62,150)	-	(62,150)
Cash payments for purchases of equipment	(7,993,602)	(6,700,168)	(7,963,378)	(6,619,712)
Cash receipts from disposal of equipment	615,873	896,086	597,427	896,086
Cash payments for purchases of intangible assets	(3,465,845)	(523,959)	(3,465,845)	(523,959)
Interest received	858,014	169,470	1,254,496	555,788
Dividend received	3,246,677	2,530,932	3,246,677	2,530,932
Net cash provided by (used in) investing activities	27,422,764	(62,252,366)	26,831,024	(61,785,592)
<u>Cash flows from financing activities</u>				
Cash receipt for short-term loan from related parties	700,000	600,000	-	-
Cash payments for short-term loan from related parties	(750,000)	(600,000)	-	-
Cash payments for lease liabilities	(11,384,030)	(11,355,400)	(11,384,030)	(11,355,400)
Interest paid	(64,212)	-	-	-
Dividend paid	(75,984,792)	(58,449,860)	(75,984,792)	(58,449,860)
Net cash used in financing activities	(87,483,034)	(69,805,260)	(87,368,822)	(69,805,260)
Net increase (decrease) in cash and cash equivalents	137,546,934	(40,077,828)	138,623,540	(41,492,126)
Cash and cash equivalents at beginning of year	202,861,271	242,830,421	196,195,700	237,687,826
Effect of translation adjustment on foreign currency financial statements	(218,575)	108,678	-	-
Cash and cash equivalents at end of year	340,189,630	202,861,271	334,819,240	196,195,700
<u>Supplemental disclosures of cash flows information :</u>				
Non-Cash transaction				
Liabilities incurred from acquisition of equipment and intangible assets				
Liabilities incurred from acquisition of equipment and intangible assets - beginning of year	514,884	3,394,300	514,884	3,394,300
Inventories transferred to equipment	(2,260,505)	(613,402)	(2,260,505)	(613,402)
Equipment transferred to expense	-	(4,750)	-	(4,750)
<u>Add</u> Purchases of equipment and intangible assets	13,876,705	4,962,863	13,846,481	4,882,407
<u>Less</u> Cash payments	(11,459,447)	(7,224,127)	(11,429,223)	(7,143,671)
<u>Liabilities incurred from acquisition of fixed assets and intangible assets - ending of year</u>	671,637	514,884	671,637	514,884
Right-of-use asset transferred to investment property	11,606,347	-	11,606,347	-

Notes to the financial statements form an integral part of these financial statements

NOTES TO THE FINANCIAL STATEMENTS

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

DECEMBER 31, 2023

1. GENERAL INFORMATION

(a) Legal status and address of the company group

Company

The Company was registered to be a limited company with the Ministry of Commerce on May 9, 2001. The Company has changed its status to be public company limited for trading their shares on the Stock Exchange of Thailand on May 22, 2014.

The address of its registered head office are as follows:

Locate at: 559 Soi Soonvijai 4, Rama 9 Road, Bangkok, Huaykwang, Bangkok 10310, Thailand.

Subsidiaries

1) Harn Vietnam Company Limited

Locate at: 5th floor, Vietcomreal Building, 68 Nguyen Hue, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam

2) Aiyaraharn Company Limited

Locate at: 559 Soi Soonvijai 4, Rama 9 Road, Bangkok, Huaykwang, Bangkok 10310, Thailand.

(b) Nature of the Company's operations

The principal business is involved in wholesaling, retailing, and repairing, renting, leasing, contracting and installation services of fire protection system and fire suppression agent, trading cold storage devices, trading, repairing and renting of printing equipment.

The subsidiary 1 operates the main business related to the selling of printing equipment and subsidiary 2 operates in providing Smart Building Business Solution.

2. BASIS FOR THE PREPARATION OF FINANCIAL STATEMENTS

2.1 Basis for the preparation of financial statements

The financial statements have been prepared in accordance with the accounting standards prescribed by Thai Accounts Act enunciated under the Accounting Profession Act B.E. 2547 by complying with the Thai Financial Reporting Standards. The presentation of the financial statements has been made in compliance with the Notification of the Department of Business Development, the Ministry of Commerce, re: the financial statements presentation for public limited company, issued under the Accounting Act B.E. 2543.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

The financial statements in Thai language are the official statutory financial statement of the Company. The financial statements in English language have been translated from such financial statement in Thai language.

2.2 Basis for the preparation of consolidated financial statements

2.2.1 The consolidated financial statements have included the financial statements of Harn Engineering Solutions Public Company Limited and its subsidiaries as follows;

Company name	Type of business	Percentage of shareholding		Country of establishment
		% of share capital		
		2023	2022	
Direct shareholding				
Harn Vietnam Co., Ltd.	Printing equipment	100.00	100.00	Vietnam
Aiyaraharn Co., Ltd.	Building-IoT Solutions	65.00	65.00	Thailand

2.2.2 The Company is deemed to have control over an investee or subsidiary if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.

2.2.3 Subsidiaries is fully consolidated, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.

2.2.4 The financial statements of an overseas subsidiaries is translated into Thai Baht at the closing exchange rate as to assets and liabilities, and at monthly average exchange rates as to revenues and expenses. The resultant differences have been shown under the caption of “Currency translation changes of the financial statements of foreign entity” in shareholders’ equity.

2.2.5 The consolidated financial statements are prepared by using uniform accounting policies. So that the transaction and the others event which are the same or the similar circumstances have been used the identical policies to record those transaction.

2.2.6 Material balances and transactions between the Company and its subsidiaries companies have been eliminated from the consolidated financial statements.

2.3 Financial reporting standards that became effective in the current year

During the year, the Company and its subsidiaries have adopted the revised financial reporting standards, which are effective for fiscal years beginning on or after January 1, 2023. This revision is for the financial reporting standards to be clearer and more appropriate and to conform with international financial reporting standards. Such revision does not affect the principles of the standards and does not affect the users of the financial reporting standards.

The adoption of these financial reporting standards does not have any significant impact on the financial statements in the current year.

2.4 Revised financial reporting standards to be applied in the future

The Federation of Accounting Professions has announced to apply the revised financial reporting standards 2023 and it was announced in the Royal Gazette on August 8, 2023 on altogether 4 topics: definition of the accounting estimates, disclosure of information of the accounting policy, deferred income tax related to assets and liabilities arising from one transaction and other adjustments due to the change of the Accounting Standard No. 17 “Insurance Contracts”. This adjustment is an adjustment for the financial reporting standards to be clearer and more appropriate. This is effective for the financial statements for the accounting period beginning on or after January 1, 2024.

The Management of the Company and its subsidiaries have assessed and believed that this revision will not significantly affect the financial statements in the year that such standard is applied.

3. SIGNIFICANT ACCOUNTING POLICIES

3.1 Business combinations

The Company and its subsidiaries applies the acquisition method for all business combinations except for the business combination under common control.

The Company's and its subsidiaries's control are achieved when the Company (1) has power over the investee (2) is exposed, or has rights, to variable returns from its involvement with the investee and (3) has the ability to use its power to affect its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above

Goodwill is measured as the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree, less the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date.

Consideration transferred includes the fair values of the assets transferred, liabilities incurred by the Company and its subsidiaries to the previous owners of the acquiree, and equity interests issued by the Company and its subsidiaries. Consideration transferred also includes the fair value of any contingent consideration and share-based payment awards of the acquiree that are replaced mandatorily in the business combination.

A contingent liability of the acquiree is assumed in a business combination only if such a liability represents a present obligation and arises from a past event, and its fair value can be measured reliably.

The Company and its subsidiaries measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree.

Transaction costs that the Company and its subsidiaries incurs in connection with a business combination, such as legal fees, and other professional and consulting fees are expensed as incurred.

3.2 Foreign currencies

Transactions in foreign currencies

Transactions in foreign currencies are translated to Thai Baht at the foreign exchange rates ruling at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to Thai Baht at the foreign exchange rates ruling at that date. Foreign exchange differences arising on translation are recognized as profit or loss in statement of profit or loss and other comprehensive income.

Non-monetary assets and liabilities measured at cost in foreign currencies are translated to Thai Baht using the foreign exchange rates ruling at the dates of the transactions.

3.3 Financial instruments

Classification and measurement of financial assets

Financial assets are classified, at initial recognition, as to be subsequently measured at amortized cost, fair value through other comprehensive income, or fair value through profit or loss. The classification of financial assets at initial recognition is driven by the Company and its subsidiaries' business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.

Equity instruments can be classified and cannot be changed by two types of measurement which are measuring fair value through profit or loss or measuring fair value through other comprehensive income that without recycling to profit or loss.

The initial recognition of financial assets that are not measured at fair value through profit or loss with fair value plus or deduct transaction cost directly related to the acquisition or issuance. Financial assets that are measured at fair value through profit or loss, transaction costs are recognized as expense in profit or loss.

Subsequent measurement of debt instruments by 3 methods depend on the classification of debt instruments.

- Financial assets measured at amortized cost when financial assets are held to receive cash flow under the agreement and condition of the agreement of the financial assets that generate cash flow to pay the principal and interest from the principal balance on the specified date only. Such financial assets have to be calculated using the effective rate and are subject to impairment assessment. Profit or loss arising from derecognized, modified or impaired will be recognized in profit or loss.
- Financial assets measured at fair value through other comprehensive income when financial assets are held to receive cash flow under the agreement and to sell financial assets and the agreement condition of financial assets generating cash flow that only pays the principal and interest from the principal balance on the specified date. The change of value of financial assets is recognized through other comprehensive income except loss on impairment and interest income and gain and loss on exchange rate are recognized as profit or loss upon recognized of financial assets. Earning or deficit previously recognized in other comprehensive income has to be reclassified into profit or loss. Such financial asset has to be calculated using the effective interest rate same as financial assets measured at amortized cost.
- Financial assets measured at fair value through profit or loss when financial assets that do not meet the criteria for amortized cost or financial assets measured at fair value through other comprehensive income will be presented in the statement of financial position at fair value by recognizing the net change of fair value in profit or loss.

Subsequent valuation of equity instruments must present equity instruments using the fair value and record profit/loss from change in fair value through profit or loss or other comprehensive income depending on equity instruments classification.

Classification and valuation of financial liabilities

The Company and its subsidiaries are recognized initially of financial liabilities at fair value net of transaction costs and classified as financial liabilities as financial liabilities subsequently measured at amortized cost using the effective rate. The amortized cost is calculated taking into account fees or costs that are an integral part of the effective rate. Amortization by the effective rate is presented as part of financial costs in profit or loss.

Derecognition of financial instruments

Financial assets will be derecognized from the account when the right to receive cash flow of such asset has ended or when the right to receive cash flow of the assets is transferred including upon the transfer of all risk and consideration of that asset or transfer of internal control in that asset although there is no transfer or maintaining of nearly all risk and consideration of such asset.

Financial liabilities will be derecognized from the account when the obligation of such liabilities has been complied, the obligation is cancelled or the obligation has ended. In case existing financial liabilities are changed to new liabilities from one single lender with considerably different requirements or there is a significant amendment in the requirements of existing liabilities, these are considered as recognition old liabilities and recognizing new liabilities by recognizing the difference of such carrying value under profit or loss.

Impairment of financial assets

Expected credit loss for financial assets measured at amortized cost or debt instrument financial asset measured at fair value through other comprehensive income and assets arising from credit facility obligation and financial guarantee agreement are assessed without having to wait for the credit event to occur first. The Company and its subsidiaries use the general approach in considering the allowance for loss on impairment. For trade receivables, the Company and its subsidiaries apply a simplified approach in calculating ECLs. The Company and its subsidiaries recognize a loss based on lifetime ECLs at each reporting date. It is based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

Offset of financial instruments

Financial assets and liabilities will be offset and presented at net balance in the statement of financial position in the case legally enforced in offsetting the recognized amount. The Company and its subsidiaries intend to pay the net balance or intends to receive assets and settle payment of liabilities at the same time.

Derivatives and hedging activities

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument in hedge accounting, and if so, the nature of the item being hedged. The Company and its subsidiaries designate certain derivatives as either:

- hedges of the fair value of recognised assets or liabilities or unrecognized firm commitments (fair value hedges); or
- hedges of a particular risk associated with the cash flows of recognized assets and liabilities and highly probable forecast transactions (cash flow hedges).

Derivatives that is not applied hedge accounting is classified as an asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months.

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognised immediately in profit or loss and are included in other gains (losses).

Derivative financial instruments

Derivative financial instruments are used to manage exposure to foreign exchange, interest rate and product price risks arising from operational, financing and investment activities.

The Company and its subsidiary entered into forward foreign exchange contracts in asset and liability management activities to control exposure to fluctuations in foreign exchange rates.

Gains and losses on forward foreign exchange contracts designated as hedges of existing assets and liabilities without using hedge accounting are recognized as income or expense in the statement of profit or loss.

Amounts to be paid and received are offset in the statement of financial position and included in assets or liabilities category in the statement of financial position.

The Company and its subsidiary have no policy to speculate in or engage in the trading of any derivative financial instruments.

3.4 Cash and cash equivalents

Cash and cash equivalents are cash on hand, cash at banks and bank deposits with a maturity date less than 3 months excluded deposits at bank used as collateral and short-term investments with high liquidity.

3.5 Trade and other current receivables / current contract assets

Trade and other current receivables / current contract assets are recognized initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognized at its present value.

Trade and other current receivables / current contract assets are stated at the amount expected to be collectible, The Company and its subsidiaries apply the TFRS 9 simplified approach to measuring expected credit losses which uses a simplified approach, which requires expected lifetime losses to be recognised from initial recognition of the receivables. To measure the expected credit losses, trade receivables have been grouped based on the days past due. The expected loss rates are based on the payment profiles and the corresponding historical credit losses which are adjusted to reflect the current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Company and its subsidiaries have identified the GDP, the unemployment rate and the consumer price index of the countries in which it sells its goods and services to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors. The impairment losses are recognised in profit or loss within administrative expenses.

3.6 Inventories

Inventories are valued at the lower of cost or net realizable value.

Cost of inventories is calculated by weighted average method which comprises all costs of purchases, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. In the case of manufactured inventories, cost includes an appropriate share of overhead based on normal operating capacity.

Net realizable value is the estimated selling price in the ordinary course of business less the costs to make the sale.

An allowance is made for all deteriorated, damaged, obsolete and slow-moving inventories.

3.7 Investments in subsidiaries

Subsidiaries is a company in which the Company has the power to control the financial and operating policies generally accompanying a shareholding of more than one-half of the voting rights.

Investment in subsidiaries is stated at cost net from allowance on impairment (if any). Loss on impairment of investment will be recognized as loss in the statement of comprehensive income.

3.8 Investment property

Investment property is stated at cost less accumulated depreciation and allowance on impairment (if any).

Depreciation is charged as an expense to the statement of profit or loss and other comprehensive income on a straight-line basis over the estimated useful lives of each property. The estimated useful lives are as follows:

	Years
Factory building	40
Building improvements	10
Tool and equipment	5

Depreciation is included in determining income and no depreciation is provided for construction in progress.

3.9 Property, plant and equipment

Recognition and measurement

Land is stated at cost, plant and equipment are stated at cost less accumulated depreciation and allowance on decline in value (if any).

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labor, any other costs directly attributable to bringing the assets to a working condition for their intended use as part of that property plant and equipment.

When parts of an item of plant and equipment have different useful lives, they are accounted for as separate items (major components) of equipment.

Gains or losses on disposal of an item of property plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property plant and equipment, and are recognized net within other income or other expense in the statement of profit or loss and other comprehensive income.

Subsequent costs

The cost of replacing a part of an item of property plant and equipment are recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its subsidiaries, and its cost can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing of equipment are recognized as an expense in statement of profit or loss and other comprehensive income as incurred.

Depreciation

Depreciation is calculated based on the depreciable amount of plant and equipment, which are the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is charged as an expense to the statement of profit or loss and other comprehensive income on a straight-line basis over the estimated useful lives of each property. The estimated useful lives are as follows:

	Years
Factory building	40
Building improvements	10
Tool and equipment	5
Furniture and office equipment	5
Vehicles	5 - 7
Assets for rental and demonstration	5 - 10

Depreciation is included in determining income and no depreciation is provided for construction in progress.

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.10 Goodwill

Goodwill that arises upon the acquisition of subsidiaries is included in intangible assets. The measurement of goodwill at initial recognition is described. Subsequent to the initial recognition, goodwill is measured at cost less impairment loss. The Company and its subsidiaries assess an impairment of goodwill annually, without consideration of indication that such goodwill may be impaired.

3.11 Intangible asset

Other intangible assets

Other intangible asset, which are acquired by the Company and its subsidiaries and have finite useful lives, are stated at cost less accumulated amortization and allowance for impairment (if any).

Amortization

Amortization is recognized as an expense in the statement of profit or loss and other comprehensive income on a straight-line basis over the estimated useful lives of intangible asset, other than goodwill, from the date that they are available for use as follows:

	Years
Computer software	5 - 10
Customer relationship	7

Amortization methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.12 Impairment of assets

The carrying amounts of the Company's and its subsidiaries's assets are reviewed at each the reporting period date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. For goodwill and customer relationship, the recoverable amount is estimated each year at the same time.

An impairment loss is recognized whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. The impairment loss is recognized as expense in the statements of profit or loss and other comprehensive income unless it reverses a previous revaluation credited to equity and subsequently occurs impairment, in which case it is charged to statement of other comprehensive income.

Calculation of recoverable amount

The recoverable amount is the greater of the assets' fair value less cost to sell or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

Reversals of impairment

An impairment loss in respect of financial assets is reversed if subsequent increase in recoverable amount and the recoverable amount can be related objectively to an event after the impairment loss was recognized as an expense in the statement of profit or loss and other comprehensive income.

An impairment loss in respect of goodwill is not reversed. Impairment losses recognized in prior periods in respect of other non-financial assets are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, as if no impairment loss had been recognized.

3.13 Share-based payment

The fair value of the shares as at grant date to the management and employees is recognized as employee expense along with the increase in shareholder's equity throughout the period that employee is able to access the rights without restriction. The amount recognized is expense to be adjusted to reflect the rights to purchase shares under the term of service that is not the term of equity market.

3.14 Leases

At inception of a contract, the Company and its subsidiaries assess whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company and its subsidiaries assess the lease term for the non-cancellable period as stipulated in lease contract or the remaining period of active leases at the date of initial application together with any period covered by an option to extend the lease if it is reasonably certain to be exercised or any periods covered by an option to terminate the lease if it is reasonably certain not to be exercise by considering the effect of changes in technology and/or the other circumstance relating to the extension of the lease term.

Right-of-use assets-as a lessee

Right-of-use assets are recognized at the commencement date of the lease. Right-of-use assets are stated at cost, less any accumulated depreciation and impairment losses (if any), and adjusted for any remeasurement of lease liabilities (if any). The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date, less any lease incentives received.

The cost of right-of-use assets also includes an estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are calculated by reference to their costs on a straight-line basis over the shorter of the lease term and the estimated useful lives for each of right-of-use assets.

Lease liabilities

At the commencement date of the lease, lease liabilities are stated at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable (if any) and amount expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Company and its subsidiaries and payments of penalties for terminating the lease, if the lease term reflects the Company and its subsidiaries exercising the option to terminate.

In calculating the present value of lease payments, the Company and its subsidiaries use its incremental borrowing rate, which is determined by referring to the government bond yield adjusted with risk premium depending on the lease term, at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of the interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases and leases of low-value assets

The Company and its subsidiaries apply the short-term lease recognition exemption to its short-term leases (those leases that have a lease term of 12 months or less from the commencement date and not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases that are considered of low value. Lease payments on short-term and leases of low-value assets are recognized as expense in profit and loss on a straight-line basis over the lease term.

3.15 Employee benefits

Short-term benefits

The Company and its subsidiaries recognize salaries, wages, bonus and social security contribution as expenses when incurred.

Post-employment benefits - defined contribution plan

The Company operates a provident fund that is a defined contribution plan. The assets of which are held in a separate trust fund. The provident fund is funded by payments from employees and the Company. Contributions to the provident fund and obligations under contribution plan are charged as an expense to the statement of comprehensive income in the period to which they relate.

Post-employment benefits - defined benefit plan

The employee benefits liabilities for severance payment as the labor law is recognized as an expense over the employee's service period. It is calculated by estimating the amount of future benefit earned by employees in return for service provided to the Company and its subsidiaries in the current and future periods, with such benefit being discounted to determine the present value. The reference point for setting the discount rate is the yield rate of government bonds as at the reporting date. The calculation is performed by actuarial technique using the Projected Unit Credit Method.

When the employee benefits are improved, the portion of the increased benefit relating to past service by employees is recognized in the statement of profit or loss and other comprehensive income on a straight-line basis over the average period until the benefits become vested.

When the actuarial assumptions are changed, the Company and its subsidiaries recognize all actuarial gains (losses) immediately in other comprehensive income.

3.16 Revenues

Revenue from sale of goods

Revenue from sale of goods is recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods. Revenue is measured at the amount of the consideration received or receivable, excluding value added tax, of goods supplied after deducting returns and discounts.

For sale with warranties to assure that the goods comply with agree-upon specifications, the Company recognized the warranty as provisions, contingent liabilities and contingent assets. The service-type warranties provided customers with a service in addition to the assurance that the product complies with agree-upon specifications is recognized as revenue over the period in which the service is provided.

Revenue from rendering of services

Revenue from project services is recognized over time in accordance with the measuring progress towards complete satisfaction of a performance obligation, based on the costs incurred to the satisfaction of a performance obligation relative to the total expected costs to the satisfaction of that performance obligation. In some circumstances, the Company and its subsidiaries may not be able to reasonably measure the outcome of a performance obligation, but the Company and its subsidiaries expect to recover the costs incurred in satisfying the performance obligation. In those circumstances, the Company and its subsidiaries shall recognize revenue only to the extent of costs incurred until such time that it can reasonably measure the outcome of the performance obligation.

Revenue from providing maintenance service is recognized over time when services have been rendered considering the straight-line method over the term of the contracts.

Revenue from other service is recognized when services have been rendered.

The recognized revenue which is not yet due per the contracts has been presented as “Accrued service income /Unbilled receivables” in the statement of financial position, which is classified as trade receivables when the Company has right to receive without condition such as upon completion of services and acceptance by the customer.

Revenue from rental

Revenue from rental is recognized over time on a straight-line method over the term of the contracts.

Deferred revenue

The obligation to transfer goods or service to a customer for which the Company and its subsidiaries have received consideration or an amount of consideration is due from the customer is presented as “Deferred revenue” in the statement of financial position, which is classified as other payables under trade and other current payable. Deferred revenue will be recognized as revenue when the Company completely perform the obligation stated in the contract.

Interest income and other income

Interest income is recognized in the statements of profit or loss and other comprehensive income on an accrual basis, based on the effective rate method. Other income is recognized on an accrual basis.

3.17 Expenses

Expenses are recognized in the statement of profit or loss and other comprehensive income on an accrual basis.

3.18 Borrowing costs

Finance costs comprise interest expense on borrowings and contingent consideration.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognized in statement of profit or loss and other comprehensive income using the effective interest method.

3.19 Income tax

Income tax expense for the year comprises current and deferred tax.

Current and deferred tax are recognized as income or expense in the statements of profit or loss and other comprehensive income except to the extent that they relate to a business combination, or items recognized directly in shareholders’ equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for the following temporary differences: the initial recognition of goodwill; the initial recognition of assets or liabilities in a transaction in the consolidated financial statement that is not a business combination and that affects neither accounting nor taxable profit or loss; and differences relating to investments in subsidiaries and jointly-controlled entities to the extent that it is probable that they will not reverse in the foreseeable future.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

In determining the amount of current and deferred tax, the Company takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Company and its subsidiaries believe that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Company and its subsidiaries to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets and liabilities, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. Deferred tax assets are reviewed at the end of reporting period date and reduced to the extent that it is no longer probable that the related tax benefit will be realized.

3.20 Basic earnings per share

The calculations of basic earnings per share for the year were based on the profit for the year attributable to equity holders divided by the weighted average number of ordinary shares held by outsiders outstanding during the year. The calculations of diluted earnings per share for the year were based on the weighted average number of ordinary shares on the assumption that all dilutive potential ordinary shares have been converted to ordinary shares

3.21 Fair value measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Company and its subsidiaries take into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in the financial statements is determined on such a basis.

In addition, fair value measurements are categorized into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs are inputs, other than quoted prices included within Level 1, which are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the asset or liability.

3.22 Use of management's critical judgements in applying accounting policies

(1) Use of management's critical judgements in applying accounting policies

The preparation of financial statements in conformity with generally accepted accounting principles requires the Company and its subsidiaries are management to exercise judgments in order to determine the accounting policies, estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the end of reporting period and the reported amounts of revenue and expense during the reporting period. Although these estimates are based on management's reasonable consideration of current events, actual results may differ from these estimates.

Critical judgments in applying accounting policies are as follows:

Impairment

The Company and its subsidiaries shall assess the assets balance at the statement of financial position whether there is any indication that an asset may be impaired. If any such indication exists, the Company and its subsidiaries are shall estimate the recoverable amount of the asset.

Allowance for expected credit losses

In determining an allowance for expected credit losses, the management needs to make judgement and estimates the expected credit loss based on the payment profiles and the corresponding historical credit losses which are adjusted to reflect the current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables such as GDP, the unemployment rate and the consumer price index.

Allowance for declining in value of inventory

The determination of allowance for declining in the value of inventory, requires management to make judgements and estimates of the loss expected to occur. The allowance for decline in net realizable value is estimated based on the selling price expected in the ordinary course of business less selling expense. The provision for obsolete slow-moving and deteriorated inventory, is estimated based on the approximate useful life of each type of inventory. The allowance for diminution in value of inventory as determined is compared with the original balance in the books of account and the increase or decrease in the allowance for diminution in value of inventory will be recognized as cost of sales and service in profit or loss.

Estimated construction project costs

The Company and its subsidiaries estimates costs of construction projects based on details of the construction work, taking into account the volume and value of construction materials to be used in the project, labour costs and other miscellaneous costs to be incurred to completion of service, taking into account the direction of the movement in these costs. Estimates are reviewed regularly or whenever actual costs differ significantly from the figures used in the original estimates.

Provision for losses on project services contract

Management applies judgement in estimating the loss they expect to be realised on each installation, based on estimates of anticipated costs that take into account the progress of the project and actual costs incurred to date, together with fluctuations in costs of installation materials, labour and the current situation.

Provision for penalty from delay delivery

The Company and its subsidiaries have provision incurred from delay delivery. The management applies judgement in estimating the penalty based on contract rate and the period of delay project work. The Company and its subsidiaries have recorded provision for penalty from delay delivery in the financial statements. However, actual results could differ from the estimates.

Determining the lease term of contracts with renewal and termination options

The Company and its subsidiaries determine the lease term as the non-cancellable term of the lease, together with any period covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised. The management is required to use judgment in evaluating whether it is reasonably certain whether or not to exercise the option to renew or terminate the lease, considering all relevant factors that create an economic incentive to exercise either the renewal or termination. After the commencement date, the Company and its subsidiaries reassess the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate.

Investment property/Depreciation

In determining depreciation of investment property, the management is required to make estimates of the useful lives and residual values of the investment property and to review the useful lives and residual values when there are any changes.

In addition, the management is required to review investment property for impairment on a periodical basis and record the impairment loss when it is determined that the recoverable amount is lower than the carrying amount. This requires judgement regarding forecast of future revenues and expenses relating to the assets subject to the review.

In determining the fair value disclosure of investment property, the management used the income approach supported by current and previous valuations by an independent appraiser

Property, plant and equipment and right-of-use assets/Depreciation

In determining depreciation of plant and equipment and right-of-use assets, the management is required to make estimates of the useful lives and residual values of the plant and equipment and to review the estimated useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant and equipment and right-of-use assets, for impairment on a periodical basis and record the impairment loss when it is determined that the recoverable amount is lower than the carrying amount. This requires judgement regarding forecast of future revenues and expenses relating to the assets subject to the review.

Intangible assets

In recording the initial recognition and measurement of intangible assets as at the acquired date and subsequent impairment testing, the management is required to make estimates of cash flows to be generated by the asset or the cash generating units and to choose a suitable discount rate in order to calculate the present value of those cash flows.

Employee benefit obligations

The present value of the employee benefit obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions, including the discount rate. Any changes in these assumptions will have an impact on the carrying amount of such obligations.

The Company and its subsidiaries determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the employee benefit obligations. In determining the appropriate discount rate, the Company and its subsidiaries are considers the market yield of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related obligations. Additional information is disclosed in Note 20.

Deferred tax assets

Deferred tax assets are recognized for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilized. Significant management judgement is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of estimated future taxable profits.

Estimating the incremental borrowing rate

The Company and its subsidiaries cannot readily determine the interest rate implicit of the lease. Therefore, the market rate of the Company and its subsidiaries are used to discount lease liabilities. The incremental borrowing rate is the rate of interest that the Company and its subsidiaries would have to pay for necessary borrowing to acquire the assets, or assets with close value to right-of-use assets in similar economic environment, borrowing period and borrowing security.

(2) Key sources of estimation uncertainty

Fair value measurements and valuation processes

In estimating the fair value of an asset or liability, the Company and its subsidiaries use market-observable data to the extent it is available. Where Level 1 inputs are not available, the Company and its subsidiaries engage qualified external values to perform the valuation to establish the appropriate valuation techniques and inputs to the model.

Information about valuation techniques and inputs used in determining the fair value of various assets and liabilities are disclosed in Note 31.

4. RELATED PARTY TRANSACTIONS

The Company and its subsidiaries had transactions with related parties. These parties were related through common shareholders and/or directorships or close member of family. The significant transactions with related parties as included in the financial statements are determined at the prices in line occurring in the normal course of business based on the market price in general or the price as stipulated in the agreement if no market price exists.

4.1 Types of relationship of related parties were as follows:

Company/Person name	Country/ Nationality	Related	Relationship
Harn Vietnam Co., Ltd.	Vietnam	Subsidiary	Major shareholder
Aiyaraharn Co., Ltd.	Thailand	Subsidiary	Major shareholder
Harn Engineering Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders
Phraboriban Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders
Tawipasura Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders
Nutrix Plc.	Thailand	Related company	Directorships and/or common shareholders
Jannopsiri Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders
Aiyarafun Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders of subsidiary
Mr. Jain Charnnarong	Thai	Related person	Shareholder and close member of the director's family
Mrs. Sirima Iamsakulrat	Thai	Related person	Shareholder and close member of the director's family
Mr. Prasertsak Detudom	Thai	Related person	Directorships and/or common shareholders
Mr. Sathit Wanitchaikit	Thai	Related person	Directorships and/or common shareholders
Key management personnel	Thai	Related person	Authorized person and responsible in management

4.2 Bases of measurement for intercompany revenues and expenses

	Pricing Policy
Sale of goods	Market price
Purchase of goods	Market price
Purchase and sale of equipment and intangible asset	Contractually agreed prices
Installation expenses	Market price
Other income	Contractually agreed prices
Rental and service expenses	Contractually agreed prices
Compensation to management	As approved by director and / or shareholder
Interest income	Contract price
Interest expenses	Contract price

4.3 Significant agreements with related parties. The Company and its subsidiaries entered into office building rental agreement as follows:

As at December 31, 2023			
	Lessor	Period	Rate per month (Baht)
Office rental agreement	Jannopsiri Co., Ltd.	9 year	857,220
	Phraboriban Co., Ltd.	3 year	60,895
As at December 31, 2022			
	Lessor	Period	Rate per month (Baht)
Office rental agreement	Jannopsiri Co., Ltd.	10 year	857,220
	Phraboriban Co., Ltd.	3 year	64,080

4.4 Balances with the related parties as at December 31, 2023 and 2022 consisted of

Baht				
		Consolidated financial statements		Separate financial statements
		2023	2022	2023
				2022
Trade and other current receivables				
Subsidiaries				
	Harn Vietnam Co., Ltd.	-	-	322,067
	Aiyaraharn Co., Ltd.	-	-	30,019
Related companies				
	Harn Engineering Co., Ltd.	1,371,116	1,747,319	1,371,116
	Tawipasura Co., Ltd.	4,258	-	4,258
		<u>1,375,374</u>	<u>1,747,319</u>	<u>1,727,460</u>
Rental deposit				
Related companies				
	Phraboriban Co., Ltd	150,000	150,000	150,000
	Jannopsiti Co., Ltd.	2,000,000	2,000,000	2,000,000
		<u>2,150,000</u>	<u>2,150,000</u>	<u>2,150,000</u>

Short-term loans to related parties

Changes in short-term loans to related company for the years ended December 31, 2023 was as follows:

	Baht			
	Separate financial statements			
	As at December	During the year		As at December
	31, 2022	Increase	Decrease	31, 2023
Aiyaraharn Co., Ltd.	-	1,000,000	-	1,000,000
	-	1,000,000	-	1,000,000

As at December 31, 2023, short-term loan represented the five promissory notes from related parties has 6 months maturity, bearing interest rates of 6.8675 - 7.1175 percent per annum (according to 4 major commercial banks interest rates of MLR percent per annum). The promissory notes expired on February to June 2024.

Long-term loans to subsidiary

Movements of long-term loans to subsidiary for the years ended December 31, 2023 and 2022 were as follows:

	Separate financial statements			
	2023		2022	
	USD	Baht	USD	Baht
Harn Vietnam Co., Ltd.				
Beginning balance	200,000	6,878,260	200,000	6,649,380
Addition	-	-	-	-
Deduction	-	-	-	-
Conversion of unrealized on exchange rate	-	(66,460)	-	228,880
Ending balance	200,000	6,811,800	200,000	6,878,260

On March 12, 2020, the Company entered into loan agreement with the subsidiary in the amount of USD 200,000. The interest rate has been charged at 6.15% per annum in the term of year. Later, on March 11, 2021, the company renewed the loan agreement to the subsidiary for another 5 years, the agreement expired on March 11, 2026 and charged the interest rate at 5.85% per annum.

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade and other current payables				
Subsidiary				
Aiyaraharn Co., Ltd.	-	-	78,000	78,000
Related company				
Aiyarafun Co., Ltd.	4,089	22,808	-	-
Jansopsiri Co., Ltd.	785,166	188,033	597,133	-
Phraboriban Co., Ltd.	2,070	-	2,070	-
Related person				
Mr. Sathit Wanitchaikit	537	-	-	-
	791,862	210,841	677,203	78,000
Lease liabilities				
Related company				
Phraboriban Co., Ltd.	2,156,489	624,974	2,156,489	624,974
Jansopsiri Co., Ltd.	77,899,900	86,202,441	77,899,900	86,202,441
	80,056,389	86,827,415	80,056,389	86,827,415

Short-term loans from related parties

Changes in short-term loans from related company the years ended December 31, 2023 and 2022 were as follows:

	Baht			
	Consolidated financial statements			
	As at December	During the year		As at December
	31, 2022	Increase	Decrease	31, 2023
Aiyarafun Co., Ltd.	500,000	-	(250,000)	250,000
Mr. Sathit Wanitchaikit	-	700,000	(500,000)	200,000
	500,000	700,000	(750,000)	450,000
	Baht			
	Consolidated financial statements			
	As at December	During the year		As at December
	31, 2021	Increase	Decrease	31, 2022
Aiyarafun Co., Ltd	500,000	-	-	500,000
Mr. Prasertsak Detudom	-	200,000	(200,000)	-
Mr. Sathit Wanitchaikit	-	400,000	(400,000)	-
	500,000	600,000	(600,000)	500,000

As at December 31, 2023, short-term loan represented the promissory notes from related parties has 3 months maturity, bearing interest rates of 3 percent per annum (according to commercial bank interest rates of MRR-3 percent per annum) and repayment on March 12, 2024 and short-term loans are promissory notes from related persons with interest rate of 2 percent per annum and repayment on September 28, 2024 and December 25, 2024, respectively. The loans are an unsecured loan.

4.5 Transactions for the years ended December 31, 2023 and 2022 with related parties were summarized as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Sale of goods				
Subsidiaries				
Harn Vietnam Co., Ltd.	-	-	-	17,699
Related company				
Nutrix Plc.	6,000	-	6,000	-
Revenue from rendering of services				
Related company				
Jannopsiri Co., Ltd	19,815	153,683	-	-
	<u>25,815</u>	<u>153,683</u>	<u>6,000</u>	<u>17,699</u>
Other income				
Subsidiaries				
Harn Vietnam Co., Ltd.	-	-	399,114	397,509
Aiyaraharn Co., Ltd.	-	-	668,148	612,000
Related company				
Jannopsiri Co., Ltd	81,000	81,000	81,000	81,000
Tawipasura Co., Ltd.	47,005	-	47,005	-
	<u>128,005</u>	<u>81,000</u>	<u>1,195,267</u>	<u>1,090,509</u>
Installation expenses				
Subsidiaries				
Aiyaraharn Co., Ltd.	-	-	-	140,000
	<u>-</u>	<u>-</u>	<u>-</u>	<u>140,000</u>

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Office building expenses				
Related company				
Jannopsiri Co., Ltd	597,347	-	597,347	-
Phraboriban Co., Ltd	595	-	595	-
	<u>597,942</u>	<u>-</u>	<u>597,942</u>	<u>-</u>
Interest expenses				
Related company				
Phraboriban Co., Ltd.	29,223	55,674	29,223	55,674
Jannopsiri Co., Ltd.	1,984,097	2,181,398	1,984,097	2,181,398
Aiyarafun Co., Ltd.	10,911	15,000	-	-
Related person				
Mr. Sathit Wanitchakit	537	-	-	-
	<u>2,024,768</u>	<u>2,252,072</u>	<u>2,013,320</u>	<u>2,237,072</u>
Directors remuneration				
Directors remuneration	3,292,000	3,076,500	3,292,000	3,076,500
Management benefit expenses				
Shot-term employee's benefits	22,191,565	19,332,091	20,685,565	17,892,091
Post-employment benefits	1,349,605	1,243,044	1,340,605	1,230,744
	<u>26,833,170</u>	<u>23,651,635</u>	<u>25,318,170</u>	<u>22,199,335</u>

Management benefit expenses represents the benefits paid to the Company and its subsidiaries are management and directors such as salaries, related benefit and directors' remuneration, including the benefit paid by other means. The Company and its subsidiaries are management is the persons who are defined under the Securities and Exchange Act. The management is comprised managing director or the managements who have the top position at the management level from the four lists following by the manager level.

5. CASH AND CASH EQUIVALENTS

Cash and cash equivalents were consisted of:

		Consolidated financial statements			
		Foreign currencies		Baht	
		2023	2022	2023	2022
Cash on hand	- Baht			80,000	90,000
Cash at banks					
Current accounts	- Baht			28,162,962	19,075,947
Savings accounts	- Baht			267,653,844	162,680,055
	- Vietnamese Dong	3,750,795,842	4,011,976,424	5,243,613	5,841,438
	- United States Dollar	951,482	433,603	32,406,430	14,912,079
	- United Kingdom Pound	152,943	6,295	6,640,470	259,516
	- Euro	61	61	2,311	2,236
				<u>340,189,630</u>	<u>202,861,271</u>
		Separate financial statements			
		Foreign currencies		Baht	
		2023	2022	2023	2022
Cash on hand	- Baht			50,000	60,000
Cash at banks					
Current accounts	- Baht			28,162,962	19,075,947
Savings accounts	- Baht			267,565,046	161,896,003
	- United States Dollar	951,245	433,307	32,398,451	14,901,998
	- United Kingdom Pound	152,943	6,295	6,640,470	259,516
	- Euro	61	61	2,311	2,236
				<u>334,819,240</u>	<u>196,195,700</u>

6. TRADE AND OTHER CURRENT RECEIVABLES

Trade and other current receivables were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade receivable				
Trade receivables - other companies	265,802,353	241,296,559	265,802,353	241,296,559
<u>Less</u> Allowance for expected credit losses	(10,123,193)	(13,958,824)	(10,123,193)	(13,958,824)
Net	255,679,160	227,337,735	255,679,160	227,337,735
Other current receivables				
Other receivables - subsidiaries	-	-	334,732	325,210
Other receivables - related parties	1,375,374	1,747,319	1,375,374	1,747,319
Other receivables - other companies	5,860,125	1,951,328	5,853,920	1,951,328
Accrued retentions	7,459,664	6,409,522	7,120,148	6,142,065
Deposit	1,847,123	3,937,734	1,854,194	3,929,792
Prepaid expenses	4,112,413	4,183,801	4,078,100	4,152,728
Accrued income	2,160,548	3,098,354	2,163,206	3,099,764
Total other receivables	22,815,247	21,328,058	22,779,674	21,348,206
Lease receivables				
Lease receivables - printing devices	19,345,287	25,307,204	19,345,287	25,307,204
<u>Less</u> Allowance for expected credit losses	(10,764)	(16,220)	(10,764)	(16,220)
Total	19,334,523	25,290,984	19,334,523	25,290,984
<u>Less</u> due between over 1 year	(11,002,883)	(16,980,743)	(11,002,883)	(16,980,743)
Net	8,331,640	8,310,241	8,331,640	8,310,241
Total trade and other current receivables - net	286,826,047	256,976,034	286,790,474	256,996,182

Trade receivables are classified by aging as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current	148,808,950	149,801,023	148,808,950	149,801,023
Overdue				
Less than 3 months	90,266,423	61,302,657	90,266,423	61,302,657
Over 3 months up to 6 months	14,948,778	12,814,715	14,948,778	12,814,715
Over 6 months up to 12 months	4,917,748	7,879,344	4,917,748	7,879,344
Over 12 months	6,860,454	9,498,820	6,860,454	9,498,820
Total	265,802,353	241,296,559	265,802,353	241,296,559
<u>Less</u> Allowance for expected credit losses	(10,123,193)	(13,958,824)	(10,123,193)	(13,958,824)
Trade receivables, net	255,679,160	227,337,735	255,679,160	227,337,735

The minimum lease payments and present value of minimum lease payments which receivable will be paid under the lease agreements as at December 31, 2023 and 2022, are as follows:

	Baht			
	Consolidated financial statements / Separate financial statements			
	2023		2023	
	Minimum lease payments	Present value of minimum lease payments	Minimum lease payments	Present value of minimum lease payments
Collection period				
Within 1 year	14,897,128	8,331,640	15,984,457	8,310,241
Over 1 year but less than 5 years	15,940,186	11,002,883	26,414,166	16,980,743
	30,837,314	19,334,523	42,398,623	25,290,984
<u>Less</u> Deferred interest	(11,502,791)	-	(17,107,639)	-
	<u>19,334,523</u>	<u>19,334,523</u>	<u>25,290,984</u>	<u>25,290,984</u>

The allowance for expected credit losses as at December 31, 2023 and 2022 was as follows:

	Thousand Baht					
	Consolidated financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	Total
As at December 31, 2023						
Trade and other current receivables	156,086	90,290	15,024	5,088	6,889	273,377
Lease receivables	30,393	445	10	-	-	30,848
Current contract assets	23,573	-	-	-	-	23,573
Loss allowance	572	717	1,286	792	7,259	10,626

	Thousand Baht					
	Consolidated financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	Total
As at December 31, 2022						
Trade and other current receivables	156,201	61,332	12,815	7,879	9,602	247,829
Lease receivables	41,754	661	-	-	-	42,415
Current contract assets	13,189	-	-	-	40	13,229
Loss allowance	535	463	901	2,455	9,817	14,171

	Thousand Baht					
	Separate financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	Total
As at December 31, 2023						
Trade and other current receivables	155,713	90,290	15,024	5,088	6,889	273,004
Lease receivables	30,393	445	10	-	-	30,848
Current contract assets	22,805	-	-	-	-	22,805
Loss allowance	570	717	1,286	759	6,955	10,287

	Thousand Baht					
	Separate financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	Total
As at December 31, 2022						
Trade and other current receivables	155,933	61,332	12,815	7,879	9,602	247,561
Lease receivables	41,754	661	-	-	-	42,415
Current contract assets	10,948	-	-	-	40	10,988
Loss allowance	528	463	901	2,455	9,817	14,164

7. CURRENT CONTRACT ASSETS

Current contract assets were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current contract assets	23,572,517	13,228,804	22,805,001	10,987,740
<u>Less</u> Allowance for expected credit losses	(376,862)	(73,103)	(70,696)	(67,500)
Net	<u>23,195,655</u>	<u>13,155,701</u>	<u>22,734,305</u>	<u>10,920,240</u>

8. INVENTORIES

Inventories were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Finished goods	299,261,795	386,562,096	298,048,655	384,074,221
Goods in transit	34,023,254	84,233,096	34,014,112	84,233,096
Total	333,285,049	470,795,192	332,062,767	468,307,317
<u>Less</u> Allowance for loss on devaluation of inventories	(31,939,824)	(39,706,823)	(31,655,497)	(38,749,570)
Net	<u>301,345,225</u>	<u>431,088,369</u>	<u>300,407,270</u>	<u>429,557,747</u>

Reversal of decline in value of inventory recognized as cost of goods sold for the years ended December 31, 2023 and 2022 were Baht 7.77 million and Baht 5.75 million, respectively (for the Company's only amounting to Baht 7.09 million and Baht 4.76 million, respectively). Exchange difference on translating financial statement for the year ended December 31, 2023 and 2022 were amount of Baht 0.01 million Baht 0.03 million, respectively.

9. OTHER CURRENT FINANCIAL ASSETS

Other current financial assets were consisted of:

	Baht		
	Consolidated financial statements/ Separate financial statements		
	2023		
	Cost value	Unrealized gain (loss) on revaluation of investments	Fair value
Investment in debt instruments			
- Investment in unit trusts	64,054,139	(13,635,976)	50,418,163
Total	<u>64,054,139</u>	<u>(13,635,976)</u>	<u>50,418,163</u>

	Baht		
	Consolidated financial statements/ Separate financial statements		
	2022		
	Cost value	Unrealized gain (loss) on revaluation of investments	Fair value
Investment in debt instruments			
- Investment in Bond	49,817,926	18,951	49,836,877
- Investment in unit trusts	48,215,785	(1,327,098)	46,888,687
Total	<u>98,033,711</u>	<u>(1,308,147)</u>	<u>96,725,564</u>

10. INVESTMENT IN SUBSIDIARIES

Investment in subsidiaries consisted of:

Subsidiaries	Paid-up capital	Percentage of shareholding		Baht	
		(%)		Separate financial statements	
		2023	2022	Cost method	
				2023	2022
Harn Vietnam Co., Ltd.	Vietnamese Dong 800 million	100.00	100.00	1,057,444	1,057,444
Aiyaraharn Co., Ltd.	Baht 2 million	65.00	65.00	1,300,000	1,300,000
Total				2,357,444	2,357,444

11. INVESTMENT PROPERTY

Investment property were consisted of:

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2022	Additions	Decrease	Transfer in/out	Dec. 31, 2023
<u>Cost</u>					
Land	135,286,506	-	-	-	135,286,506
Factory building	19,349,556	-	-	14,507,934	33,857,490
Building improvements	1,010,577	-	-	-	1,010,577
Tool and equipment	350,350	-	-	-	350,350
Total	155,996,989	-	-	14,507,934	170,504,923
<u>Accumulated depreciation</u>					
Factory building	(1,969,414)	(1,934,532)	-	(2,901,587)	(6,805,533)
Building improvements	(395,729)	(107,272)	-	-	(503,001)
Tool and equipment	(285,269)	(65,078)	-	-	(350,347)
Total	(2,650,412)	(2,106,882)	-	(2,901,587)	(7,658,881)
Investment property-net	153,346,577				162,846,042

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2021	Additions	Decrease	Transfer in/out	Dec. 31, 2022
<u>Cost</u>					
Land	135,286,506	-	-	-	135,286,506
Factory building	19,349,556	-	-	-	19,349,556
Building improvements	948,427	62,150	-	-	1,010,577
Tool and equipment	350,350	-	-	-	350,350
Total	155,934,839	62,150	-	-	155,996,989
<u>Accumulated depreciation</u>					
Factory building	(1,485,675)	(483,739)	-	-	(1,969,414)
Building improvements	(291,283)	(104,446)	-	-	(395,729)
Tool and equipment	(215,200)	(70,069)	-	-	(285,269)
Total	(1,992,158)	(658,254)	-	-	(2,650,412)
Investment property-net	153,942,681				153,346,577

	Baht			
	Consolidate financial statements		Separate financial statements	
	2023	2022	2023	2022
Depreciation for the year				
- Administrative expenses	2,106,882	658,254	2,106,882	658,254

According to the Board of Directors' Meeting No. 5/2018 held on November 9, 2018, the Board of Directors had a resolution to approve entering into the to buy/to sell land and building agreement for the purpose to use as a single warehouse in the future. Later, the Company has entered into to buy/to sell land and building agreement at the amount of Baht 117.00 million. In 2021, such land and building had a renter. The lease agreement commencing on July 1, 2021, ends on June 30, 2024.

During the year 2023, the Company changed its objective for ownership of the right-of-use assets under the building lease agreement for some office buildings from being for use in operations to being for rental for operations. The Company therefore transferred the right-of-use assets under the building lease agreement to an investment property with a cost of Baht 14.51 million.

During the year 2023, the Company was appraised by the independent appraisers by applying the market price approach for land and the replacement cost approach for building and its construction in the valuation in according to the report, had its fair value in the amount of Baht 169.58 million. According to the report dated December 8, 2023 and January 17, 2024. Moreover, The Company conducts appraisal by evaluating discounted cash flow model for the right-of-use assets, thus the fair value is Baht 28.22 million.

The Company and its subsidiaries had rental incomes of investment property for the years ended December 31, 2023 and 2022 in total amounting of Baht 6,908,502 and Baht 3,834,757, respectively (for the Company's only amounting to 7,263,985 Baht and Baht 3,834,757, respectively) and recognized as operating expenses amounting to Baht 2,554,051 and Baht 881,514, respectively (for the Company's only amounting to Baht 2,597,534 and Baht 881,514, respectively), which was recognized in the statement of comprehensive income.

12. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment were consisted of:

	Baht						
	Consolidated financial statements						
	Balance	Transactions during the year				Balance	
	Dec. 31, 2022	Addition	Decrease	Transfer in/out	Transfer classified transactions	Exchangediffer ence on translating Financial statements	Dec. 31, 2023
<u>Cost</u>							
Land	37,358,915	-	-	-	-	-	37,358,915
Buildings and structures	36,325,512	-	-	-	-	-	36,325,512
Tool and equipment	9,978,204	354,943	(592,253)	-	-	-	9,740,894
Furniture and office equipment	50,446,889	1,325,404	(4,174,612)	1,017,763	-	(5,022)	48,610,422
Vehicles	21,697,562	2,911,998	(5,975,209)	-	-	-	18,634,351
Assets for rent and demonstration	51,262,499	2,009,162	(4,052,424)	-	-	-	49,219,237
Assets in progress	617,500	3,460,263	-	(1,017,763)	-	-	3,060,000
Total	207,687,081	10,061,770	(14,794,498)	-	-	(5,022)	202,949,331
<u>Accumulated depreciation</u>							
Building and structures	(3,697,240)	(908,138)	-	-	-	-	(4,605,378)
Tool and equipment	(6,080,896)	(1,347,914)	547,103	-	1,049	-	(6,880,658)
Furniture and office equipment	(28,145,983)	(6,469,437)	4,118,445	-	(1,049)	5,591	(30,492,433)
Vehicles	(15,158,176)	(1,166,908)	5,298,998	-	-	-	(11,026,086)
Assets for rent and demonstration	(30,048,521)	(3,253,257)	4,013,468	-	-	-	(29,288,310)
Total	(83,130,816)	(13,145,654)	13,978,014	-	-	5,591	(82,292,865)
Property, plant and equipment-net	124,556,265						120,656,466

Baht						
Consolidated financial statements						
Balance	Transactions during the year					Balance
Dec. 31, 2021	Addition	Decrease	Transfer in/out	Transfer classified transactions	Exchangedifference on translating Financial statements	Dec. 31, 2022
<u>Cost</u>						
Land	37,358,915	-	-	-	-	37,358,915
Buildings and structures	36,325,512	-	-	-	-	36,325,512
Tool and equipment	9,868,772	664,840	(750,143)	194,735	-	9,978,204
Furniture and office equipment	49,128,027	1,573,812	(1,177,142)	921,840	352	50,446,889
Vehicles	23,937,333	-	(2,239,771)	-	-	21,697,562
Assets for rent and demonstration	52,676,936	955,077	(2,828,413)	458,899	-	51,262,499
Assets in progress	617,500	1,580,224	(4,750)	(1,575,474)	-	617,500
Total	209,912,995	4,773,953	(7,000,219)	-	352	207,687,081
<u>Accumulated depreciation</u>						
Building and structures	(2,789,102)	(908,138)	-	-	-	(3,697,240)
Tool and equipment	(5,471,436)	(1,351,382)	741,922	-	-	(6,080,896)
Furniture and office equipment	(22,987,553)	(6,323,355)	1,164,916	-	9	(28,145,983)
Vehicles	(15,387,638)	(1,260,308)	1,489,770	-	-	(15,158,176)
Assets for rent and demonstration	(27,501,774)	(5,172,835)	2,626,088	-	-	(30,048,521)
Total	(74,137,503)	(15,016,018)	6,022,696	-	9	(83,130,816)
Property, plant and equipment-net	135,775,492					124,556,265

Baht						
Separate financial statements						
Balance	Transactions during the year					Balance
Dec. 31, 2022	Additions	Decrease	Transfer in/out	Transfer classified transactions		Dec. 31, 2023
<u>Cost</u>						
Land	37,358,915	-	-	-	-	37,358,915
Buildings and structures	36,325,512	-	-	-	-	36,325,512
Tool and equipment	9,978,204	354,943	(592,253)	-	-	9,740,894
Furniture and office equipment	50,209,761	1,295,181	(4,103,799)	1,017,763	-	48,418,906
Vehicles	21,697,562	2,911,998	(5,975,209)	-	-	18,634,351
Assets for rent and demonstration	51,262,499	2,009,162	(4,052,424)	-	-	49,219,237
Assets in progress	617,500	3,460,263	-	(1,017,763)	-	3,060,000
Total	207,449,953	10,031,547	(14,723,685)	-	-	202,757,815
<u>Accumulated depreciation</u>						
Building and structures	(3,697,240)	(908,138)	-	-	-	(4,605,378)
Tool and equipment	(6,079,847)	(1,347,914)	547,103	-	-	(6,880,658)
Furniture and office equipment	(28,069,413)	(6,427,902)	4,082,195	-	-	(30,415,120)
Vehicles	(15,158,176)	(1,166,908)	5,298,998	-	-	(11,026,086)
Assets for rent and demonstration	(30,048,521)	(3,253,257)	4,013,468	-	-	(29,288,310)
Total	(83,053,197)	(13,104,119)	13,941,764	-	-	(82,215,552)
Property, plant and equipment-net	124,396,756					120,542,263

	Baht					
	Separate financial statements					
	Balance	Transactions during the year			Balance	
	Dec. 31, 2021	Additions	Decrease	Transfer in/out	Transfer classified transactions	Dec. 31, 2022
<u>Cost</u>						
Land	37,358,915	-	-	-	-	37,358,915
Buildings and structures	36,325,512	-	-	-	-	36,325,512
Tool and equipment	9,868,772	664,840	(750,143)	194,735	-	9,978,204
Furniture and office equipment	48,971,707	1,493,356	(1,177,142)	921,840	-	50,209,761
Vehicles	23,937,333	-	(2,239,771)	-	-	21,697,562
Assets for rent and demonstration	52,676,936	955,077	(2,828,413)	458,899	-	51,262,499
Assets in progress	617,500	1,580,224	(4,750)	(1,575,474)	-	617,500
Total	209,756,675	4,693,497	(7,000,219)	-	-	207,449,953
<u>Accumulated depreciation</u>						
Building and structures	(2,789,102)	(908,138)	-	-	-	(3,697,240)
Tool and equipment	(5,470,869)	(1,350,900)	741,922	-	-	(6,079,847)
Furniture and office equipment	(22,948,007)	(6,286,322)	1,164,916	-	-	(28,069,413)
Vehicles	(15,387,638)	(1,260,308)	1,489,770	-	-	(15,158,176)
Assets for rent and demonstration	(27,501,774)	(5,172,835)	2,626,088	-	-	(30,048,521)
Total	(74,097,390)	(14,978,503)	6,022,696	-	-	(83,053,197)
Property, plant and equipment-net	135,659,285					124,396,756

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Depreciation for the years				
- cost of rendering of services	3,541,571	3,693,380	3,541,090	3,692,898
- Distribution cost and administrative expenses	9,604,083	11,322,638	9,563,029	11,285,605
	13,145,654	15,016,018	13,104,119	14,978,503

As at December 31, 2023 and 2022, the Company and its subsidiaries had equipment which were fully depreciated but still in use with the cost price of Baht 37.30 million and Baht 36.26 million, respectively (for the Company's only amounting to Baht 37.30 million and Baht 36.26 million, respectively).

13. RIGHT-OF-USE ASSETS

Right-of-use assets consists of:

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance as at	Transactions during the year			Balance as at
	December 31, 2022	Addition	Transfer-in (Transfer-out)	Classification	December 31, 2023
<u>At cost</u>					
Building	104,557,640	2,264,881	(14,507,934)	-	92,314,587
Equipment	1,199,644	-	-	-	1,199,644
Total	105,757,284	2,264,881	(14,507,934)	-	93,514,231
<u>Less Accumulated depreciation</u>					
Building	(21,314,286)	(9,491,883)	2,901,587	(710,747)	(28,615,329)
Equipment	(1,200,961)	(299,911)	-	710,747	(790,125)
Total	(22,515,247)	(9,791,794)	2,901,587	-	(29,405,454)
Right-of-use assets - net	83,242,037				64,108,777

Baht					
Consolidated financial statements / Separate financial statements					
	Balance as at	Transactions during the year			Balance as at
	December	Addition	Transfer-in	Classification	December
	31, 2021		(Transfer-out)		31, 2022
<u>At cost</u>					
Building	104,557,640	-	-	-	104,557,640
Equipment	984,913	214,731	-	-	1,199,644
Total	105,542,553	214,731	-	-	105,757,284
<u>Less Accumulated depreciation</u>					
Building	(11,071,746)	(10,242,540)	-	-	(21,314,286)
Equipment	(217,125)	(983,836)	-	-	(1,200,961)
Total	(11,288,871)	(11,226,376)	-	-	(22,515,247)
Right-of-use assets - net	94,253,682				83,242,037

The Company and its subsidiary lease several assets including office building which lease term 9-10 years, warehouse which lease term 3 years and equipment of which lease term 4 years.

14. GOODWILL

On November 29, 2016, Chillmatch Co., Ltd. and Q II S Co., Ltd. were transferred their entire business into the Company by issuing capital increase shares for Baht 675.36 million to exchange for the identifiable net assets of both companies for Baht 340.69 million, resulting in a goodwill of Baht 334.67 million.

Testing for impairment of goodwill

During the year ended December 31, 2022 the Company's management has tested for impairment of goodwill by preparing forecasted financial information in assessing the value of the Refrigeration System and Digital Printing System. In assessing the Value in Use, the present value of future free cash flow or DCF expected to be received in each year from the financial forecast 5 years (from January 1, 2023 to December 31, 2027) with discounted rate obtained from the calculation of the weighted average cost of capital : WACC of the business unit.

Later, during the year ended December 31, 2023 the Company's management has tested for impairment of goodwill by preparing forecasted financial information in assessing the value of the Refrigeration System and Digital Printing System. In assessing the Value in Use, the present value of future free cash flow or DCF expected to be received in each year from the financial forecast 5 years (from January 1, 2024 to December 31, 2028) with discounted rate obtained from the calculation of the weighted average cost of capital : WACC of the business unit.

After consideration, management believed that goodwill is not impaired.

The key assumptions used in estimating the value in use are as follows:

Key assumption	Value		Approach used to determine the value
	2023	2022	
- Discount rate	4.01% (Weighted Average Cost of Capital : WACC)	4.53% (Weighted average cost of capital : WACC)	The discount rate which is a pre-tax rate that reflects the specific risk of the particular business unit
- Terminal Value Growth Rate	0%	0%	Appropriate estimated rate

15. CUSTOMER RELATIONSHIP

Customer relationship were consisted of:

	Baht			
	Consolidated financial statements / Separate financial statements			
	Balance	Transactions during the year		Balance
	Dec. 31, 2022	Addition	Decrease	Dec. 31, 2023
<u>Cost</u>				
Customer relationship	104,307,663	-	-	104,307,663
<u>Less</u> accumulated amortization	(91,684,729)	(12,622,934)	-	(104,307,663)
Customer relationship - net	12,622,934			-

	Baht			
	Consolidated financial statements / Separate financial statements			
	Balance	Transactions during the year		Balance
	Dec. 31, 2021	Addition	Decrease	Dec. 31, 2022
<u>Cost</u>				
Customer relationship	104,307,663	-	-	104,307,663
<u>Less</u> accumulated amortization	(77,829,869)	(13,854,860)	-	(91,684,729)
Customer relationship - net	26,477,794			12,622,934

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Depreciation for the years				
- Administrative expenses	<u>12,622,934</u>	<u>13,854,860</u>	<u>12,622,934</u>	<u>13,854,860</u>

16. INTANGIBLE ASSET

Intangible asset were consisted of:

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2022	Addition	Decrease	Transfer In / out	Dec. 31, 2023
<u>Cost</u>					
Software licenses	42,260,490	3,814,935	(202,511)	-	45,872,914
Total	<u>42,260,490</u>	<u>3,814,935</u>	<u>(202,511)</u>	<u>-</u>	<u>45,872,914</u>
<u>Less</u> Accumulated amortization					
Software licenses	(30,440,924)	(4,123,653)	202,507	-	(34,362,070)
Total	<u>(30,440,924)</u>	<u>(4,123,653)</u>	<u>202,507</u>	<u>-</u>	<u>(34,362,070)</u>
Intangible asset-net	<u>11,819,566</u>				<u>11,510,844</u>

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2021	Addition	Decrease	Transfer In / out	Dec. 31, 2022
<u>Cost</u>					
Software licenses	42,245,035	188,910	(173,455)	-	42,260,490
Total	42,245,035	188,910	(173,455)	-	42,260,490
<u>Less Accumulated amortization</u>					
Software licenses	(26,260,025)	(4,354,351)	173,452	-	(30,440,924)
Total	(26,260,025)	(4,354,351)	173,452	-	(30,440,924)
Intangible asset-net	15,985,010				11,819,566

	Baht	
	Consolidated financial statements / Separate financial statements	
	2023	2022
Depreciation for the years		
- cost of rendering of services	160,829	564,201
- Administrative expenses	3,962,824	3,790,150
	4,123,653	4,354,351

As at December 31, 2023 and 2022, the Company and its subsidiaries had intangible assets which were fully depreciated but still in use with the cost price of Baht 7.63 million and Baht 7.41 million, respectively (for the Company's only amounting to Baht 7.63 million and Baht 7.41 million, respectively).

17. DEFERRED TAX ASSETS AND DEFERRED TAX LIABILITIES

Changes in deferred tax assets and deferred tax liabilities for the years ended December 31, 2023 and 2022 were summarized as follows:

	Baht				
	Consolidated financial statements				
	Balance as at	Income (expenses) during the year			Balance as at
	Dec. 31, 2022	In profit or loss	In other comprehensive income	Exchange difference on translating financial statements	Dec. 31, 2023
Deferred tax assets:					
Allowance for expected credit losses	2,919,126	(793,706)	-	(282)	2,125,138
Allowance for devaluation of inventories	7,941,365	(1,547,162)	-	(6,239)	6,387,964
Allowance for impairment of investment	49,564	-	-	-	49,564
Lease agreements	866,912	381,126	-	-	1,248,038
Non-current provisions for employee benefit	5,803,558	387,081	342,226	-	6,532,865
Derivatives liabilities	355,049	(336,103)	-	-	18,946
Unearned revenue	26,304	(25,508)	-	(796)	-
Employee joint investment program expenses	1,205,601	(205,702)	-	-	999,899
Total	19,167,479	(2,139,974)	342,226	(7,317)	17,362,414

	Baht				
	Consolidated financial statements				
Balance as at	Income (expenses) during the year			Balance as at	
Dec. 31, 2022	In profit or	In other	Exchange	Dec. 31, 2023	
	loss	comprehensive	difference on		
		income	translating		
			financial		
			statements		
Deferred tax liabilities:					
Unrealized gain (loss) on measuring investments	217,854	204,004	-	13,850	
Customer relationship (from fair value adjustment of business combination)	2,524,587	2,524,587	-	-	
Depreciation of equipment	127,323	126,860	-	-	
Finance lease assets	1,114,130	1,074,828	-	39,302	
Total	3,983,894	3,930,279	-	53,152	
Deferred tax assets (liabilities) - net	15,183,585			17,309,262	
Deferred tax income (expenses) - net		1,790,305	342,226	(6,854)	

	Baht				
	Consolidated financial statements				
	Balance as at	Income (expenses) during the year			Balance as at
	Dec. 31, 2021	In profit or loss	In other comprehensive income	Exchange difference on translating financial statements	Dec. 31, 2022
Deferred tax assets:					
Allowance for expected credit losses	2,550,656	368,187	-	283	2,919,126
Allowance for devaluation of inventories	6,797,821	1,145,516	-	(1,972)	7,941,365
Allowance for impairment of investment	49,564	-	-	-	49,564
Lease agreements	436,857	430,055	-	-	866,912
Non-current provisions for employee benefit	5,380,155	423,403	-	-	5,803,558
Derivatives liabilities	44,935	310,114	-	-	355,049
Unearned revenue	29,386	(2,791)	-	(291)	26,304
Employee joint investment program expenses	1,279,276	(73,675)	-	-	1,205,601
Total	16,568,650	2,600,809	-	(1,980)	19,167,479
Deferred tax liabilities:					
Inventories (from fair value adjustment of business combination)	58,583	58,583	-	-	-
Equipment (from fair value adjustment of business combination)	488	488	-	-	-
Unrealized gain (loss) on measuring investments	487,854	270,000	-	-	217,854
Customer relationship (from fair value adjustment of business combination)	5,295,559	2,770,972	-	-	2,524,587
Depreciation of equipment	264,681	137,577	-	(219)	127,323
Finance lease assets	1,012,828	(101,302)	-	-	1,114,130
Prepaid expenses	76,850	76,798	-	52	-
Total	7,196,843	3,213,116	-	(167)	3,983,894
Deferred tax assets (liabilities) - net	9,371,807				15,183,585
Deferred tax income (expenses) - net		5,813,925	-	(2,147)	

	Baht			
	Separate financial statements			
	Balance as at	Income (expenses) during the year		Balance as at
	Dec. 31, 2022	In profit or loss	In other comprehensive income	Dec. 31, 2023
Deferred tax assets:				
Allowance for expected credit losses	2,917,589	(860,242)	-	2,057,347
Allowance for devaluation of inventories	7,749,914	(1,418,815)	-	6,331,099
Allowance for impairment of investment	49,564	-	-	49,564
Lease agreements	866,912	381,126	-	1,248,038
Non-current provisions for employee benefit	5,754,215	369,334	342,226	6,465,775
Derivatives liabilities	355,049	(336,103)	-	18,946
Employee joint investment program expenses	1,205,601	(205,702)	-	999,899
Total	18,898,844	(2,070,402)	342,226	17,170,668
Deferred tax liabilities:				
Unrealized gain (loss) on measuring investments	217,854	204,004	-	13,850
Customer relationship (from fair value adjustment of business combination)	2,524,587	2,524,587	-	-
Depreciation of equipment	121,129	121,129	-	-
Finance lease assets	1,114,130	1,074,828	-	39,302
Total	3,977,700	3,924,548	-	53,152
Deferred tax assets (liabilities) - net	14,921,144			17,117,516
Deferred tax income (expenses) - net		1,854,146	342,226	

	Baht			
	Separate financial statements			
	Balance as at	Income (expenses) during the year		Balance as at
	Dec. 31, 2021	In profit or loss	In other comprehensive income	Dec. 31, 2022
Deferred tax assets:				
Allowance for expected credit losses	2,548,679	368,910	-	2,917,589
Allowance for devaluation of inventories	6,797,821	952,093	-	7,749,914
Allowance for impairment of investment	49,564	-	-	49,564
Lease agreements	436,857	430,055	-	866,912
Non-current provisions for employee benefit	5,345,031	409,184	-	5,754,215
Derivatives liabilities	44,935	310,114	-	355,049
Employee joint investment program expenses	1,279,276	(73,675)	-	1,205,601
Total	16,502,163	2,396,681	-	18,898,844
Deferred tax liabilities:				
Inventories (from fair value adjustment of business combination)	58,583	58,583	-	-
Equipment (from fair value adjustment of business combination)	488	488	-	-
Unrealized gain (loss) on measuring investments	487,854	270,000	-	217,854
Customer relationship (from fair value adjustment of business combination)	5,295,559	2,770,972	-	2,524,587
Depreciation of equipment	257,012	135,883	-	121,129
Finance lease assets	1,012,828	(101,302)	-	1,114,130
Total	7,112,324	3,134,624	-	3,977,700
Deferred tax assets (liabilities) - net	9,389,839			14,921,144
Deferred tax income (expenses) - net		5,531,305	-	

18. TRADE AND OTHER CURRENT PAYABLES

Trade and other current payables were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade payables				
Trade payables - other companies	106,506,979	168,725,583	105,996,589	166,518,618
Other current payables				
Accrued commission expenses	15,636,469	14,652,252	15,636,469	14,652,252
Accrued bonus	16,690,040	12,908,021	16,690,040	12,730,594
Advance from customers for goods and services	30,035,097	45,856,074	29,867,841	45,249,770
Other accrued expenses	15,208,805	15,682,282	15,029,383	15,331,311
Account payable - Revenue department	5,508,274	3,490,810	5,483,581	3,395,318
Other deposit	1,800,459	1,518,349	1,878,459	1,596,349
Other	20,763,533	7,676,650	20,763,533	7,676,650
Total	105,642,677	101,784,438	105,349,306	100,632,244
Total trade and other current payables	212,149,656	270,510,021	211,345,895	267,150,862

19. LEASE LIABILITIES

The carrying amounts of lease liabilities and the movement for the years ended December 31, 2023 and 2022 are presented below.

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Beginning balance	87,576,596	96,437,966	87,576,596	96,437,966
Addition	2,264,881	214,731	2,264,881	214,731
Accretion of interest	2,047,071	2,279,299	2,047,071	2,279,299
Payments	(11,384,030)	(11,355,400)	(11,384,030)	(11,355,400)
Decrease from contract cancellation	-	-	-	-
Ending balance	80,504,518	87,576,596	80,504,518	87,576,596
Less: current portion	(10,443,166)	(9,228,565)	(10,443,166)	(9,228,565)
Lease liabilities - net of current portion	70,061,352	78,348,031	70,061,352	78,348,031

Amounts recognized in the statement of comprehensive income for the years ended December 31, 2023 and 2022 are comprise;

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Depreciation of right-of-use assets	9,791,794	11,226,376	9,791,794	11,226,376
Interest expense on lease liabilities	2,047,071	2,279,299	2,047,071	2,279,299
Leases of low-value assets	162,907	183,741	135,161	151,058
Total	12,001,772	13,689,416	11,974,026	13,656,733

For the year ended December 31, 2023 and 2022, the Company and its subsidiaries had rental income from investment property in the amount of Baht 11,546,937 and Baht 11,539,141 respectively (for the Company's only amounting to Baht 11,519,191 and Baht 11,506,458, respectively) and also had non-cash additions to right-of-use assets and lease liabilities of Baht 2,264,881 and Baht 214,731, respectively (for the Company's only amounting to Baht 2,264,881 and Baht 214,731, respectively).

20. NON-CURRENT PROVISIONS FOR EMPLOYEE BENEFIT

Movements of non-current provisions for employee benefit for the years ended December 31, 2023 and 2022 were as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Beginning balance defined benefit obligations	30,765,106	27,968,095	30,518,395	27,792,471
Current service costs and interest	2,705,870	2,797,011	2,617,134	2,725,924
Actuarial loss	1,711,130	-	1,711,130	-
Benefits paid by the plan	(1,146,667)	-	(1,146,667)	-
Ending balance defined benefit obligations	34,035,439	30,765,106	33,699,992	30,518,395

The statements of comprehensive income for the years ended December 31, 2023 and 2022 are as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Current service costs				
Cost of sales	346,276	356,717	318,582	369,867
Distribution cost	733,186	789,312	733,186	789,312
Administrative expenses	972,370	1,043,132	911,328	958,895
Interest on obligation	654,038	607,850	654,038	607,850
Total	2,705,870	2,797,011	2,617,134	2,725,924

Actuarial (gain) loss

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Actuarial (gain) loss arising from				
Changes in demographic assumptions	516,934	-	516,934	-
Changes in financial assumptions	(2,041,207)	-	(2,041,207)	-
Experience adjustments	3,235,403	-	3,235,403	-
Total	1,711,130	-	1,711,130	-

Principal actuarial assumptions at the reporting date for the years ended December 31, 2023 and 2022 are as follow:

	Percentage			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Discount rate	2.99 - 3.19	1.92 - 2.32	2.99 - 3.19	1.92 - 2.32
Salary increase rate	4.00	4.00	4.00	4.00
Employee turnover rate	4.78 - 22.92	4.78 - 28.65	4.78 - 22.92	4.78 - 28.65
Mortality rate	105.00% of Thai Mortality Ordinary Table 2017	105.00% of Thai Mortality Ordinary Table 2017	105.00% of Thai Mortality Ordinary Table 2017	105.00% of Thai Mortality Ordinary Table 2017

Sensitivity analysis

The results of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligations as at December 31, 2023 and 2022 are summarized below:

2023				
Consolidated financial statements / Separate financial statements				
	%		Baht	
	Increase	Decrease	Increase	Decrease
Discount rate	1	(1)	(2,499,351)	2,914,297
Salary increase rate	1	(1)	2,434,489	(2,119,930)
Turnover rate	20	(20)	(2,788,149)	3,284,920
Mortality rate	20	(20)	(290,854)	294,767

2022				
Consolidated financial statements / Separate financial statements				
	%		Baht	
	Increase	Decrease	Increase	Decrease
Discount rate	1	(1)	(2,468,333)	2,876,380
Salary increase rate	1	(1)	2,684,381	(2,331,843)
Turnover rate	20	(20)	(3,233,426)	3,922,859
Mortality rate	20	(20)	(313,143)	317,561

21. PREMIUM ON ORDINARY SHARES

According to the Public Companies Act B.E. 2535, under the provision of section 51, the Company is required to set aside share subscription received in excess of the par value of the shares issued to a reserve account ("premium on ordinary shares"). The premium on ordinary shares is not available for dividend distribution.

22. THE EMPLOYEE JOINT INVESTMENT PROGRAM (EJIP)

On May 22, 2015, the Securities and Exchange Commission approved the Employee Joint Investment Program (EJIP). The details of the program are as follows;

The period of EJIP	May 1, 2020 to April 30, 2025, with a total duration of 5 years.
Eligible employees under EJIP	The employees has over one year working experience or Employees at director on the voluntary basis.
EJIP arrangement	The Company will make deduction from the payroll of eligible employees who voluntarily join the EJIP, at the rate 5% of each month and director at the rate 5-30% of each month. The Company will contribute 100% of the amount contributed by EJIP participants on a monthly basis.
EJIP buying schedule	Monthly basis.
Conditions for holding the securities	During the 1 st year - 2 st year, cannot sell any shares After the 2 nd year, can sell 25% of accumulated shares After the 3 rd year, can sell 50% of accumulated shares After the 4 th year, can sell 75% of accumulated shares After the 5 th year, can sell all shares
EJIP program manager	Philip Securities (Thailand) Public Company Limited

The statements of comprehensive income for the years ended December 31, 2023 and 2022 are as follows:

	Baht					
	Consolidated financial statements / Separate financial statements					
	2023			2022		
	Surplus on share-based payment transactions	(Less) Treasure shares	Net	Surplus on share-based payment transactions	(Less) Treasure shares	Net
Beginning balance	15,439,243	(9,411,239)	6,028,004	13,822,057	(7,425,678)	6,396,379
Movements of the year						
- Employees joint investment program expenses	4,462,558	-	4,462,558	4,556,090	-	4,556,090
- Employees joint investment program expenses paid	-	(5,491,066)	(5,491,066)	-	(4,924,465)	(4,924,465)
- Transfer shares to employees	(4,758,011)	4,758,011	-	(2,248,330)	2,248,330	-
- Employees leave the investment program	(303,679)	303,679	-	(690,574)	690,574	-
Ending balance	14,840,111	(9,840,615)	4,999,496	15,439,243	(9,411,239)	6,028,004

The statements of comprehensive income for the years ended December 31, 2023 and 2022 are as follows:

	Baht	
	Consolidated financial statements /	
	Separate financial statements	
	2023	2022
Cost of rendering of services	543,028	714,414
Distribution cost	1,033,777	1,491,398
Administrative expenses	2,025,977	2,350,278
Interest from interest rate changes	859,776	-
	4,462,558	4,556,090

23. LEGAL RESERVE

According to the Public Companies Act B.E. 2535, under provision of section 115, the Company is required to set aside a statutory reserve of at least 5 percent of its net profit after deducting accumulated deficit brought forward (if any) until the reserve reaches 10 percent of the registered share capital. The statutory reserve could not be used for dividend payment.

24. APPROPRIATION OF RETAINED EARNINGS

According to the resolution of the 2023 Annual General Meeting of Shareholders on April 24, 2023 the shareholders approved dividend payment at Baht 0.13 per share for the issued and paid up ordinary shares of 584,500,000 shares, in total amount of Baht 75,984,792. The dividend was paid on May 19, 2023.

According to the resolution of the 2022 Annual General Meeting of Shareholders on April 25, 2022 the shareholders approved dividend payment from the operation for the year 2021 at Baht 0.10 per share for the issued and paid-up ordinary shares of 584,500,000 shares, in total amount of Baht 58,449,860. The dividend was paid on May 13, 2022.

25. PROVIDENT FUND

The Company and its employees jointly registered a provident fund scheme under the Provident Fund Act B.E. 2530. The Fund is contributed to by both the employees and the Company. The Fund is managed by an asset management company. This Fund is registered under the conditions of Ministry of Finance and the Fund is managed by the approved fund manager.

For the years ended December 31, 2023 and 2022, the Company and its subsidiaries paid contributions to provident fund and recognized as expenses amounting to Baht 4.76 million and Baht 4.57 million, respectively (for the Company's only amounting to Baht 4.76 million and Baht 4.57 million, respectively).

26. OPERATING SEGMENT

Segment information is presented in respect of the business segments. The primary format in segment information report is based on the management and internal reporting structure.

The Company and its subsidiaries comprises the following main business segments:

- Segment 1 Fire Protection Products and Project
- Segment 2 Sanitary and Air-Conditioning System
- Segment 3 Refrigeration System
- Segment 4 Digital Printing System
- Segment 5 Building-IoT Solutions

Operating segment by business in the consolidated statement of comprehensive income for the years ended December 31, 2023 and 2022 were as follows:

	Thousand Baht											
	Consolidated financial statements											
	2023						2022					
	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total
Revenue from sale												
of goods	518,567	59,883	247,315	309,658	160	1,135,583	462,886	55,703	230,334	324,405	-	1,073,328
Revenue from rendering												
Of services	125,266	-	-	36,889	1,883	164,038	96,854	-	-	42,245	7,234	146,333
Cost of sale of goods	(363,542)	(44,123)	(184,641)	(177,623)	(198)	(770,127)	(342,026)	(40,189)	(172,541)	(198,651)	-	(753,407)
Cost of rendering of												
services	(105,161)	-	-	(32,201)	(1,119)	(138,481)	(79,984)	-	-	(34,485)	(5,380)	(119,849)
Gross profit	<u>175,130</u>	<u>15,760</u>	<u>62,674</u>	<u>136,723</u>	<u>726</u>	<u>391,013</u>	<u>137,730</u>	<u>15,514</u>	<u>57,793</u>	<u>133,514</u>	<u>1,854</u>	<u>346,405</u>
Other income						26,606						22,629
Distribution cost						(113,843)						(113,161)
Administrative expenses						(158,832)						(141,825)
Profit from operation						144,944						114,048
Finance cost						(2,918)						(2,294)
Tax expense						(28,853)						(22,905)
Profit for the year						113,173						88,849
Other comprehensive income												
(expense) for the year						(1,604)						61
Total comprehensive income for the year						<u>111,569</u>						<u>88,910</u>

	Thousand Baht									
	Separate financial statements									
	2023					2022				
	Segment 1	Segment 2	Segment 3	Segment 4	Total	Segment 1	Segment 2	Segment 3	Segment 4	Total
Revenue from sale of goods	518,567	59,883	247,315	303,382	1,129,147	462,886	55,703	230,334	320,037	1,068,960
Revenue from rendering of services	125,266			36,757	162,023	96,854			41,646	138,500
Cost of sale of goods	(363,543)	(44,122)	(184,641)	(173,399)	(765,705)	(342,034)	(40,189)	(172,541)	(194,775)	(749,539)
Cost of rendering of services	(105,161)			(31,943)	(137,104)	(80,124)			(33,638)	(113,762)
Gross profit	175,129	15,761	62,674	134,797	388,361	137,582	15,514	57,793	133,270	344,159
Other income					27,432					23,821
Distribution cost					(112,043)					(111,009)
Administrative expenses					(156,937)					(140,005)
Profit from operation					146,813					116,966
Finance cost					(2,907)					(2,279)
Tax expense					(28,789)					(23,188)
Profit for the year					115,117					91,499
Other comprehensive income (expense) for the year					(1,369)					
Total comprehensive income for the years					113,748					91,499

Operating segment by business in the statement of financial position as at December 31, 2023 and 2022 were as follows:

	Thousand Baht											
	Consolidated financial statements											
	2023						2022					
	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total
Assets for reportable segments												
Trade receivables -												
other companies	153,615	17,440	49,441	45,306	-	265,802	138,489	16,538	32,538	53,732	-	241,297
Inventories	61,552	7,806	77,452	54,247	288	301,345	265,733	9,954	90,783	64,348	270	431,088
Goodwill	-	-	200,066	134,606	-	334,672	-	-	200,066	134,606	-	334,672
Customer relationship	-	-	-	-	-	-	-	-	9,165	3,458	-	12,623
				-		-						
Assets under common use												
- Assets under common use	-	-	-	-	-	162,846	-	-	-	-	-	153,347
- Investment property	-	-	-	-	-	120,656	-	-	-	-	-	124,556
- Property, plant and equipment	-	-	-	-	-	64,109	-	-	-	-	-	83,242
- Right-of-use assets	-	-	-	-	-	11,511	-	-	-	-	-	11,820
- Others	-	-	-	-	-	493,085	-	-	-	-	-	390,458
Total assets for reportable segments	315,167	25,246	326,959	234,159	288	1,754,026	404,222	26,492	332,552	256,144	270	1,783,103
Total liabilities for reportable segments	-	-	-	-	-	370,846	-	-	-	-	-	434,479

Thousand Baht										
Separate financial statements										
2023					2022					
Segment 1	Segment 2	Segment 3	Segment 4	Total	Segment 1	Segment 2	Segment 3	Segment 4	Total	
Assets for reportable segments										
Trade receivables - other companies	153,615	17,440	49,441	45,306	265,802	138,489	16,538	32,538	53,732	241,297
Inventories	161,552	7,806	77,452	53,597	300,407	265,733	9,954	90,784	63,087	429,558
Goodwill	-	-	200,066	134,606	334,672	-	-	200,066	134,606	334,672
Customer relationship	-	-	-	-	-	-	-	9,165	3,458	12,623
Assets under common use										
- Investment property	-	-	-	-	162,846	-	-	-	-	153,347
- Property, plant and equipment	-	-	-	-	120,542	-	-	-	-	124,397
- Right-of-use assets	-	-	-	-	64,109	-	-	-	-	83,242
- Intangible assets	-	-	-	-	11,511	-	-	-	-	11,820
- Others	-	-	-	-	496,707	-	-	-	-	390,124
Total assets for reportable segments	315,167	25,246	326,959	233,509	1,756,596	404,222	26,492	332,553	254,883	1,781,080
Total liabilities for reportable segments	-	-	-	-	369,101	-	-	-	-	430,320

For the years ended December 31, 2023 and 2022, there was no revenue from sales and service with a single external customers contributed 10% or more to the total revenue.

27. EXPENSE BY NATURE

Expenses by nature for the years ended December 31, 2023 and 2022 consist of the significant expenses were as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Purchases of finished goods	634,029,364	862,185,990	630,337,501	858,934,637
Other changes in finished goods and work in process	129,743,144	(102,792,398)	129,150,477	(103,567,276)
Employee expenses	200,847,721	189,373,440	197,620,159	184,378,758
Office rental and service expenses	610,321	658,905	582,575	593,075
Depreciation and amortization	41,790,917	45,109,859	41,749,381	45,072,344
Others	174,261,607	133,705,776	172,348,238	128,903,600
Total	1,181,283,074	1,128,241,572	1,171,788,331	1,114,315,138

28. INCOME TAX EXPENSE

28.1 Major components of income tax expense

For the years ended December 31, 2023 and 2022 consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Income tax expense shown in profit or loss :				
Current tax expense:				
Income tax expense for the years	30,643,728	28,718,806	30,643,728	28,718,806
Deferred tax expense (income):				
Changes in temporary differences relating to the original recognition and reversal	(1,790,305)	(5,813,925)	(1,854,146)	(5,531,305)
Total	<u>28,853,423</u>	<u>22,904,881</u>	<u>28,789,582</u>	<u>23,187,501</u>
Income tax relating to components of other comprehensive income:				
Deferred tax expenses (income) relating to Gain (loss) on re-measurements of defined benefits plans	(342,226)	-	(342,226)	-
Total	<u>28,511,197</u>	<u>22,904,881</u>	<u>28,447,356</u>	<u>23,187,501</u>

28.2 A numerical reconciliation between income tax expense and the product of accounting profit multiplied by the applicable tax rate.

For the years ended December 31, 2023 and 2022, which were summarized as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Accounting profit for the years	142,025,935	111,753,860	143,906,550	114,686,920
The applicable tax rate (%)	20%	20%	20%	20%
Income tax expense at the applicable tax rate	<u>28,405,187</u>	<u>22,350,772</u>	<u>28,781,310</u>	<u>22,937,384</u>
Reconciliation items:				
Tax effect of expenses that are not deductible in determining tax profit:				
- Expenses not allowed as expenses in determining taxable profit	289,367	226,315	227,111	494,451
Addition expenses deductible for tax purpose	(218,839)	(247,710)	(218,839)	(244,334)
Other	377,708	575,504	-	-
Total reconciliation items	<u>448,236</u>	<u>554,109</u>	<u>8,272</u>	<u>250,117</u>
Total tax expense (income)	<u>28,853,423</u>	<u>22,904,881</u>	<u>28,789,582</u>	<u>23,187,501</u>

28.3 A numerical reconciliation between the average effective tax rate and the applicable tax rate.

For the years ended December 31, 2023 and 2022 were summarized as follows:

	Consolidated financial statements			
	2023		2022	
	Tax amount (Baht)	Tax rate (%)	Tax amount (Baht)	Tax rate (%)
Accounting profit before income tax expense for the years	142,025,935		111,753,860	
Income tax expense at the applicable tax rate	28,405,187	20.00	22,350,772	20.00
Reconciliation items	448,236	0.32	554,109	0.50
Income tax expense at the average effective tax rate	<u>28,853,423</u>	<u>20.32</u>	<u>22,904,881</u>	<u>20.50</u>

	Separate financial statements			
	2023		2022	
	Tax amount (Baht)	Tax rate (%)	Tax amount (Baht)	Tax rate (%)
Accounting profit before income tax expense for the years	143,906,550		114,686,920	
Income tax expense at the applicable tax rate	28,781,310	20.00	22,937,384	20.00
Reconciliation items	8,272	0.01	250,117	0.22
Income tax expense at the average effective tax rate	<u>28,789,582</u>	<u>20.01</u>	<u>23,187,501</u>	<u>20.22</u>

29. BASIC EARNINGS PER SHARE

Basic earnings per share is calculated by dividing the profit for the years by the weighted average number of ordinary shares in issue during the years.

		Consolidated financial Statements		Separate financial statements	
		2023	2022	2023	2022
Profit for the years of parent company	(Baht)	114,041,134	88,783,953	115,116,968	91,499,419
Weighted average number of ordinary shares	(Shares)	584,500,000	584,500,000	584,500,000	584,500,000
Basic earnings per share	(Baht per share)	0.20	0.15	0.20	0.16

30. COMMITMENTS AND CONTINGENT LIABILITIES

As at December 31, 2023 and 2022, the Company and its subsidiaries had commitments and contingent liabilities as follows:

30.1 As at December 31, 2023 and 2022, the Company and its subsidiaries have letters of guarantee issued by banks for goods and work under system installation service agreement of:

		Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Million Baht		27.13	22.21	27.13	22.21

30.2 The credit facilities with financial institutions as at December 31, 2023 and 2022 consisted of:

		Consolidated financial statements / Separate financial statements			
		Facilities (Million Baht)		Referred interest rate (% per annum)	
Type of credit		2023	2022	2023	2022
Bank overdrafts		9.00	9.00	MOR, MOR-0.50	MOR, MOR-0.50
Letter of credit/trust receipt		120.00	120.00	MLR-1, MMR	MLR-1, MMR
Letter of guarantee		74.00	74.00	1.00-1.25%	1.25 - 2%
Forward exchange contracts		410.00	410.00	-	-
Total		613.00	613.00		
Forward foreign exchange contracts (Million US dollars)		7.00	7.00		

30.3 Minimum lease and service payments are as follows:

		Million Baht			
		Consolidated financial statements		Separate financial statements	
Payment periods		2023	2022	2023	2022
Due not later than 1 year		0.48	0.50	0.48	0.48
Due later than 1 year but not later than 5 years		0.08	0.56	0.08	0.56

Rental and service expenses for the years ended December 31, 2023 and 2022 are Baht 0.61 million and Baht 0.66 million, respectively (for the Company's only to Baht 0.58 million and Baht 0.59 million, respectively).

30.4 Commitment relating to purchase of goods and services agreements

As at December 31, 2023, the Company and its subsidiaries had commitments relating to the purchase of goods and services according to memorandums and purchase and sale of goods and services agreements with suppliers. The price and conditions to purchase or sale were as specified in the said memorandum and agreements and average period of was not more than 12 months, as follows:

	2023	
	Consolidated financial statements	Separate financial statements
Baht	23,549,633	23,549,633
US dollar	2,004,795	2,004,795
EURO	1,330,620	1,330,620
GBP	504,082	488,620
YEN	699,300	699,300
Vietnamese Dong	12,000,000	-

30.5 Commitment on capital expenditure

As at December 31, 2023, the Company has capital commitments in the amount of 1.23 million baht.

30.6 Litigation

The Company had a lawsuit in the Civil Court, which had a total claim amount of Baht 11.01 million. Subsequently, on July 11, 2023, the Company had entered into a compromise agreement with the parties in court and agreed to pay compensation for the termination of the labor contract in the amount of Baht 0.76 million within 30 days. The Civil Court considered that the said agreement as legitimate and adjudged under the compromise agreement on the same day, which the case was considered final. The Company has completely recognized such compensation as expenses in the statement of comprehensive income for the year ended December 31, 2023.

31. FAIR VALUE MEASUREMENT

The Company and its subsidiaries uses the market approach to measure its assets and liabilities that are required to be measured at fair value by relevant TFRS, except that the cost approach or income approach is used when there is no active market or when a quoted market price is not available.

Fair value hierarchy

In applying the above-mentioned valuation techniques, the Company and its subsidiaries endeavors to use relevant observable inputs as much as possible. TFRS 13 Fair Value Measurement establishes a fair value hierarchy categorizing such inputs into three levels as follows:

- Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities
- Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly
- Level 3 - Use of unobservable inputs such as estimates of future cash flows.

As at December 31, 2023 and 2022, the Company and its subsidiaries had the following financial assets and liabilities that were measured at fair value on which the fair value hierarchy is classified as follows:

	Baht			
	Consolidated financial statements / Separate financial statement			
	2023			
	Level 1	Level 2	Level 3	Total
Financial assets (liabilities) measured at fair value				
Investments in unit trusts	44,010,873	6,407,290	-	50,418,163
Foreign currency forward contracts	-	(1,016,844)	-	(1,016,844)

	Baht			
	Consolidated financial statements / Separate financial statements			
	2022			
	Level 1	Level 2	Level 3	Total
Financial assets (liabilities) measured at fair value				
Investments in Bond	-	49,836,877	-	49,836,877
Investments in unit trusts	39,290,938	7,597,749	-	46,888,687
Foreign currency forward contracts	-	(1,688,695)	-	(1,688,695)

Fair valuation techniques and inputs to Level 2 fair valuation

The fair value of investments in investment units that are not listed on the Stock Exchange of Thailand is determined by using the net asset value per unit as announced by the fund managers.

The fair value of derivatives has been determined by using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as spot rates of foreign currencies, forward rate of the respective currencies, and interest rate yield curves.

During the year, there were no transfers within the fair value hierarchy.

Certain financial assets and financial liabilities is measured at fair value

The following table gives information about how the fair values of these financial assets and financial liabilities are measured at fair value on fair value hierarchy as at December 31, 2023 and 2022.

Financial assets and financial liabilities	(Baht)		Fair value Hierarchy	Valuation techniques and key inputs for fair value measurement
	Fair value			
	Consolidated financial statements/Separate financial statements			
	2023	2022		
<u>Financial assets (liabilities)</u>				
Foreign currency forward contracts	(1,016,844)	(1,688,695)	Level 2	Discounted cash flow The estimated future cash flows is from foreign currency exchange rates (from observable forward exchange rates at the end of the reporting period) and contract forward rates, discounted at a rate that reflects the credit risk of various counterparties.

These financial assets and financial liabilities are presented as a part of other current assets and other current liabilities in the statement of financial position.

Valuation technique for financial instruments not measured at fair value of the Company and its subsidiaries are as follows:

Cash and cash equivalents, trade and other current receivables, current portion of financial lease receivable had carrying values approximate their fair values due to the relatively short-term maturity of these financial instruments.

Trade and other current payables, short-term provisions and other current liabilities - the carrying amounts stated in the reporting date of these financial liabilities approximate their fair values because of the short-term period to maturity of these financial instruments.

32. FINANCIAL INSTRUMENTS

Financial risk management policies

The Company and its subsidiaries are exposed to normal business risks from changes in interest rates and currency exchange rates and from non-performance of contractual obligations by counterparties. The Company and its subsidiaries do not hold or use derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Company and its subsidiaries. The Company and its subsidiaries have a system of controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. The management continually monitors the Company and its subsidiaries are risk management process to ensure that an appropriate balance between risk and control is achieved.

Capital management

The Board of Directors' policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board monitors the return on capital, which the Company and its subsidiaries define as result from operating activities divided by total shareholders' equity, and also monitors the level of dividends to ordinary shareholders.

Foreign currency risk

The Company and its subsidiaries are exposed to foreign currency risk relating to purchases which are denominated in foreign currencies. The Company and its subsidiaries primarily utilize forward foreign exchange contracts with maturities of less than one year to hedge such financial assets and liabilities denominated in foreign currencies. The forward foreign exchange contracts entered into at the reporting date also relate to anticipated purchases, denominated in foreign currencies, for the subsequent period

As at December 31, 2023 and 2022, the Company and its subsidiaries have financial liabilities in foreign currencies as follows;

	Foreign Currencies			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Not hedged				
US dollar	20,632	533,130	20,632	524,410
EURO	328,808	135,600	328,808	135,600
GBP	75,276	160,085	75,276	130,740
YEN	1,284,300	1,428,500	1,284,300	1,428,500

Derivatives

Derivatives are forward foreign exchange contracts used for economic hedging purposes and not as speculative investments. However, derivatives do not meet the hedge accounting criteria, therefore they are classified as 'held for trading' for accounting purposes and are accounted for at fair value through profit or loss. They are presented as current assets or liabilities to the extent they are expected to be realized within 12 months after the end of the reporting period.

As at December 31, 2023 and 2022, the Company had gain (loss) from changes in fair value of derivatives in the amount of Baht (1.02) million and Baht (1.69) million, respectively.

Net foreign exchange gains (losses)

For the years ended December 31, 2023 and 2022, the aggregate net foreign exchange gains (losses) recognized in profit or loss are as follow:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Unrealized gain (loss) on exchange rates	(141,922)	135,596	(208,382)	292,793
Gain (loss) on exchange rates				
- Sales	3,113,740	(21,451)	3,132,337	46,056
Total net gain (loss) on exchange rate recognized in profit before income tax	2,971,818	114,145	2,923,955	338,849

Credit risk

Credit risk is the potential financial loss resulting from the failure of a customer or a counterparty to settle its financial and contractual obligations to the Company as and when they fall due.

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. At the reporting date, there were no significant concentrations of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the statement of financial position. However, due to the large number of parties comprising the Company and its subsidiaries are customer base, management does not anticipate material losses from its debt collection.

Liquidity risk

The Company and its subsidiaries monitor its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Company's and its subsidiaries's operations and to mitigate the effects of fluctuations in cash flows

Classification and measurement of financial asset and financial liabilities

	Baht					
	Consolidated financial statements					
	2023			2022		
	FVPL	Amortized cost	Total	FVPL	Amortized cost	Total
Financial assets						
Cash and cash equivalents	-	340,189,630	340,189,630	-	202,861,271	202,861,271
Trade and other current receivables	-	286,826,047	286,826,047	-	256,976,034	256,976,034
Current contract assets	-	23,195,655	23,195,655	-	13,155,701	13,155,701
Other non-current financial assets	50,418,163	-	50,418,163	96,725,564	-	96,725,564
Trade and other non-current receivables	-	11,002,883	11,002,883	-	16,980,743	16,980,743
Other non-current assets	-	29,615,095	29,615,095	-	29,146,836	29,146,836
	50,418,163	690,829,310	741,247,473	96,725,564	519,120,585	615,846,149
Financial liabilities						
Trade and other current payables	-	212,149,656	212,149,656	-	270,510,021	270,510,021
Current portion for lease liabilities	-	10,443,166	10,443,166	-	9,228,565	9,228,565
Short-term loan from related party	-	450,000	450,000	-	500,000	500,000
Lease liabilities	-	70,061,352	70,061,352	-	78,348,031	78,348,031
Other non-current liabilities	-	26,974,935	26,974,935	-	26,725,725	26,725,725
	-	320,079,109	320,079,109	-	385,312,342	385,312,342

	Baht					
	Separate financial statements					
	2023			2022		
	FVPL	Amortized cost	Total	FVPL	Amortized cost	Total
Financial assets						
Cash and cash equivalents	-	334,819,240	334,819,240	-	196,195,700	196,195,700
Trade and other current receivables	-	286,790,474	286,790,474	-	256,996,182	256,996,182
Current contract assets	-	22,734,305	22,734,305	-	10,920,240	10,920,240
Short-term to related company	-	1,000,000	1,000,000	-	-	-
Other non-current financial assets	50,418,163	-	50,418,163	96,725,564	-	96,725,564
Trade and other non-current receivables	-	11,002,883	11,002,883	-	16,980,743	16,980,743
Other non-current assets	-	29,240,172	29,240,172	-	28,992,420	28,992,420
	<u>50,418,163</u>	<u>685,587,074</u>	<u>736,005,237</u>	<u>96,725,564</u>	<u>510,085,285</u>	<u>606,810,849</u>
Financial liabilities						
Trade and other current payables	-	211,345,895	211,345,895	-	267,150,862	267,150,862
Current portion for lease liabilities	-	10,443,166	10,443,166	-	9,228,565	9,228,565
Lease liabilities	-	70,061,352	70,061,352	-	78,348,031	78,348,031
Other non-current liabilities	-	26,974,935	26,974,935	-	26,725,724	26,725,724
	<u>-</u>	<u>318,825,348</u>	<u>318,825,348</u>	<u>-</u>	<u>381,453,182</u>	<u>381,453,182</u>

33. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

Changes in the liabilities arising from financing activities for the years ended December 31, 2023 and 2022 are as follows:

	Baht			
	Consolidated financial statements / Separate financial statements			
	Balance as at	Cash flows	Non-cash transaction	Balance as at
	Jan. 1, 2023	Increase (decrease)*	Increase	Dec. 31, 2023
Lease liabilities	87,576,596	(11,384,030)	4,311,952	80,504,518
Total	<u>87,576,596</u>	<u>(11,384,030)</u>	<u>4,311,952</u>	<u>80,504,518</u>

	Baht			
	Consolidated financial statements / Separate financial statements			
	Balance as at	Cash flows	Non-cash transaction	Balance as at
	Jan. 1, 2022	Increase (decrease)*	Increase	Dec. 31, 2022
Lease liabilities	96,437,966	(11,355,400)	2,494,030	87,576,596
Total	<u>96,437,966</u>	<u>(11,355,400)</u>	<u>2,494,030</u>	<u>87,576,596</u>

* Financing cash flows included net proceed and repayment cash transactions in the statements of cash flows.

34. EVENT AFTER THE REPORTING PERIOD

According to the resolution of the Board of Directors' Meeting No. 1/2024 held on February 28, 2024, the Board of Directors approved dividend payment at Baht 0.15 per share for 584,500,000 issued and paid up ordinary shares, in total amount of Baht 87,675,000. The dividend declaration will be proposed to the next Annual General Shareholders' Meeting for approval.

35. APPROVAL OF FINANCIAL STATEMENTS

These financial statements were authorized for issue by the Board of Directors of the Company on February 28, 2024.

Section 4



Attachment

Attachment 1**Details of Directors, Executives, Controllers and Company Secretary****Bord of Director and Authorized**

As of December 31, 2023

**01.****Mr. Pichet Sithi-Amnuai**

Independent Director (Non-Executive) /
Chairman of the Board

02.**Mr. Prasert Deejongkit**

Independent Director (Non-Executive) /
Chairman of the Nomination and
Remuneration Committee / Member of the
Audit Committee

03.**Dr. Teerachai Pornsinsirak**

Independent Director (Non-Executive) /
Chairman of the Risk Management
Committee/ Member of the Audit Committee

04.**Mrs. Valeeratn Chuerboonchai**

Independent Director (Non-Executive)/
Chairperson of the Audit Committee
/ Member of the Nomination and
Remuneration Committee

05.**Mrs. Sirima Iamsakulrat**

Directors (Non-Executive) /
Authorized Director

06.**Dr. Jain Charnnarong**

Directors (Non-Executive) / Member of the
Executive Committee / Member of the Nomination
and Remuneration Committee/ Authorized Director

07.**Mr. Wirat Sukchai**

Directors (Executive)/ Chairman of the Executive
Committee/ Member of the Risk Management
Committee and Authorized Director

08.**Mr. Thammanoon Tripetchr**

Directors (Executive) / Member of the Executive
Committee / Member of the Risk Management
Committee and Authorized Director



References information disclosed on HARN website, be in the links below, shall be deemed to be part of Form 56-1 One Report. <https://www.harn.co.th/en/about/board-of-directors/>

Executives, Person taking the highest responsibility in finance and accounting, Supervisors accounting and Company Secretary

As of December 31, 2023



Mr. Thammanoon Tripetchr

Chief Executive Officer /
Chief Marketing Officer: Digital Printing System



Mr. Wirat Sukchai

Chief Marketing Officer:
Refrigeration System /
Investor Relations



Mr. Rattanaphan Mukhariwattananon

Chief Marketing Officer:
Safety and Comfortable



Mr. Wisit Wachiralappaitoon

Chief Financial Officer /
The person taking the
highest responsibility in
finance and accounting



Mrs. Varinkan Teraumranon

Chief Operating Officer



Miss Ananya Proyngoen

Accounting Manager
and Supervising
Accounting



Miss Wasukan Boonmee

Company Secretary



References information disclosed on HARN website, be in the links below, shall be deemed to be part of Form 56-1 One Report <https://www.harn.co.th/en/about/management/>
<https://www.harn.co.th/en/investor-relations/shareholders-information/information/>

Mr. Pichet Sithi-Amnuai

Independent Director (Non-Executive)

Chairman of the Board

Age 58 Yrs.

Shareholding (As at December 31, 2023) - None -

Appointment April 24, 2023

Education

- M.Ed. (Early Childhood Education), Chulalongkorn University
- M.B.A. University of Texas at Austin, USA
- B.E. (Industrial Engineering), Chulalongkorn University

Training participation

Training program of Thai Institute of Directors Association (IOD)

- Role of the Chairman Program (RCP) Class 55/2023
- Corporate Governance for Capital Market Intermediaries (CGI) Class 0/2014
- Anti – Corruption for Executive Program (ACEP) Class 2/2012
- TLCA Executive Development Program (EDP) Class 4
- Monitoring Fraud Risk Management (MFM) Class 1/2009
- Successful Formulation & Execution the Strategy (SFE) Class 2/2008
- Monitoring the Internal Audit Function (MIA) Class 1/2007
- Monitoring the System of Internal Control and Risk Management (MIR) Class 1/2007
- Role of the Compensation Committee (RCC) Class 1/2006
- Audit Committee Program (ACP) Class 10/2005
- Director Certification Program (DCP) Class 64/2005

Other courses

- Transformational Executive Network for Exponential Growth (TenX 2022)
- Business Revolution and Innovation Network (BRAIN 02/2018)
- Thailand Energy Academy (TEA 09/2017)
- TLCA Leadership Development Program (LDP)
- Capital Market Academy Leadership Program (CMA 11/2010)

Board skill matrix (as December 31, 2023)

Strategy, Marketing and Competition/ Accounting and Finance/
Technology and IT/ Legal related to business/ Risk Management/
Human Resources/ Responsibility and Sustainable Development

Work experience (5-years past experiences)

- 2023 - Present** Chairman of the Board, Harn Engineering Solutions Plc.
- 2022 - Present** Director, Thailand Futures Exchange Plc.
- 2021 - Present** Vice Chairman and Director, the Stock Exchange of Thailand (SET)
- 2021 - Present** Director, TSFC Securities Plc.
- 2019 - Present** President of the Association, Association of Thai Securities Companies
- 2019 - Present** Managing Director, HO Kitchen Co., Ltd.
- 2015 - Present** Director, S AND S Property Co., Ltd.
- 2009 - Present** President, Director, and Eexecutives Director, Bualuang Securities Plc.

Current Positions

Listed Company - None -

Public Company / Limited Company (5)

- Thailand Futures Exchange Plc.
- TSFC Securities Plc.
- HO Kitchen Co., Ltd.
- S & S Property Co., Ltd.
- Bualuang Securities Plc.

Other Organizations/Institutions (2)

- Association of Thai Securities Companies
- The Stock Exchange of Thailand (SET)

State Enterprise - None -

Having a Special Interest that is Different from Other Directors - None -

Family Relation with Other Directors - None -

Dispute in the 10 Preceding Years - None -

Participation in administration or consultants who receive a regular salary - None -

Being a professional service provider, such as an auditor, legal advisor - None -

Business relationships that May result in inability to perform duties independently - None -

Mr. Prasert Deejongkit

Independent Director (Non-Executive)

Chairman of the Nomination and Remuneration Committee

Member of the Audit Committee

Age 57 Yrs.

Shareholding (As at December 31, 2023) - None -

Appointment April 23, 2021

Education

- M.B.A. (Financial Management (2nd honours)), National Institutes of Development Administration (NIDA)
- L.L.B. Sukhothai Thamathirat Open University, Nonthaburi
- B.E. (Mechanical Engineering), Chulalongkorn University

Training participation

Training program of Thai Institute of Directors Association (IOD)

- Board Nomination & Compensation Program (BNCP), Class 14/2022
- Director Accreditation Program (DAP), Class 184/2021

Board skill matrix (as December 31, 2023)

Strategy, Marketing and Competition / Accounting and Finance / Legal related to business

Work experience (5-years past experiences)

2021 - Present Director, Harn Engineering Solutions Plc.

2021 - Present Director, CMDP Digital Infrastructure for Capital Market Co., Ltd.

2020 - Present EVP & Manager, Corporate Finance Department, Bangkok Bank Plc.

2015 - Present Director, Club's Board of Directors, Investment Banking Club, Association of Securities Companies (Thailand)

2013 - Present Director, the Registered Provident Fund of Bangkok Bank Plc.

2019 - 2023 Director, TRIS Corporation Limited

2020 - 2021 Director of Sub-Committee on Director on Debt Securities, the Securities and Exchange Commission

2009 - 2019 SVP & Manager, Corporate Finance Department, Bangkok Bank Plc.

Current Positions

Listed Company (1)

- Bangkok Bank Plc.

Public Company / Limited Company (1)

- CMDP Digital Infrastructure for Capital Market Co., Ltd

Other Organizations/Institutions (2)

- Investment Banking Club, Association of Securities Companies (Thailand)
- The Registered Provident Fund of Bangkok Bank Public Company Limited

State Enterprise - None -

Having a Special Interest that is Different from Other Directors - None -

Family Relation with Other Directors - None -

Dispute in the 10 Preceding Years - None -

Participation in administration or consultants who receive a regular salary - None -

Being a professional service provider, such as an auditor, legal advisor - None -

Business relationships that May result in inability to perform duties independently - None -

Dr. Teerachai Pornsinsirak

Independent Director (Non-Executive)

Chairman of the Risk Management Committee

Member of the Audit Committee

Age 53 Yrs.

Shareholding (As at December 31, 2023) - None -

Appointment April 25, 2022

Education

- Ph.D. (Electrical Engineering), California Institute of Technology (Caltech), California, USA.
- M.S. (Electrical Engineering), Stanford University, California, U.S.A.
- L.L.B. (Legal Science), Sukhothai Thamathirat Open University
- B.S. (Physics and Electrical Engineering), California Institute of Technology (Caltech), California, USA.
- Executive Certificate in Engineering and Business for Executives, California Institute of Technology (Caltech), California, U.S.A.

Training participation

Training program of Thai Institute of Directors Association (IOD)

- Advanced Audit Committee Program (AACP) Class 50/2023
- Directors Certification Program (DCP), Class 211/2015

Training Other

- Senior Executive Course Capital Market Academy (VTT) Class 29

Board skill matrix (as December 31, 2023)

Strategy, Marketing and Competition / Technology and IT / Risk Management / Human Resources / Responsibility and Sustainable Development

Work experience (5-years past experiences)

2022 - Present Director, Harn Engineering Solutions Plc.

2022 - Present Head of Digital and Innovation, Banpu Plc.

2021 - 2022 Director and Managing Director, Thai Film Industries Plc.

2020 - 2021 Independent Strategy and Management Consultant, TEKA Construction Co., Ltd.

2018 - 2020 Chief Strategy Officer, B.Grimm Co., Ltd.

2011 - 2018 Research Manager, Technology and Innovation / Corporate Strategy, PTT Public Company Limited

Current Positions

Listed Company (1)

- Banpu Plc.

Public Company / Limited Company - None -

Other Organizations/Institutions - None -

State Enterprise - None -

Having a Special Interest that is Different from Other Director - None -

Family Relation with Other Director - None -

Dispute in the 10 Preceding Years - None -

Participation in administration or consultants who receive a regular salary - None -

Being a professional service provider, such as an auditor, legal advisor - None -

Business relationships that May result in inability to perform duties independently - None -

Mrs. Valeeratn Chuerboonchai**Independent Director (Non-Executive)****Chairperson of the Audit Committee****Member of the Nomination and Remuneration Committee****Age 69 Yrs.****Shareholding (As at December 31, 2023)**

5,671,700 shares (0.97%)

Appointment

May 15, 2022

Education

- B.B.A. (Accounting), Assumption University

Training participation**Training program of Thai Institute of Directors Association (IOD)**

- Advanced Audit Committee Program (AACP), Class 49/2023
- Board Nomination & Compensation Program (BNCP), Class 14/2022
- Financial Statements for Directors (FSD), Class 28/2015
- Director Certification Program (DCP), Class 205/2015
- Anti-Corruption for Executive Program (ACEP), Class 14/2015
- Director Accreditation Program (DAP), Class SET/2012

Board skill matrix (as December 31, 2023)

Accounting and Finance / Human Resources

Work experience (5-years past experiences)

2018 - Present Directors and Chairperson of the Audit Committee, Harn Engineering Solutions Plc.

2018 - Present Directors, Nutrix Plc.

2012 - 2018 Directors and Member of the Executive Committee, Harn Engineering Solutions Plc.

2012 - 2017 Assistant Managing Director: Operations, Harn Engineering Solutions Plc.

2007 - 2016 Director and Member of the Executive Committee, Chillmatch Co., Ltd.

2007 - 2016 Director and Member of the Executive Committee, QIS Co., Ltd.

2007 - 2012 Finance Director, Fire Victor Co., Ltd.

Current Positions

Listed Company - None -

Public Company / Limited Company (1)

- Nutrix Plc.

Other Organizations/Institutions - None -

State Enterprise - None -

Having a Special Interest that is Different from Other Director - None -

Family Relation with Other Director - None -

Dispute in the 10 Preceding Years - None -

Participation in administration or consultants who receive a regular salary - None -

Being a professional service provider, such as an auditor, legal advisor - None -

Business relationships that May result in inability to perform duties independently - None -

Mrs. Sirima Iamsakulrat**Directors (Non-Executive)****Authorized Director****Age 61 Yrs.****Shareholding (As at December 31, 2023)**

81,884,151 shares (14.01%)

Appointment date: September 5, 2012 (HARN was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)

Education

- M.B.A., Stanford University, USA.
- B.Econ. (Economics), Chulalongkorn University

Training participation**Training program of Thai Institute of Directors Association (IOD)**

- Board Nomination & Compensation Program (BNCP), Class 5/2018
- Successful Formulation & Execution of Strategy (SFE), Class 24/2015
- Director Certification Program (DCP), Class 211/2015
- Director Accreditation Program (DAP), Class SET/2012

Board skill matrix (as December 31, 2023)

Core Business / Accounting and Finance / Responsibility and Sustainable Development

Work experience (5-years past experiences)

2019 - Present Directors, Thawiphasura Co., Ltd.

2018 - Present Directors, Harn Engineering Solutions Plc.

2017 - Present Directors, Jainnopsiri Co., Ltd.

2017 - Present Directors, Phraborriban Co., Ltd.

1989 - Present Member of the Executive Committee, Harn Engineering Co., Ltd.

2016 - 2018 Director and Chairperson of the Executive Committee, Harn Engineering Solutions Plc.

2012 - 2016 Member of the Executive Committee, Harn Engineering Solutions Plc.

Other Positions

Listed Company - None -

Public Company / Limited Company (4)

- Harn Engineering Co., Ltd.
- Jainnopsiri Co., Ltd.
- Pharaborriban Co., Ltd.
- Thawiphasura Co., Ltd.

Other Organizations/Institutions - None -

State Enterprise - None -

Family Relation with Other Director

Elder sister of Dr.Jain Charnnarong

Dispute in the 10 Preceding Years - None -

Dr. Jain Charnnarong

Directors (Non-Executive)

Member of the Executive Committee

Member of the Nomination and Remuneration Committee

Authorized Director

Age 57 Yrs.

Shareholding proportion (As at December 31, 2023)

68,953,030 shares (11.80%)

Appointment date April 28, 2017

Education

- Doctoral Philosophy of Mechanical Engineering, Minor in Management, Massachusetts Institute of Technology, Cambridge, USA.
- Master of Science in Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, USA.
- Bachelor of Engineering (First Class of Honor), Chulalongkorn University, Thailand

Training participation

Training program of Thai Institute of Directors Association (IOD)

- Board Nomination & Compensation Program (BNCP), Class 14/2022
- How to Develop a Risk Management Plan (HRP), Class 8/2015
- Successful Formulation & Execution of Strategy (SFE), Class 23/2015
- Family Business Sustainability (FBS), Class 1/2014
- Director Certification Program (DCP), Class 173/2013

Board skill matrix (as December 31, 2023)

Core Business / Technology and IT / Responsibility and Sustainable Development

Work experience (5-years past experiences)

2020 - Present Directors, Aiyaraharn Co., Ltd.

2019 - Present Directors, Thawiphasura Co., Ltd.

2017 - Present Directors, Member of the Executive Committee, Harn Engineering Solutions Plc.

2017 - Present Directors, Jainnopsiri Co., Ltd.

2017 - Present Directors, Phraboriban Co., Ltd.

2007 - Present Directors, Harn Engineering Co., Ltd.

2001 - 2014 Founder & CEO, Siam General Aviation Company Limited (SGA)

1999 - 2001 Directors & General Manager, Siam Land Flying Company Limited (SGA)

1998 - 2000 Business Analyst, Siam Commercial Bank Public Company Limited

Other Positions

Listed Company - None -

Limited Company/Public Company Limited (5)

- Harn Engineering Co., Ltd.
- Aiyaraharn Co., Ltd.
- Jainnopsiri Co., Ltd.
- Phraboriban Co., Ltd.
- Thawiphasura Co., Ltd.

Other Organizations/Institutions - None -

State Enterprise - None -

Family Relation with Other Director

Younger brother Mrs. Sirima Iamsakulrat

Dispute in the 10 Preceding Years - None -

Mr. Wirat Sukchai

Directors (Executive)

Chairman of the Executive Committee

Member of the Risk Management Committee

Authorized Director, Chief Marketing Officer:

Refrigeration System and Investor Relations

Age 58 yrs.

Shareholding (As at December 31, 2023)

89,006,630 shares (15.23%)

Appointment

September 5, 2012 (HARN was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)

Education

- M.B.A. (E-MBA), National Institute of Development Administration (NIDA)
- B.B.A. (Sales and Marketing), Bangkok University

Training participation:

Training program of Thai Institute of Directors Association (IOD)

- How to Develop a Risk Management (HRP) Class 12/2017
- Successful Formulation & Execution of Strategy (SFE), Class 24/2015
- Director Certification Program (DCP), Class 204/2015
- Role of Chairman Program (RCP), Class 36/2015
- Anti-Corruption for Executive Program (ACEP), Class 14/2015
- Director Accreditation Program (DAP), Class SET/2012

Board skill matrix (as December 31, 2023):

Core Business / Strategy, Marketing and Competition/ Risk Management/ Responsibility and Sustainable Development

Work experience (5-years past experiences)

2023 - Present Directors, Zenex Property Co., Ltd.

2023 - Present President of the Association, Market for Alternative Investment - mai

2022 - Present Chairman of the Executive Committee, Chief Marketing Officer: Refrigeration System, Harn Engineering Solutions Plc.

2016 - 2022 Chief Executive Officer and Managing Director: Fire Protection System, Air-conditioning System and Sanitary, Harn Engineering Solutions Plc.

2012 - 2016 Managing Director, Harn Engineering Solutions Plc.

2002 - 2012 General Manager, Fire Victor Co., Ltd.

Current Positions

Listed Company - None -

Public Company / Limited Company (1)

- Zenex Property Co., Ltd.

Other Organizations/Institutions (1)

- Market for Alternative Investment - mai

State Enterprise - None -

Family Relation with Other Director - None -

Dispute in the 10 Preceding Years - None -

Mr. Thammanoon Tripetchr

Directors (Executive)

Member of the Executive Committee

Member of the Risk Management Committee

Authorized Director, Chief Executive Officer

Chief Marketing Officer: Digital Printing System

Age 56 Yrs.

Shareholding (As at December 31, 2023)

23,260,187 shares (3.98%)

Appointment November 1, 2016

Education

- B.B.A. (Management), Assumption University of Thailand

Training participation

Training program of Thai Institute of Directors Association (IOD)

- How to Develop a Risk Management Plan (HRP), Class 31/2022
- Director Certification Program (DCP), Class 211/2015
- Successful Formulation & Execution of Strategy (SFE), Class 24/2015
- Financial Statements for Directors (FSD), Class 28/2015
- Director Accreditation Program (DAP), Class 116/2015

Board skill matrix (as December 31, 2023)

Core Business/ Strategy/ Marketing and Competition/ Accounting and Finance/ Technology and IT/ Legal related to business/ Risk Management/ Human Resources/ Responsibility and Sustainable Development

Work experience (5-years past experiences)

2022 - Present Directors, Member of the Executive Committee, Chief Executive Officer and Chief Marketing Officer: Digital Printing System, Harn Engineering Solutions Plc.

2021 - Present Directors, Harn Vietnam Co., Ltd.

2020 - Present Directors, Aiyaraharn Co., Ltd.

2016 - 2022 Managing Director: Digital Printing System, Harn Engineering Solutions Plc.

2015 - 2016 Managing Director, Q II S Co., Ltd.

2014 - 2016 Director, Chillmatch Co., Ltd.

2010 - 2015 Directors, General Manager, Q II S Co., Ltd.

Current Positions

Listed Company - None -

Public Company / Limited Company (2)

- Aiyaraharn Co., Ltd.
- Harn Vietnam Co., Ltd.

Other Organizations/Institutions - None -

State Enterprise - None -

Family Relation with Other Director - None -

Dispute in the 10 Preceding Years - None -

Mr. Rattanaphan Mukhariwattananon

Chief Marketing Officer:

Safety and Comfortable

Age 45 yrs.

Shareholding (As at December 31, 2023)

4,479,062 shares (0.77%)

Appointment January 1, 2014

Education

- Executive M.B.A. KU 25, Kasetsart University
- B.Ind.Tech. (Mechanical), Sriprathum university

Training participation

- PEX and PPR pipeline knowledge
- Team Engagement for TOP Culture
- Basic knowledge of international product exports
- Inert gas fire extinguishing system course
- Halogen carbon fire extinguishing system course
- Fire Product value and on Lead Free (NSF) value
- Analytical Thinking and Systems Thinking for Cross-functional Problem Solving and Decision Making
- Basic of Air-conditioning System
- HVAC Training by Victaulic
- CSR for Corporate Sustainability (P01)
- ISO 9001 : 2015 Understanding and Implementation
- Risk Management Certificate Program, Class 10
- Sprinkler System Design
- Warehouse Sprinkler System and Clean Agent Fire Extinguishing Design

Work experience

2022 - Present Chief Marketing Officer: Safety and Comfortable, Harn Engineering Solutions Plc.

2014 - 2022 Sales Director: Safety and Comfortable, Harn Engineering Solutions Plc.

2008 - 2013 Sales Manager, Fire Victor Co., Ltd.

2003 - 2008 Sales Engineer, Fire Victor Co., Ltd.

Mr. Wisit Wachiralappaitoon

Chief Financial Officer, The person taking
the highest responsibility in finance and accounting

Age 49 Yrs.

Shareholding (As at December 31, 2023)

816,045 shares (0.14%)

Appointment March 16, 2016

Education

- Master of Science (Accounting), Thammasat University
- B.B.A. (Accounting), Ramkhamhaeng University
- LL.B. (Laws), Ramkhamhaeng University
- Global Entrepreneurship and Electronic Commerce, York College of Industry Technology, Ontario, Canada

Certified Public Accountant of Thailand

- License No. 6051

Training participation

- Team Engagement for TOP Culture
- The Continuing Professional Development Program By Self-Study CPD Financial Reporting Standards For Non-Publicly Interested Entities (NPAEs)
- Basic knowledge of international product exports
- Operations in accordance with the Personal Data Protection Act
- Checking corporate fraud with Jurisprudence of Accountancy
- Analysis and management of foreign exchange rate risk
- Training Schedule Ethics Training Project For Professional Accountants Only Certified Public Accountant Class 5
- Accounting tools with RPA, AI and OCR technology
- Training for Continuing Professional Knowledge (CPD) for auditors and accountants According to the regulations of the Federation of Accounting Professions.
- Executive Accountant Testing Program (Financial Strategy)
- Financial Management Strategy To revive the organization and create growth in the New Normal
- The New CFO (Crisis Finance Officer) (SET)
- Changes in TFRS15, and Draft TFRS9, TFRS16, effective 2019 and 2020
- Prepare Financial Reporting Standard No. 9 Financial Instruments (TFRS 9) and No. 16 Lease Agreement (TFRS 16)

Work experience

2019 - Present Chief Financial Officer, Harn Engineering Solutions Plc.

2016 - 2019 Finance Director, Harn Engineering Solutions Plc.

2012 - 2016 Chief Financial Officer, Hot Pot Plc.

Mrs. Varinkan Teraumranon

Chief Operating Officer

Age 58 Yrs.

Shareholding (As at December 31, 2023)

1,512,912 shares (0.26%)

Appointment October 10, 2019

Education

- B.B.A. (Accounting), Rajamangala Institute of Technology

Training participation:

Training program of Thai Institute of Directors Association (IOD):

- Effective Minute Taking Plan (EMT), Class 36/2016
- Company Reporting Program (CRP), Class 16/2016
- Company Secretary Program (CSP), Class 72/2016
- How to Develop a Risk Management Plan (HRP), Class 8/2015

Other courses

- Anti-Corruption Working Paper
- Team Engagement for TOP Culture
- Personal financial management course for private pension funds
- Certificate in ESG Management (C-ESG) Class 2/2022
- Operations in accordance with the Personal Data Protection Act
- Analytical Thinking and Systems Thinking for Cross-functional Problem Solving and Decision Making
- Personal Data Protection Act (PDPA)
- CSR for Corporate Sustainability(P01)
- Business Sustainability Strategy (S01-S03)
- Sustainability Risk and Materiality Analysis (S04)
- CSR Evaluation and Data Management (S05)
- Sustainability Reporting (S06)
- Organizational Success Assessment through KPI Course
- 360o Marketing Communication Techniques Course
- Finance for Non-finance Executive Course
- Finance for the Boss Course

Work experience

2021 - Present Chief Operating Officer, Harn Engineering Solutions Plc.

2019 - 2021 Chief operating officer and Company Secretary, Harn Engineering Solutions Plc.

2016 - 2019 Corporate Governance Director and Company Secretary, Harn Engineering Solutions Plc.

2016 - 2017 Assistant Managing Director: Corporate Governance and Secretary Company, Harn Engineering Solutions Plc.

2014 - 2016 Operation Support Director (General Management Group), Harn Engineering Solutions Plc.

Miss Ananya Proyngoen

The person supervising accounting

Age 42 yrs.

Shareholding (As at December 31, 2023)

167,214 shares (0.03%)

Appointment December 1, 2016

Education

- Master of Accountancy (M.Acc.), Chulalongkorn University
- B.B.A. (Accounting), Rajamangala Institute of Technology Chakrabongsa Bhuvanarth Campus

Certified Public Accountant of Thailand

- License No. 11654

Training participation

- Upgrading working papers expert in reviewing anti-corruption
- Summarizing accounting standards and financial reporting standards, revised year 2023.
- Accounting Information
- Accounting standards related to land, Building and equipment
- Ethics for accounting professionals
- Financial statement analysis

Work experience

2016 - Present Accounting Manager, Harn Engineering Solutions Plc.

2014 - 2015 Accounting Manager, I AM Consulting Co., Ltd.

2013 - 2014 Accounting Supervisor, Yum Restaurants International

Miss Wasukan Boonmee

Company Secretary

Age 44 yrs.

Shareholding proportion (As at December 31, 2023)

105,516 shares (0.02%)

Appointment date August 11, 2021

Education

- B.B.A. (Business Computer), Chandrakasem Rajabhat University

Training participation**Training program of Thai Institute of Directors Association (IOD)**

- S01 Setting goals for sustainable development of business
- S02,S04 Value Chain and Materiality Analysis
- S03 Sustainability strategy and Initiative
- Effective Minute Taking Plan (EMT), Class 65/2015
- Company Secretary Program (CSP), Class 64/2015

Work experience

2021 - Present Company Secretary, Harn Engineering Solutions Plc.

2016 - 2021 Assistant Company Secretary, Harn Engineering Solutions Plc.

2015 - 2016 Company Secretary and Secretary of the Audit Committee, Chillmatch Co., Ltd.

2007 - 2015 Administrative, Harn Engineering Co., Ltd.

Details Position the Board and the Management of HARN / Subsidiaries / Related Companies

Name		Company	Position of HARN / Subsidiaries / Related Companies																		
			Harn Engineering Co., Ltd.	The Stock Exchange of Thailand (SET)	Thailand Futures Exchange Plc.	Nutrix Plc.	Jainnopsiri Co., Ltd.	Pharaborriban Co., Ltd.	Harn Vietnam Co., Ltd.	Ayaraharn Co., Ltd	Bangkok Bank Plc.	CMDF Digital Infrastructure for Capital Market Co., Ltd.	TRIS Co., Ltd.	Banpu Plc.	TSFC Securities Plc.	HO Kitchen Co., Ltd.	S & S Property Co., Ltd.	Bualuang Securities Plc.	Market for Alternative Investment - mai	Zenex Property Co., Ltd.	Thawiphasura Co., Ltd.
1. Mr. Pichet	Sithi-Amnuai	▲		■	■								■	■	■	■					
2. Mr. Prasert	Deejongkit	■								■	■	■									
3. Dr. Teerachai	Pornsinsirirak	■											●								
4. Mrs. Valeeratn	Chuerboonchai	■			■																
5. Mrs. Sirima	Iamsakulrat	■	■				■	■												■	
6. Dr. Jain	Charnnarong	■●	■				■	■		■										■	
7. Mr. Wirat	Sukchai	■●●																▲ ■ ●	■		
8. Mr. Thammanoon	Tripetchr	■●●							■	■	●							●			
9. Mr. Rattanaphan	Mukhairiwattananon	●●																			
10. Mr. Wisit	Wachiralappaitoon	●●																			
11. Mrs. Varinkan	Teraumaranon	●●																			

Note : ▲ = Chairman ■ = Director ● = Executive ■ = Management

Attachment 2 | Details of Subsidiaries Directors

1) Harn Vietnam Company Limited

The Board of Directors at the Meeting No. 5/2018, held on November 9, 2018 resolved to establish a subsidiary in Vietnam which HARN owns 100%. To support the market expansion into Asian countries AEC and enhance the efficiency of customer service base in Ho Chi Minh City, Vietnam, focuses the target group Global Accounts of Domino UK, which is the distributor/owner main brand of HARN and other companies in main industrial of Vietnam for Digital Printing Products.

HARN registered the establishment of Harn Vietnam Company Limited (“subsidiary”), Vietnam, with a registered capital of 800,000,000 Vietnamese dong or approximately 1,057,444 baht. HARN holds 100% of the subsidiary’s shares of the registered capital on July 30, 2019. Specifying the legal representatives of the Subsidiary as follow Mr. Thammanoon Tripetchr, sign and affix the company seal.

2) Aiyaraharn Company Limited

The Board of Directors at the Meeting No. 4/2020, held on May 14, 2020 decided to establish a subsidiary with HARN holding 65% of its shares. Provide intelligent building and Internet of Things (IoT) development services under the name “Aiyaraharn”.

HARN registered the establishment of Aiyarahan Company Limited (“subsidiary”), with a registered capital of Baht 2,000,000. HARN holds 65% of the subsidiary’s shares of the registered capital on July 8, 2020. Specifying the Directors having authority to sign on behalf of the Subsidiary as follow Mr.Thammanoon Tripetchr, Mr. Jain Charnnarong, Mr. Prasertsak Detudom, two-thirds shall jointly sign.

3) Details Position of the Subsidiaries

Name	Position of Subsidiaries	
	Harn Vietnam Co., Ltd.	Aiyara Harn Co., Ltd.
1. Mr. Thammanoon Tripetchr	■ D	■ D
2. Mr. Jain Charnnarong		■ D
3. Mr. Prasertsak Detudom		■ D

Note : ■ = Director/Legal representatives D = Management



References information disclosed on HARN website, be in the links below, shall be deemed to be part of Form 56-1 One Report. <https://www.harn.co.th/en/about/business-structure/>

1) Head of Internal Audit

HARN does not have its own internal audit department and therefore uses external services (Outsourcing). The audit committee approves the appointment of as internal audit namely Ultima Advisory Company Limited, which appointed Miss Chonlada Thirapattananon, Managing director and Miss Siriphan Tantipanichphan, senior internal audit manager as the head of internal audit of HARN. Supervising the operations in accordance with the objectives and the international standards, including objectivity and independent consulting on HARN's operation and report directly to the Audit Committee, with Mr. Wisit Wachiralappaatoon, Chief Financial Officer, who is the Secretary of the Audit Committee responsible for coordinating within the company to ensure that HARN has an adequate and appropriate internal control system: as follows; (Details in Section 2 "Internal Control and Connected Transaction", page 177-180)

Miss Chonlada Thirapattananon

Managing Director

Age 55 Yrs.

Shareholding proportion (As at December 31, 2023) - None -

Appointment date December 2, 2016

Education

- M.Acc. (Accounting and Finance), Chulalongkorn University
- Graduate Diploma Program in Auditing, Thammasat University
- B.Acc. (Accounting), Thammasat University

Certified Public Accountant of Thailand

- License No. 4994

Training participation

- Training project to receive a certificate in internal audit, class 3
- COSO 2013 course
- Internal Audit in Information System, Class 2/2016
- Strategic Leadership in the Future Digital Age (Chulalongkorn Business School)

Work Experiences (5 years past experiences)

2010 - Present Managing Director, Ultima Advisory Co., Ltd.

2005 - 2010 Manager, Deloitte Touche Tohmatsu Jaiyos Advisory Co., Ltd.

1997 - 2005 Financial Controller, Sensient Technologies (Thailand) Ltd.

Accounting and Finance Department, Amex Team Advertising Group

Manager, Gilberte Reed Co., Ltd.

1991 - 1996 Audit Manager / Ernst & Young Office Limited

Relation among Family with other Directors, Management, Major Shareholders of the Company or Subsidiaries - None -

Participation in administration, staff, employees or consultants who receive a regular salary - None -

Significant business relationships that May result in inability to perform duties independently - None -

Miss Siriphan Tantipanichphan

Senior Internal Audit Manager

Age 54 Yrs.

Shareholding proportion (As at December 31, 2023) - None -

Appointment date August 10, 2017

Education

- M.B.A, National Institute of Development Administration
- B.Acc. (Accounting), Thammasat University

Certified Public Accountant of Thailand

- License No. 4820

Training participation

- Training project to receive a certificate in internal audit, class 13
- COSO 2013 course
- COSO ERM 2017 course
- Internal Audit in Information System, Class 2/2016
- Corruption Prevention Course in Organizations, Class 16

Work Experiences (5 years past experiences)

2016 - Present Senior Manager, Ultima Advisory Co., Ltd.

1993 - 2015 Senior Manager, Ernst & Young Office Limited

Relation among Family with other Directors, Management, Major Shareholders of the Company or Subsidiaries - None -

Participation in administration, staff, employees or consultants who receive a regular salary - None -

Significant business relationships that May result in inability to perform duties independently - None -

2) Head of Compliance

The Chief Operating Officer is responsible for overseeing the operation of HARN (Compliance) to promote and support supervision of business operations, including the operations of executives and employees and its subsidiaries, to comply with the law. The rules of HARN's investment.

This is to ensure that there is a process to supervise compliance with the relevant laws and regulations, including the specification of duties and responsibilities of various departments, to reduce any impacts that may incur from operations not in compliance with the relevant laws and regulations. This may cause HARN to face legal penalties or loss of benefits. The executives of all departments are responsible for collecting and reviewing the laws related to their responsibilities, while setting procedures and work processes based on the appropriate internal control and risk management, in line with the follow-up for compliance. The Quality Management Department by the Chief Operating Officer is a regulatory body responsible for monitoring the work performance as appropriate and accuracy according to the relevant laws, regulations and ethics, and presenting to the Board of Directors for acknowledgment at least once a year.

Profile details in Attachment 1 (List of designated personnel), page 252



References information disclosed on HARN website, be in the links below, shall be deemed to be part of Form 56-1 One Report <https://www.harn.co.th/en/corporate-governance/corporate-governance-policy/>

1) Business Assets

Investment properties

As at December 31, 2023 HARN's investment properties which can generate profit from rental or from value appreciation or both. The net book value of HARN's investment properties less accumulated depreciation and allowance for impairment the total shown in the consolidated, details as follows:

Unit: THB million

Investment properties	net book values as of December 31, 2023	Proprietary nature	Obligation
1. Land	135.29	HARN's owned	None
2. Buildings and structures	27.05	HARN's owned	None
3. Buildings and structures improvements	0.51	HARN's owned	None
4. Tools and equipment	-	HARN's owned	None
5. Right-of-use assets	10.16	the right to use some	None
Total	162.85		

Land, Buildings and Equipment

As at December 31, 2023 HARN's total operating fixed assets consist of land, buildings and structures, tools and equipment, furniture and office equipment, vehicle, assets for rent and demonstration, and assets under construction. The net book value of HARN's operating fixed assets less accumulated depreciation and allowance for impairment the total shown in the consolidated, details as follows:

Unit: THB million

Land, Buildings and Equipment	Net book values as of December 31, 2023	Proprietary nature	Obligation
1. Land	37.36	HARN's owned	None
2. Buildings and structures	31.72	HARN's owned	None
3. Tools and equipment	2.86	HARN's owned	None
4. Furniture and office equipment	18.12	HARN's owned	None
5. Vehicle	7.61	HARN's owned	None
6. Assets for rent and demonstration	19.93	HARN's owned	None
7. Assets under construction	3.06	HARN's owned	None
Total	120.66		

Long-Term Leases

HARN entered into a lease agreement for building and warehouse space to be used as a headquarter location and to store goods, including renting out buildings and warehouse buildings by entering into a lease agreement with the third-party companies and persons related to HARN, details as follows:

Counterparties	Place			Rental period			Area
	No.	Floor	Road / Sub-District / District / Province	Term of lease	Contract start	Contract end	(sq.m.)
Office Building							
1. Lessor: Jainnopsiri Co., Ltd. Renter: HARN	559 ^{1/}	1 - 6	Rama 9 soi 13, Bangkoki, Huaykwang, Bangkok	3 years ^{1/}	January 1, 2021	December 31, 2023	4,375.20
				4 months ^{2/}	January 1, 2024	April 30, 2024	4,375.20
Warehouse buildings							
2. Lessor: Phraboriban Co., Ltd. Renter : HARN	509	Soi Soonviai 4 Bangkoki, Huaykwang, Bangkok		3 years	November 1, 2020	October 31, 2023	356.38
				6 months ^{2/}	November 1, 2023	April 30, 2024	307.55
Warehouse buildings							
3. Lessor: Phattararit 1997 Co., Ltd. Renter: HARN	38/43	Moo 4, Lamlukka Road, Lamlukka, Pathumtani		5 years	March 2, 2020	March 2, 2025	80

Note : ^{1/} On January 1, 2021, HARN entered into a office building lease agreement with Jainnopsiri Co., Ltd. and the conditions under the contract the commitment of the lessor to lease the office building for another 7 years after the contract expires.

^{2/} On November 1, 2023, HARN renewed the temporary office building lease agreement with Jennopasiri Limited for a period of 4 months and renewed the temporary warehouse building lease agreement with Phraboriban Limited for a period of 6 months, it is proposed the 2024 AGM to approve additional lease agreement once again.

Property Insurance Policy Contract

HARN has insured 2 policies of property all risk insurance and third-party liability insurance with Dhipaya Insurance Public Company Limited, with a total sum insured of Baht 464.65 million, following details;

Type insurance	Company Insured	Property Insured	Capital (MB.)	Period assured	Assured
insured no.1					
Property all risk insurance and third-party liability insurance	Dhipaya Insurance Public Company Limited	<p>Property Location, 559 Soi Soonvial 4 Bangkok, Huaykwang, Bangkok</p> <p>The insured property. All kinds, various raw materials including all packaging, and including all assets belonging to the insured and/or under the care of the Insured as a keeper.</p> <p>Protection This insurance policy covers loss or damage to insured property resulting from various events such as fire, lightning, explosions, vehicle impact, smoke, aircraft, water damage, storms, floods, riots, strikes or malicious acts (excluding those committed for political, religious, or ideological purposes), acts of nature such as earthquakes, and other unforeseen or unspecified events that are not specifically excluded in the insurance policy contract (OCI Form).</p> <p>Limit of liability For flood disaster, not more than Baht 70 million per time and throughout the insurance period.</p> <p>Extending protection</p> <ul style="list-style-type: none"> Insurance for electrical appliances limit not more than: Baht 30 million per time and throughout the insured period Glass insurance limit not more than: Baht 30 million per time and throughout the insured period Losses due to theft of property, which show no signs of forced entry (excluding stocks and all types of goods), are not covered under this policy, limit not more than: Baht 30 million per time and throughout the insured period Machine insurance limit not more than: Baht 30 million per time and throughout the insured period Protection of electronic equipment, equipment due to unforeseen external factors and theft involving visible signs of forced entry, limit not more than: Baht 20 million accident and throughout the insurance period Money insurance (Por Ngor.2) limit not more than: Baht 2 million per time and throughout the insured period 	49.80	September 18, 2023 to September 18, 2024	HARN

Type insurance	Company Insured	Property Insured	Capital (MB.)	Period assured	Assured
		<ul style="list-style-type: none"> Cover damage to real estate located in an open space or a building with one side open, including a fence, gate, from the dangers of scorpions, storms, floods, ice, sand, or dust, limit not more than: Baht 10 million per time and throughout the insured period The maximum liability for loss or damage to insured property resulting from theft or robbery (Tor Sor. 1.21) is limited to the sum insured. <p>Public Liability</p> <p>Protection</p> <ul style="list-style-type: none"> Legal liability of the insured for accidents and physical injuries, death, and damage to the property of third parties caused by defects in the insured premises. Or negligence of the insured or employees of the insured within the insured premises and occurring during the insured period. Costs, fees for compensation claiming which the insured must compensate the claimant with written consent from the Company. <p>Special conditions</p> <ul style="list-style-type: none"> Liability from elevators, escalators, cranes and hoists PL/002-1. Liability from providing first aid by the insured, limit not more than Baht 0.01 million per person and not more than Baht 0.50 million per time throughout the insured period. Liability from parking lot, limit not more than Baht 0.50 million per person and not more than Baht 5 baht per time throughout the insured period. Liability from neon signs and advertising signs Form Ror. Bor. 102, limit not more than Baht 1 million per time throughout the insured period. Legal liability from fire and explosion for property not owned by the insured Form Ror. Bor. 007. 			

Type insurance	Company Insured	Property Insured	Capital (MB.)	Period assured	Assured
		<ul style="list-style-type: none"> Expand coverage for medical expenses for injuries occurring within the operation premises Form Ror. Bor. 008 form, maximum liability not more than Baht 0.01 million per person and not more than Baht 0.50 million per time throughout the insured period. MECHANICALLY PROPELLED VEHICLES : limit not more than Baht 1 million per time throughout the insured period. 			
insured no.2					
Property all risk insurance and third-party liability insurance	Dhipaya Insurance Public Company Limited	<p>According to location of branch offices namely;</p> <p>2.1) Office and Wharehouse, 888/14-16 (branch no. 11)</p> <p><u>The insured property</u>, includes: buildings, furniture, fixtures, affixed and stock</p> <ul style="list-style-type: none"> Building No. 888/14 - 16 Moo 21, Bang Phli Yai Sub-District, Bang Phli District, Samut Prakan (excluding foundation), including renovations, additions, fences, gates, utilities such as air-conditioning systems, water systems, electrical systems and other systems. Decorations, renovations, additions, furniture, fixtures, office equipment, computer systems, computers, tools, appliances, demonstrations, all kinds of related machinery and equipment, forklifts, and all kinds of assets belonging to the insured and/or under the care of the insured as a keeper and all kinds of products various raw materials. All kinds' products, raw materials, including all packaging and including all property belonging to the insured and/or under the care of the Insured as a keeper. <p>2.2) 100 Years Building, 1st Floor Faculty of Engineering Chulalongkorn University (branch no. 10)</p> <p><u>The insured property</u>, includes: furniture, fixtures and products stock.</p> <p>2.3) Warehouse 38/43 Moo 4, Lam Luk Ka Road, Lam Luk Ka Sub-district, Lam Luk Ka District, Pathum Thani.</p>	414.85	September 18, 2023 to September 18, 2024	HARN


Type insurance	Company Insured	Property Insured	Capital (MB.)	Period assured	Assured
		<p><u>The insured property</u>, includes: products stock</p> <p>2.4) Warehouse 509 Soi Soonvijai (branch no.8)</p> <p><u>The insured property</u>, includes: furniture, fixtures and products stock.</p> <p>Protection This insurance policy covers loss or damage to insured property resulting from various events such as fire, lightning, explosions, vehicle impact, smoke, aircraft, water damage, storms, floods, riots, strikes or malicious acts (excluding those committed for political, religious, or ideological purposes), acts of nature such as earthquakes, and other unforeseen or unspecified events that are not specifically excluded in the insurance policy contract (OCI Form).</p> <p>Limit of liability For flood disaster, not more than Baht 70 million per time and throughout the insurance period.</p> <p>Extending protection</p> <ul style="list-style-type: none"> Insurance for electrical appliances limit not more than: Baht 30 million per time and throughout the insured period Glass insurance limit not more than: Baht 30 million per time and throughout the insured period Losses due to theft of property, which show no signs of forced entry (excluding stocks and all types of goods), are not covered under this policy, limit not more than: Baht 30 million per time and throughout the insured period Machine insurance limit not more than: Baht 30 million per time and throughout the insured period Protection of electronic equipment, equipment due to unforeseen external factors and theft involving visible signs of forced entry, limit not more than: Baht 20 million accident and throughout the insurance period Money insurance (Por Ngor.2) limit not more than: Baht 2 million per time and throughout the insured period 			

Type insurance	Company Insured	Property Insured	Capital (MB.)	Period assured	Assured
		<ul style="list-style-type: none"> Cover damage to real estate located in an open space or a building with one side open, including a fence, gate, from the dangers of scorpions, storms, floods, ice, sand, or dust, limit not more than: Baht 10 million per time and throughout the insured period The maximum liability for loss or damage to insured property resulting from theft or robbery (Tor Sor. 1.21) is limited to the sum insured. <p>Public Liability</p> <p>Protection</p> <ul style="list-style-type: none"> The insurer is legally liable for bodily injury, loss of life, and property damage to third parties caused by defects on the insured premises or the negligent actions of the insurer or their employees within the insured premises during the policy period. The expenses and fees for claiming indemnity, which the insured shall pay to the claimant, with the insured's written consent to the company. <p>Special conditions</p> <ul style="list-style-type: none"> The liability for providing first aid by the insurance policyholder limit not more than: the maximum responsibility shall not exceed Baht 0.01 million per person and no more than Baht 1 million each time, and throughout the insured period The liability arising from parking premises limit not more than: Baht 0.5 million per time and limit not more than: Baht 5 million throughout the insured period The liability arising from NIA and advertising signs, Form Ror Bor.102 limit not more than: Baht 1 million per time and throughout the insured period The legal liability for fire and explosion hazards for properties not owned by the insurance policyholder, Form Ror Bor. 007. Expanding coverage for medical expenses for injuries occurring within the business premises, Form Ror Bor. 008: Maximum liability of up to Baht 0.01 million per person and limit not more than: Baht 1 million per time and throughout the insured period MECHANICALLY PROPELLED VEHICLES limit not more than: Baht 1 million per time and throughout the insured period 			

Intangible Asset

HARN's intangible assets include computer software, goodwill, customer relationships, and trademarks. The details as of December 31, 2023 are as follows:

1. Computer software which has a net book value of Baht 11.51 million, with amortization by the straight-line method over the asset's useful life of 5-10 years
2. Goodwills with a total value of Baht 334.67 million, unamortized and impairment testing in complying of TAS36 "Impairment of Asset"
3. Relationship with customers has been completed amortization using the straight-line method over the useful life of the assets of 7 years
4. Trademarks/service marks which have developed their own brand of 7 brands, namely HARN, VALTEC, Spark, Guardian, BLUEICE, KOPPAR, YUKI. Details are as follows:

No.	trademark	Owner	Registration	For Products / Services	Period
1.		HARN	201120438	For the administration of sales, design, installation and service of firefighting system equipment, air-conditioning system and sanitary, administration of sales and the assemble of industrial cooling system equipment, administration of sales, installation and service of machines, equipment, spare parts, consumables of digital printing system on the package, packet, labels including workpiece creation from digital file.	March 28, 2018 to March 27, 2028
2. ^{1/}		HARN	Kor162287	For the metal water pipe valve products	October 18, 2021 to October 17, 2031
3. ^{1/}		HARN	Kor381341	For the fire hose set, fire hose, fire hose connector products	October 30, 2022 to October, 29 2026
4. ^{1/}		HARN	Kor62121	For the fire extinguisher products	June 20, 2016 to June 19, 2026
5. ^{1/}		HARN	171127993 171127974	For the compressor lubricant products <ul style="list-style-type: none"> • For the oil separators as part of the compressor • pressure regulators as part of the compressor • an emergency device of the compressor to stop the operation of the compressor when the lubricant is lower than the limit • Anti-vibration devices of the compressor 	April 4, 2016 to April 3, 2026
6. ^{1/}		HARN	171127981 171127990	For the copper pipes, copper joints, copper welding wires For the insulations	April 4, 2016 to April 3, 2026
7. ^{1/}		HARN	181101901	For the refrigerant products	April 4, 2016 to April 3, 2026

Note : ^{1/} Products under the trademark of HARN (No. 2 - 7) are contracted products with domestic or foreign manufacturers.

Investment Policy in Subsidiaries and Associates

As a policy, HARN invests in subsidiaries, joint ventures, to support and promote business growth and ensures governance and by assigning its representatives to serve as Directors in subsidiaries, joint ventures. The presence of HARN's representatives as Directors in subsidiaries, ventures enable it to participate in policymaking, stay informed, and periodically monitor performance. Any activity that may have a significant impact on HARN must be approved by the Board of Directors first.

2) Details on Asset Valuation

During 2023, the company had two independent appraisals for land, buildings, and constructions. These appraisals were approved by the Securities and Exchange Commission, using market value criteria to assess land value, and replacement cost method to evaluate constructions. According to the report, the total fair value amounted to Baht 252.27 million (as per the financial statements as of December 31, 2023, the total value Baht 221.26 million). The details are as follows:

1. Vacant land with an area of 5-0-9 rai, property location Soi Chaloem Phrakiat Rama 9, Soi 28, Dokmai Subdistrict, Prawet District, Bangkok, had a book value of Baht 114.95 million, according to the asset valuation and appraisal report, fair value of December 8, 2023 was Baht 125.40 million.
2. Land with warehouse building, land area of 6-2-00 rai with a 2-story warehouse and office building (3 buildings), property location number 888/14 - 16, Jongsiri Parkland Project, Bang Phli Yai Subdistrict, Bang Phli District, Samut Prakan, book value is equal to Baht 106.31 million according to the asset valuation and appraisal report, fair value of January 17, 2024 was Baht 126.87 million.

Harn Engineering Solutions Public Company Limited (“HARN”) operates its business responsibly, transparently, accountably, fairly, ethically and with due regard to all of its stakeholders by adhering to the principles of good corporate governance. Recognizes that its adherence to the principles of good corporate governance will contribute to the operational and management efficiency of HARN’s and Subsidiaries. The Company also bolsters its credibility and fosters sustainable growth, itself but also for the society and the nation as a whole in order to achieve its vision.

The Board of Directors has formulated the Policies and Principles of Corporate Governance and Code of Conduct has been distributed throughout its establishment in order for directors, executives, employees, subsidiary, joint venture, controlling person of HARN, including business representatives (if any) to adhere when performing their duties to express intention to develop and improve our good corporate governance to be rated excellence in accordance with international standard. HARN has reviewed and revised the handbook so as to keep them up-to-date, and to keep them abreast of any changes be in line with business strategies including related regulations. Also, comprehensively communicated to all Directors, Executives and Employees, who have acknowledged and understood it entirely, and implement as a guideline for executing their duties.

References information disclosed on HARN website, be in the links below, shall be deemed to be part of Form 56-1 One Report



<https://www.harn.co.th/corporate-governance/corporate-governance-policy/>

1) Report of the Audit Committee



Mrs. Valeeratn Chuerboonchai

Chairperson of the Audit Committee

Appointed by the Board of Directors (the Board), the current Audit Committee consists of 3 proficient and knowledgeable independent directors, all of whom command diverse expertise and experience. In 2023, after Mr. Thakol Nunthirapakorn retired by rotation from the Board at the 2023 Annual General Meeting (“AGM”) from April 24, 2023. The Board meeting elected Mrs. Valeeratn Chuerboonchai was appointed by the Board meeting to take the Chairperson of the Audit Committee and appoint Dr. Teerachai Pornsinsirak to take Member of the Audit Committee on April 25, 2023 onward, the individual terms of the Committee are summarized as follows:

January 1, to April 24, 2023

1. Mr. Thakol	Nunthirapakorn	Chairman
2. Miss Voranuch	Supaibulpipat	Member
3. Mrs. Valeeratn	Chuerboonchai	Member

April 25, to December 31, 2023

1. Mrs. Valeeratn	Chuerboonchai	Chairman
2. Mr. Prasert	Deejongkit	Member
3. Dr. Teerachai	Pornsinsirak	Member

Serving as secretary to this committee is Mr. Wisit Wachiralappaatoon, Chief Financial Officer.

The composition and qualifications are considered suitable. Mrs. Valeeratn Chuerboonchai and Mr. Prasert Deejongkit are particularly qualified for reviewing financial statements’ credibility against the requirements of the Securities and Exchange Commission, Thailand (SEC) and Stock Exchange of Thailand (SET).

The committee executed its Board-assigned duties and those under its own charter, which agreed with SEC’s and SET’s best practices, in oversees review financial reports to ensure that they are accurate, completely, and its business operations are compliant with applicable laws regulations and policy. The Audit Committee is also responsible for proposing to appoint and proposing to terminate the external auditor of the HARN’s, including considering the appointment, transfer and termination of the employment the internal auditors of the HARN’s. It also reviewed and advocated HARN’s corporate governance, together with adequate risk management and internal control system, as well as enforcement of compliance. It ensured HARN’s emphasis on being a transparent organization with efficient and effective internal audit activity, while aligning corporate goals, and improve the Internal Audit to be a trustworthy for sustainable long-term value creation for HARN with due regard for satisfying stakeholders’ expectations.

1. Advocated the upgrading of processes of governance, risk management, and compliance processes, with a focus on raising awareness of employees’ careful and thoughtful actions, including the review of rules and regulations related to the operation together with the cautious internal control process, the review of the investigation process and disciplinary action to be appropriate and fair.

2. Strengthen internal audit quality to efficiently, effectively, and credibly accommodate stakeholders' expectations by focusing on performance audit practices and increasing the role of advice consulting. In addition, by utilizing important external risk factors that affect business operations, internal audit activities can be identified in a timely manner, add value to HARN and continuously improve operational processes.
3. Encouraged and focus on managing Cybersecurity Risks that could impact the security and stability of the HARN's Information system to ensure the professional operation of HARN, considering all aspects of operation.
4. Enhance Corporate Governance to drive the organization towards sustainable growth by advocating the role in providing assurance and consultation on Sustainability as well as the disclosure of Sustainability information in a transparent and trustworthy manner to all stakeholders.

In 2023, held a total of 5 meetings all of the Audit Committee members attended every meeting detail of attendance meeting as follows;

January 1, to April 24, 2023 : Meeting 1 time

1. Mr. Thakol	Nunthirapakorn	: 1 time
2. Mr. Prasert	Deejongkit	: 1 time
3. Mrs. Valeeratn	Chuerboonchai	: 1 time

April 25, to December 31, 2023 : Meeting 4 times

1. Mrs. Valeeratn	Chuerboonchai	: 4 times
2. Mr. Prasert	Deejongkit	: 4 times
3. Dr. Teerachai	Pornsinsirak	: 4 times

Including consultation with the executives, the Internal Auditor, and the Auditor. In addition, the Audit Committee held one non-executive meeting with the external auditor for unrestricted consultation on the external auditor's work, its opinions, issues arising from audit and financial report scrutiny, together with its collaboration with the Audit Committee and Internal Auditor. Each quarter, the Audit Committee a performance report to the Board, which the performance highlights of the Audit Committee as follows:

1. Reviewed the Financial Statements

The Audit Committee reviewed financial reports both quarterly and annual separate and consolidated financial statements data. It also examined key audit matters, appropriateness of the account recording system, and disclosure of other key information, indicated in the auditors' report by Dharmniti Auditing Co., Ltd. To this end, reviewed the credibility of estimated figures, assumptions requiring managements' discretion, disclosure of key transactions potentially affecting financial reports, while obtaining clarification from the external auditor and management to ensure that financial report preparation was accurately, credibly undertaken and useful for the useful for users of financial reports, as well as the criteria of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET). The auditor has reviewed and audited the financial report, and provided unqualified opinions.

2. Internal Audit

The Audit Committee reviewed and approved annual audit plans, conformance to the plans, internal audit findings and recommendations and follow-ups as well as improvements of significant issues every quarter. It also assessed the independency of the internal audit from Ultima Advisory Company Limited to perform the duties efficiently and effectively continuously, comply with rules and policies, support the adoption of audit management system and data analysis tools to manage the internal audits. In addition, it also pushed of the quality of audit perform for greater professionalism that creates sustainable value to the organization, and upheld internal audit assessment of international professional standards, to ensure aspects of good governance and adequate internal control and internal audit.

3. Connected Transactions

The Audit Committee reviewed connected transactions or those posing potential conflicts of interest with that of HARN's and subsidiary under the SET's regulations to the Office of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET) announcements and other relevant laws. There is a view that transaction meets the general trade conditions, fairness, and sensibility taking into account the best benefits of business and its shareholders. Such transactions were also promptly disclosed to SET.

4. Review of Compliance with Laws, Corporate Governance, Risk Management, and Internal Control

The Audit Committee reviewed the efficiency and effectiveness of corporate governance while giving support for business in pursuit of sustainability, reviewing compliance with current laws and regulations, as well as encouraged the preparation for and closely monitored the upcoming laws that may impact HARN's businesses, also reviewed risk management measures and close monitoring of cyber security risk outcomes and emerging threats, include key risk other to ensure efficiency and effectiveness. It also emphasized the readiness of the workforce in support of rapid change. The Audit Committee, moreover, followed supervises the adequacy and appropriateness of good corporate governance, risk management, internal controlm comply withorganization-wide regulations laws and rules include reviewed the complaint handling and whistleblowing process, it endorsed the sufficiency of the internal control system as required by the SEC to ensure that HARN commands appropriate and sufficient internal control, comply with law without major problems or defects process business.

5. Appointment of the External Auditor for 2023 and 2024 and Approval for Audit Fee

In selecting the external auditor, the Audit Committee considered performance records, experience, independency, audit fees, and compliance with SEC's announcements. The Committee resolved to nominate Mr.Thanawut Piboonsawat, License No.6699 and/or Miss Potjanarat Siripipat, License No.9012 and/or Miss Roongnapha Saengchan, License No.10142 and/or Miss Techinee Pornpenpob, License No.10769, or other auditors approved by the Office of the SEC's from Dharmniti Auditing Company Limited as external auditor and the proposed audit fee for the Board's endorsement before submitting to the 2023 Shareholders' Annual General Meeting for approval.

From 2017 to 2023, the auditor from Dharmniti Audit Co., Ltd. has performed the duty of reviewing, inspecting and suggesting on HARN's financial statements for 7 consecutive fiscal years, which is due as specified by the Securities and Exchange Commission. The Audit Committee has considered and selected auditors based on their performance, experience, independence, audit remuneration, as well as not contrary to the announcement of the Securities and Exchange Commission. It was approved to propose to the Board of Directors to consider and approve the change of auditors and determine the audit fees for 2024 in order to request approval from the 2024 Annual General Meeting of Shareholders.appointment of the auditors from Karin Audit Company Limited namely; Mr. Jadesada Hungsaprue CPA Registration No. 3759 or Ms. Kannika Wipanurat CPA Registration No. 7305 or Mr. Jirote Sirirrote CPA Registration No. 5113 or Ms. Nonglak Pattanabandith CPA Registration No. 4713 or Ms. Sumana Senivongse CPA Registration No. 5897 or Mr. Komin Linphrachaya CPA Registration No. 3675 or Ms. Kojchamon Sunhuan CPA Registration No. 11536 or Mr. Worapol Wiriyakulapong CPA Registration No. 11181 or Mr. Pojana Asavasontichai CPA Registration No. 4891 or Mr. Wichian Proongpanish CPA Registration No. 5851 or other auditors approved by the Office of the SEC's from Karin Audit Company Limited as external auditor of HARN and the proposed the 2024 audit fee for the Annual General Meeting Shareholder for approval.

6. Quality Assessing of the Audit Committee

The Audit Committee reviewed its own charter and assessed its own performance as a group and individuals against SET's best practices to ensure efficient, fruitful performance. Overall assessment result for as a group and dividul was "excellent" and result for self-assessment was "excellent", and reported its performance outcomes to the Board acknowled, as well as action sets plans to improve its process of governance, risk management, and internal control supervision as well as compliance with HARN's regulations.

In conclusion, this year the Audit Committee its charter duties and responsibilities with diverse expertise, prudence, and independence while providing creative views and advice for equal benefit of all stakeholders. The Audit Committee concluded that HARN and Subsidiaries had valued efficient and effective business conduct, prepared credible and material financial reports in line with financial reporting standards, and sufficiently provide disclosure of connected transactions with potential conflicts of interest, as well as had risk management, internal control process, good corporate governance and anti-corruption prevention suitable and adequate, include in full has compliance with business applicable laws and regulations has efficient and efficient.

2) Report of the Nomination and Remuneration Committee



Mr. Prasert Deejongkit

Chairman of the Nomination and Remuneration Committee

The Board of Directors appointed the Nomination and Remuneration Committee, which consists of at least 3 directors, most directors must be qualified as independent directors. The current Nomination and Remuneration Committee, consists of 3 directors, which 2 independent directors and 1 non-executive director are summarized as follows:

January 1, to December 31, 2023

1. Mr. Prasert	Deejongkit	Chairman (Independent Director)
2. Mrs. Valeeratn	Chuerboonchai	Member (Independent Director)
3. Dr. Jain	Charnnarong	Member

Serving as secretary to this committee is Ms. Varinkan Teraumranon, Chief Operating Officer.

The Nomination and Remuneration Committee duty is to recruit qualified people under HARN process and criteria for nomination as Directors and Chief Executive Officer, also selects Directors to serve on Board-Committees and reviews Director and Board-Committee's remuneration models and criteria before proposing for the consideration of the Board and the Annual General Meeting of Shareholders as required by law.

In 2023, the Nomination and Remuneration Committee executed duties assigned by the Board of Directors, considered, screened, and gave opinions on various issues before presenting to the Board of Directors with caution, prudence, transparency, and fairness as specified in the charter completely in line with the operational strategy Realize the best interests of the stakeholders, held a total of 2 meetings all of the Nomination and Remuneration Committee members attended every meeting, with attendance detailed below:

January 1, to December 31, 2023: Meeting 2 times

1. Mr. Prasert	Deejongkit	: 2 times
2. Mrs. Valeeratn	Chuerboonchai	: 2 times
3. Dr. Jain	Charnnarong	: 2 times

The performance highlights of the Nomination and Remuneration Committee as follows:

Recruitment Duties

Proceeded Strictly conduct recruitment and selection of qualified persons to be appointed as Board of Directors in accordance with the screening process and criteria specified in the policies and principles of corporate governance and business ethics. The appointment was carefully considered from various professions as required from the Board Skill Matrix for nominate qualified persons to the Board of Directors and/or the shareholders' meeting as required by law. In this regard, the list of professional directors in the Thai Institute of Directors Association (IOD) was used to assist in the selection of suitable persons, to this end, considered the composition and qualifications of the Board, both overall and individually, to match the size, type, complexity, and diversity of businesses, as well as personal independence as required by applicable laws and HARN's criteria. The activities are described below:

1. Recruitment and selection of qualified person as director Replace directors who completed their terms

Conduct recruitment and selection of qualified persons as Board of Directors, replace directors who completed their terms for the year 2023, to present to the Board of Directors and the AGM. The 2 directors nominated for another term were Mrs. Sirima Iamsakulrat and Mr. Jain Charnnarong. It also recruited and nominated person to replace Mr. Thakol Nunthirapakorn, who does not wish to be re-elected as Independent Director, Chairman of the Board and Chairman of the Audit Committee from all in the Company, in order to comply with the principles of good corporate governance and in line with the Company's corporate governance policy, which requires independent directors to hold office continuously for not more than 9 years. The agreed to propose for the Board's approval to appoint Mr. Pichet Sithi-amnual as Independent Director and Chairman of the Board, because suitable qualifications without prohibited qualifications by law, and possesses skills, experience, and expertise in several aspects related to and beneficial for driving HARN's business operations towards its vision. Also, Independent Directors have all qualifications as specified by relevant regulations, will be able to provide opinions independently.

2. Nominated director as the chairperson and members of the audit committee

Nominated directors, for the chairperson of the audit committee and the member of the audit committee, tabled these lists for the Board to appoint in place of vacancies or directors with term completion as required by law as follows;

- Appointed Mrs. Valeeratn Chuerboonchai as the Chairperson of the Audit Committee
- Appointed Dr. Teerachai Pornsinsirak as the Member of the Audit Committee instead of Dr. Thakol Nunthirapakorn

Those appointed directors were knowledgeable with capabilities and experiences suitable for the nature of business operations which could be beneficial to HARN's strategies, while having qualifications as HARN's director and an independent director in accordance with the relevant laws and rules, in line with results of performance and reliable roles to stakeholders without any conflicts with HARN.

3. Orientation and provided documents for new director

Provided useful documents, to newly appointed directors in 2023, 1 new director were appointed: namely Mr. Pichet Sithi-amnual

4. Review stipulated the overall qualification structure framework (Skill Matrix)

For accordance with corporate governance principles, by conducting a specific competence assessment of the Board of Directors for the year 2023 to review the appropriate expertise, both regulatory and strategic, to be appropriate and in line with the business context.

5. Review the development plan for directors and top executive

Considering training courses related to the development of knowledge and competence on good corporate governance and the performance of a director's duties of the Thai Institute of Directors Association (IOD) in order to develop directors and increase useful perspectives to be applied to the business, has sent Mr. Pichet Sithi-amnual, Chairman of the Board attend the Role of the Chairman Program (RCP), class 55/2023, including sending Mrs. Valeeratn Chuerboonchai, Chairperson of the Audit Committee and Dr. Teerachai Pornsinsirak, Member of the Audit Committee attend the Advanced Audit Committee Program (AACP), class 49/2023 and class 50/2023, respectively.

6. Opportunities minority shareholders propose agenda and persons as directors

Encouraged and supported the granting opportunity for minor shareholders, to propose agendas and nominate candidates as directors to nomination process from from October 9 to December 31, 2023 before the 2024 AGM, open rules through the HARN website and Thailand Stock Exchange website, it has been proven that no shareholder has nominated anyone to serve as a director.

Remuneration Duties

The Nomination and Remuneration Committee defined directors' remuneration under criteria, based on company performance and business complexity; Board performance; director responsibilities; and comparison with peer companies in the same industry. The elaborated as follows:

1. Determine remuneration and criteria for remuneration payment to directors

Consider the Identified remuneration payment rate and criteria for directors and sub-committees before proposing for the approval of the 2023 AGM. The survey of comparison with leading companies of similar industries revealed that monthly remuneration and meeting allowance payment rate and structure remained appropriate. Therefore, the same remuneration rate as that of 2022 had been proposed and was approved by the 2023 AGM.

2. Review the criteria for performance evaluation and set remuneration for Chief Executive Officer

Review the 2023 Chief Executive Officer of Performance Evaluation criteria Form and remuneration criteria for the Board's consideration and allow non-executive directors to evaluate performance in accordance with the guidelines of the SET. Approved the performance assessment of Mr. Thammaroon Tripatch, Chief Executive Officer, as well as annual salary adjustment and bonus, and tabled it for the Board's consideration.

Other duties according to the charter

1. Reviewed the director recruitment and remuneration policy

Consider the rules, procedures for recruitment of directors and structure of remuneration for the Board of Directors, criteria for remuneration payment, including promotion of continual development with complete, sufficient, and appropriate coverage guidelines, with no issues to be additionally resolved.

2. Consider review of performance evaluation form for Chief Executive Officer

Approve the detailed revision of the criteria, methods and considerations of CEO's recruitment and salary structure according to HARN's strategic direction, and submit it to the board of directors for consideration.

3. Review the succession policy of Top Executives

Approve the detailed revision of the qualifications, regulations, and succession procedures according compliant with HARN's business strategy. Prepare recruitment and selection of qualified and capable executives to replace vacant high positions, and submit to the board for review, and regularly report the performance progress of the plan to the Board.

4. Review the Nomination and Remuneration Committee charter

To set the guidelines in developing and improving the the performance of duties appropriately and sufficiently and in accordance with the principles of good corporate governance, transparency, and clarity as well as reviewing the appropriate compensation structure to support HARN's operations to be in alignment with the goals. This includes the evaluation of the operating performance of groups and individuals according to the good governance guidelines of the Stock Exchange of Thailand to ensure that the operation of the Nomination, Remuneration and Corporate Governance Committee is effective for the achievement of specified results. The evaluation results of groups and individuals are at an excellent level, which has been reported to the Board.

Nomination and Remuneration Committee have used knowledge, ability, caution, and sufficient independence in giving opinions and suggestions for the overall benefit of HARN for the best interest of shareholders. It also serves to oversee the Board's performance under the good corporate governance system in accordance with the relevant laws and regulations. In 2023, no significant errors that affect HARN and the shareholders have been found, including, no non-executive directors resigned due to HARN's corporate governance issues, including avoiding methods of harming HARN's reputation.

3) Report of the Executive Committee



Mr. Wirat Sukchai

Chairman of the Executive Committee

Harn Engineering Solutions Public Company Limited is committed to operating a business with adherence to the Corporate Governance and Code of Conduct by prioritizing to sustainable development and embracing Environmental, Social, and Governance adhere to represent an integral part to ensure HARN's sustainable success. The Board of Directors appointed the Executive Committee, which consists of directors and top executive of 6 knowledgeable, competent, and experienced to support the Board in formulating policies and guidelines, includes business strategic plans, and monitoring the results of performance to be in specified objectives, in line with the CG and sustainability code of the international standard are summarized as follows:

January 1, to December 31, 2023

1. Mr. Wirat	Sukchai	Chairman and Chief Marketing Officer: Refrigeration System
2. Mr. Thammanoon	Tripetchr	Member and Chief Executive Officer, Chief Marketing Officer: Digital Printing
3. Mr. Jain	Charnnarong	Member
4. Mr. Rattanaphan	Mukhariwattananon	Member and Chief Marketing Officer: Fire Protection and Comfortable
5. Mr. Wisit	Wachiralappaitoon	Member and Chief Financial Officer
6. Mrs. Varinkan	Teraumranon	Member and Chief Operating Officer

Serving as secretary to this committee is Mrs. Varinkan Teraumranon.

In 2023, all sectors have been flexible the Precautionary Measures to control the pandemic of the COVID-19 in the second half of the year, so, the overall economic activities were recovered and improved. However, there were still factors affecting the slowdown and uncertain economic conditions of Thailand as a result of conflicts between superpowers on the global economy, this is a challenge of HARN. The Executive Board managed businesses to the best of their ability with careful. Also gave any guidance and suggestions about business administration as well as followed up and evaluate of HARN and subsidiaries' performance, closely, in order to strengthen the organization's business continuity and sustainable.

The Executive Committee, held a total of 12 meetings in 2023, with perfect attendance by all members, completely executed all duties stated in the charter the Executive Committee, and as assigned by the Board of Directors completely by report the performance with guidelines for solving problems and suggestions to the Board of Directors regularly, with attendance detailed below:

January 1, to December 31, 2023: Meeting 12 times

1. Mr. Wirat	Sukchai	: 12 times
2. Mr. Thammanoon	Tripetchr	: 12 times
3. Mr. Jain	Charnnarong	: 12 times
4. Mr. Rattanaphan	Mukhariwattananon	: 12 times
5. Mr. Wisit	Wachiralappaitoon	: 12 times
6. Mrs. Varinkan	Teraumranon	: 12 times

The performance highlights of the Executives Committee as follows:

1. Specified and reviewed of HARN and its subsidiaries' mission, vision, strategy, and business plan

In the past year, Specified and reviewed vision, mission and business operation plans of the Company and its subsidiaries in each line of business on a monthly, by specifying that the meeting shall be arranged and such plans shall be conveyed to the management and the employees at all levels for their acknowledgement and compliance, so that the targets should be achieved as per specified, considering the internal and external factors, including acceptable opportunities and risks.

2. Reviewed and monitored performance

Review been considered and track the performance every business line of HARN on a monthly, as well as the progress of various projects, in order to accordance plan policy, target and budgets, as approved by the Board and report every quarter the performance to the Board for acknowledgment.

3. Considered and approved the annual budget and investment

Considered scrutinize and approved the annual budget and investment of HARN, including the develop information technology systems, computer equipment renovation, fire protection system renovation, innovation project and other important matters in business to promote sustainable business operations on environment, society, and governance (ESG) for the Board's approval.

4. Consider approving the 2022 annual dividend

Consider scrutinize and approve in 2022, annual dividend payment at the rate Baht 0.13 per share of net profit from the operating results of the year 2022 as reference to specific financial statements for the Board's and the shareholders' approval.

5. Determine and review organizational structure, administration, and policy of human resource management

Consider reviewing the organizational structure, administration, and policy of human resource management by reviewing the criteria for recruitment, training, performance evaluation development, relocation, termination, and setup of annual salary increase rate, bonus for the year 2023, and other benefits for employee and department manager, except Chief Executive Officer.

6. Consider the sustainable development

Devising a strategic plan according to the framework Business + Sustainability or B+S for moving towards Carbon Neutrality by 2040 and Net Zero Greenhouse Gas Emissions by 2050 while designing a work plan and guidelines for Greenhouse Gas reduction with appropriate technology, such as install a solar in some areas of the parking, increase 177 kWh per hour, change the organization's vehicles from gasoline vehicles to electric vehicles, and restore green space by reducing forest fires in the "Sander bocks House" project, etc, including communication about sustainable development actions to nurture the corporate culture.

7. Review charter and self-evaluate the Executive Committee

Consider review the Charter of the Executive Committee to ensure that the guidelines for their performing duties are suitable for current situations. Also, the overall performance evaluation of the Executive Committee has been done for groups and individuals for the year 2023 in three areas: 1) structure and qualifications 2) meeting, and 3) roles and responsibilities according to the good guidelines of the Stock Exchange of Thailand. The evaluation results for groups and individuals were at the level of good, which was reported to the Board of Directors for acknowledgement. The Executive Committee is intends to taking the evaluation results as a guideline for further improvement.

The Executive Committee still has a commitment to perform duties with full capacities and prudence for the most benefit of all groups of stakeholders. Also, it is to lead HARN towards effective operating performance according to good corporate governance policies and principles, anti-corruption, business ethics, and organizational development towards sustainable growth as appropriate to support the vision, mission, and strategy of HARN's business for the international sustainability direction. This can reflect the operations with responsibility to the environment, society, and governance or ESG with a balance. Following the commitment in various fields, HARN has been evaluated in the 5-star "excellent" business for the 5th consecutive year with the full score of 100 for the shareholders' meeting for the 6th consecutive year. This reflects HARN's good corporate governance under standards, along with its responsibilities for the environmental, social, and sustainable management which result from the effective cooperation of the Executive Committee and employees. Therefore, HARN will confidently experience continual growth with utmost benefits to all stakeholders and value added to shareholders through the long-term sustainability.

4) Report of the Risk Management Committee



Dr. Teerachai Pornsinsirak

Chairman of the Risk Management Committee

The Risk Management Committee, appointed by the Board of Directors, which is made up of 1 Independent director and 12 HARN's executives has Chief Executive Officer, Chief Marketing Officer, Chief Financial Officer, Chief Operating Officer and director of various departments, who are knowledgeable, competent, and experienced with expertise the business, is responsible for supporting directors in supervising corporate risk management to ensure the achievement of business goals and enhance confidence and credibility of HARN among investors and stakeholders. Current, comprises of 13 members, are summarized as follows:

January 1, to May 14, 2023

1. Dr. Teerachai Pornsinsirak	Chairman (Independent)
2. Mr. Wirat Sukchai	Member
3. Mr. Thammanoon Tripetchr	Member
4. Mr. Rattanaphan Mukhariwattananon	Member
5. Mr. Wisit Wachiralappaitoon	Member
6. Mr. Prapas Rakpanya	Member
7. Mr. Suchat Suwatnodom	Member
8. Mr. Kittiphong Kittimethawenun	Member
9. Mr. Vachiravit Akaraseranee	Member
10. Mr. Sukit Litikorn	Member
11. Mr. Withoon Thamee	Member
12. Mrs. Varinkan Teraumranon	Member

May 15, to December 31, 2023

1. Dr. Teerachai Pornsinsirak	Chairman (Independent)
2. Mr. Wirat Sukchai	Member
3. Mr. Thammanoon Tripetchr	Member
4. Mr. Rattanaphan Mukhariwattananon	Member
5. Mr. Wisit Wachiralappaitoon	Member
6. Mr. Prapas Rakpanya	Member
7. Miss Warangkana Jongnui	Member
8. Mr. Suchat Suwatnodom	Member
9. Mr. Kittiphong Kittimethawenun	Member
10. Mr. Vachiravit Akaraseranee	Member
11. Mr. Sukit Litikorn	Member
12. Mr. Withoon Thamee	Member
13. Mrs. Varinkan Teraumranon	Member

Serving as secretary to this committee is Ms. Varinkan Teraumranon, Chief Operating Officer.

The Risk Management Committee defined and reviewed the corporate risk management framework, policy, and processes, performing as indicated in the Risk Management Committee Charter, as well as efficiently providing recommendations for proper risk management approaches while aligning with corporate vision and direction and business plans as well as mitigating impacts of business uncertainties. Moreover, consistently and effectively advocates and improves risk management practices throughout the organization on a par with international standards to forge corporate culture while continuously monitoring results of corporate risk management and that of various projects' risk management to ensure shareholders and stakeholders that risk managementsystem can indeed handle these risks in all dimensions.

In 2023, the Risk Management Committee, held a total of 4 meetings, with perfect attendance by all members, with attendance detailed below:

January 1, to May 14, 2023: Meeting 2 time

1. Dr. Teerachai	Pornsinsirirak	: 2 times
2. Mr. Wirat	Sukchai	: 2 times
3. Mr. Thammanoon	Tripetchr	: 2 times
4. Mr. Rattanaphan	Mukhariwattananon	: 2 times
5. Mr. Wisit	Wachiralappaitoon	: 2 times
6. Mr. Prapas	Rakpanya	: 2 times
7. Mr. Suchat	Suwatnodom	: 2 times
8. Mr. Kittiphong	Kittimethawenun	: 2 times
9. Mr. Vachiravit	Akaraseranee	: 2 times
10. Mr. Sukit	Litikorn	: 2 times
11. Mr. Withoon	Thamee	: 2 times
12. Mrs. Varinkan	Teraumranon	: 2 times

May 15, to December 31, 2023: Meeting 2 time

1. Dr. Teerachai	Pornsinsirirak	: 2 times
2. Mr. Wirat	Sukchai	: 2 times
3. Mr. Thammanoon	Tripetchr	: 2 times
4. Mr. Rattanaphan	Mukhariwattananon	: 2 times
5. Mr. Wisit	Wachiralappaitoon	: 2 times
6. Mr. Prapas	Rakpanya	: 2 times
7. Miss Warangkana	Jongnui	: 2 times
8. Mr. Suchat	Suwatnodom	: 2 times
9. Mr. Kittiphong	Kittimethawenun	: 2 times
10. Mr. Vachiravit	Akaraseranee	: 2 times
11. Mr. Sukit	Litikorn	: 2 times
12. Mr. Withoon	Thamee	: 2 times
13. Mrs. Varinkan	Teraumranon	: 2 times

The performance highlights of the Risk Management Committee as follows:

1. Review and Amend the Risk Management Policy

Reviewed the risk management policies to the composition of the committee and framework risk appetite, including guidelines for risk management in various aspects, including strategic and business, operational, financial, external factors, etc. to be in line with shifting situations and business factor and flexibly take appropriate actions, as well as reviewing the risks with corruption in accordance anti-corruption measures framework, and follow up on operation.

2. Steered Risk Management to Ease Business Impacts

Key global situations that may affect HARN business operations were monitored. Has proactive measures focusing on management to reduce the likelihood of all risk incidents, supporting and continuously developing risk management at all levels throughout the organization, which advising the Management on the revision of risk management measures to ensure its alignment with the current circumstances to ensure the adequacy, suitability, and timeliness of its measures and gain opportunities to generate value for the business in a sustainable way.

3. Supervised the Risk Management Considering Environment, Society and Governance

Provide opinions and suggestions on strategies direction and scope stakeholder management corporate issues included the drive for implementation by all functions, monitoring operational and management results to ensure the risk management process is complete, covering the management of all stakeholder groups, while taking into 3 responsibilities main: Environment, Society, and Governance (ESG)

4. Supervised the Develop of Corporate Innovations

Driving, giving comments and suggestions for innovation management to achieve tangible results and achieve business according to the target, complete the process of development innovation with efficient and innovation and technology management for increased effectiveness that meets HARN's strategic and core goals, as well as resource optimization, contributing to sustainable growth.

5. Considered and commented on future Business

Rigorously considered risk issues and risk management practices, advised on the pros and cons of business decisions to make the investment worth the opportunity cost and suitable for the business context, as well as carefully commented on current and new businesses wants to grow in the future in line with its cautious strategic business direction.

6. Review the Enterprise Risk Control Reports

Review the enterprise risk process reports alongside the 2023 annual plan to clear risk management plan be in line with strategies and target business, it has been transferred to the practice of the whole organization in order to manage risks in a timely and effective manner.

7 Monitored Corporate Risk Management

Determine Key Risk Indicators to measure the effectiveness of risk management, counseled to management on the improvement the effectiveness of risk management by revising risk management plans in line with prevailing business strategies and contexts. Also, has reported its performance results to the Board In quarterly basis, which the Board urged and closely monitored the outcomes of debtor under highly volatile markets.

Supervised, followed up, and reviewed plans and recommended guidelines for corporate risk management, mitigation plans, 2023 key risk indicators, and key projects on a quarterly basis, to ensure that effective and appropriate risk management is implemented within risk appetite statement, and consistent with the risk management policy. The committee also reported the findings of corporate risk management and the Risk Management Committee performance to the Board on a regular basis. In turbulent market conditions, the board of directors is pushing for close monitoring of the debtor's risk management process.

8. Reviewed the Risk Management Committee Charter

Consider and review the Charter of the Risk Management Committee to ensure that the guidelines for their performing duties suitable and accord with for current situations contexts. Also, the overall performance evaluation of the Risk Management Committee has been done for groups and individuals for the year 2023, according to the good governance guidelines of the Stock Exchange of Thailand to ensure that HARN's risk management processes are appropriate able to support and develop risk management in all dimensions. In this regard, the evaluation results for groups and individuals were at the level of good, which was reported to the Board of Directors for acknowledgement.

The Risk Management Committee concluded that in 2023, HARN has developed a comprehensive corporate risk management system for all aspects of according to the risk management policy, and continual cover risk management practices to strategic, financial, compliance, social, environmental include emerging risk to cope with prevailing circumstances. The meetings were regularly arranged to review, monitor and manage key and urgent such risk issues, rendering HARN and Subsidiaries' risk management effectiveness. HARN indeed efficiently and sufficient, appropriate. Ultimately, this would sustainably support business goal achievement in the long-term amid challenging circumstances and controlled within indicated risk appetite.



Quality Living Through Sustainable Engineering



Fire Protection & Safety



Air Conditioning & Sanitary



Refrigeration



Digital Printing



Harn 3DMed



Internet of Things

Quality Living Through

Sustainable Engineering



Harn Engineering Solutions Public Company Limited

559 ซอยศูนย์วิจัย 4 ถนนพระราม 9 แขวงบางกะปิ เขตห้วยขวาง กรุงเทพฯ 10310

559 Soi Soonvijai 4, Rama 9 Road, Bangkapi, Huaykwang, Bangkok 10310, Thailand

 02 318 9744  02 318 9744 ต่อ 4000  Harn EngineeringSolutions



www.harn.co.th