



WHA CORPORATION PUBLIC COMPANY LIMITED  
ANNUAL REPORT 2019



**SMART  
SOLUTIONS**

YOUR ULTIMATE  
SOLUTION PARTNER





## WHA Group Corporate Culture



### Advanced

Lead initiatives and adjust to change circumstances to proactively create values to customer and stay advance in competitiveness.



### Champion

Ensure strong achievement orientation and entrepreneurial by holding high expectations for oneself to achieve a higher levels and always seeking new business opportunities.



### Resourceful

Ensure to create sound expertise and practical solutions to customer to strengthen an efficient and effective working with them.



### Partnership

Build and maintain active partnerships and/ or network of contacts internally and externally to further the organization's goals.



### Integrity

Instill mutual trust and confidence, create a culture that fosters transparency and work ethics and demonstrates a sense of corporate responsibility.



## VISION

“Be recognized as a market leader in aligning vertical integrated logistics facilities provider, total solution industrial estates, utilities, power, and digital infrastructure platforms with high quality capturing throughout value chain in Asia”.

## MISSION

1. To fulfill requirements of key major business partners, shareholders and stakeholders
2. To focus on innovative and effective strategy, business, finance, service quality, safety, environment, community, and good governance disciplines
3. To create a last-long relationship with strategic alliance
4. To provide unrivalled quality products with knowledge and expertise that lead to win-win solutions
5. To maintain financial discipline to maximize return on equity
6. To develop world class logistic facilities, industrial estates, utilities, power and property customer solutions
7. To differentiate comprehensive platform for both infrastructure data center as well as customized service solutions for leading MNCs and Thai conglomerates
8. To develop, engage talent and experience team to enhance organizational core competency

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# PERFORMANCE OVERVIEW



## WHA Corporation PCL (WHA)

#1 Logistics facilities developer offering a variety of premium facilities uniquely servicing our clients' needs.

Registered Capital • THB 1,568 mm Paid-Up Capital • THB 1,495 mm<sup>1</sup>



## WHA Industrial Development PCL (WHAID)

#1 Industrial Estate developer delivering world-class solutions to industrial customers.

Registered Capital • THB 6,000 mm Paid-Up Capital • THB 3,882 mm

**98.54%**



## WHA Utilities and Power PCL (WHAUP)<sup>2</sup>

Integrated Industrial Utilities & Power provider with solid business growth.

Registered Capital • THB 3,825 mm Paid-Up Capital • THB 3,825 mm

**70.00%**



## WHA Infonite Co., Ltd. (WHA Infonite)

Digital Service Provider Providing a digital platform solution for leading companies.

This fully-integrated and supported initiative adds value to WHA group.

Registered Capital • THB 400 mm Paid-Up Capital • 400 mm

**97.67%**

## PROPERTY FUNDS AND REITS

### Group Asset Management Platform

**15%**  
WHART

NAV per unit • THB 10.68<sup>1</sup>  
Paid-Up Capital • THB 23,169 mm  
Total Asset • THB 38,154 mm

**15%**  
HREIT

NAV per unit • THB 9.09<sup>1</sup>  
Paid-Up Capital • THB 6,223 mm  
Total Asset • THB 9,914 mm

**15%**  
WHABT

NAV per unit • THB 10.51<sup>1</sup>  
Paid-Up Capital • THB 1,931 mm  
Total Asset • THB 2,708 mm

**22.95%**  
HPF

NAV per unit • THB 9.90<sup>1</sup>  
Paid-Up Capital • THB 4,630 mm  
Total Asset • THB 4,424 mm

## JV COLLABORATIONS

### Logistics Partnership

**65%**

WHA KPN Alliance

**50%**

Central WHA Alliance

**51%**

WHA Daiwa Logistics Property

**51%**

WHA -JD Alliance

### Industrial Development Business Partnership

**60%**

Eastern Seaboard Industrial Estate

**99%**

WHA Industrial Zone Nghe An Joint Stock Company

### Digital Business Partnership

**33.33%**

Genesis Data Center

**15%**

Supernap (Thailand)

## BUSINESS COLLABORATIONS<sup>1/2</sup>

### Utilities Business Partnership

**47%**

Cau Lo Water Supply JSC

**34%**

Duang River Surface Water Plant JSC

### Power Business Partnership

**35%**

Gheco-One

**12.75%**

Houay Ho Power

**25.01%**

Gulf Solar

**25.01%**

B. Grimm Power (WHA) 1

**5%**

Glow IPP

**25.01%**

Gulf JP NLL

**75%**

WHA Gunkul

**33.33%**

Chonburi Clean Energy

**25.01%**

Gulf TS 1-4, Gulf VTP, Gulf NLL 2

**35%**

Gulf WHA MT

Remarks : <sup>1</sup> NAV per unit as of Jan 3, 2020

<sup>2</sup> Held by WHA Industrial Development PCL.

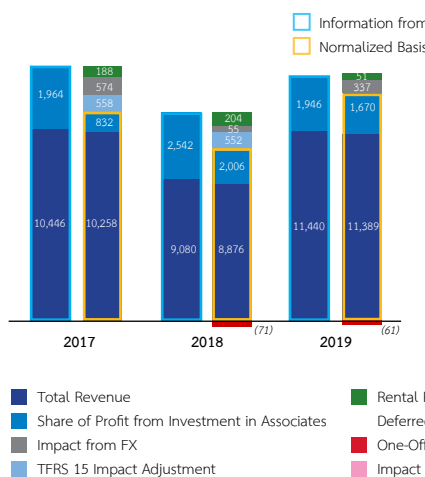
## OPERATING PERFORMANCE

### 2019 OVERALL HIGHLIGHT

- Total revenue was THB 13,385.8 mm which increased by 15.2%, compared to the same period of last year, whereas normalized total revenue surged by 20.0%. The solid performance indicated strong capability of WHA Group which mainly from increase in normalized rental and service revenue from warehouses, distribution centers and factories, increase in revenue and share of profit from sale of investment properties, revenue from industrial land sale which is mainly from higher number of land transfer, and increases utilities income mainly from escalated sale volume of industrial water.
- All in all, the reported net profit and normalized net profit for 2019 were THB 3,229.3 mm and THB 2,932.9 mm which increased by 11.1% and 21.1%, respectively.

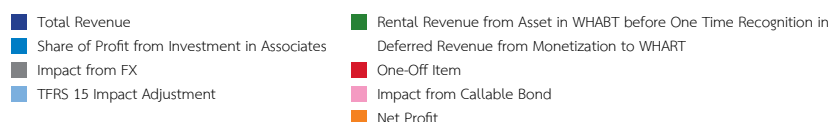
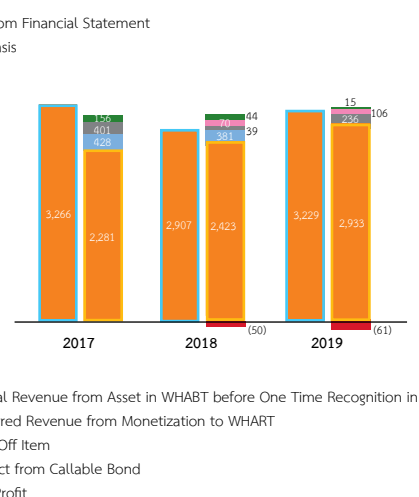
### TOTAL REVENUE

(Unit : THB mm)



### NET PROFIT

(Unit : THB mm)

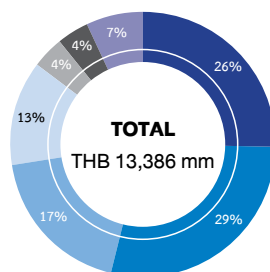


## REVENUE & GROSS PROFIT BREAKDOWN

### 2019 REVENUE BREAKDOWN

(Unit : THB mm)

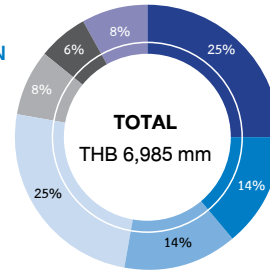
Rental Property	951
Sale of Industrial Estates	3,505
Sale of IP's	3,891
Utilities	2,245
Power	1,779
Dividends and Management	541
Other Income	474



### 2019 GROSS PROFIT BREAKDOWN

(Unit : THB mm)

Rental Property	539
Sale of Industrial Estates	1,777
Sale of IP's	964
Utilities	941
Power	1,779
Dividends and Management	541
Other Income	474



### Recurring vs Non-recurring income 45:55

Remark : Share of profit from JV's and Associates included

### Recurring vs Non-recurring income 61:39

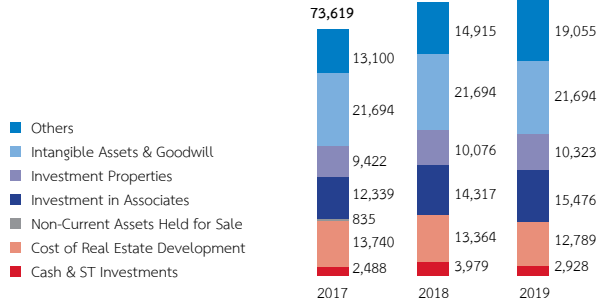
Remark : Share of profit from JV's and Associates included Gross profits are based on consolidated financial statements and thus affected by PPA adjustment

## FINANCIAL POSITION

- As of 31 December 2019, the Company had total assets of THB 82,263.8 mm, which increased by THB 3,918.9 mm from THB 78,344.9 mm as of 31 December 2018. The main reasons included increase in investments in available-for-sale (due to having mark to market investment in REITs), increase in property, plant and equipment as the expansion in solar business and increase in retained earnings.

### ASSETS

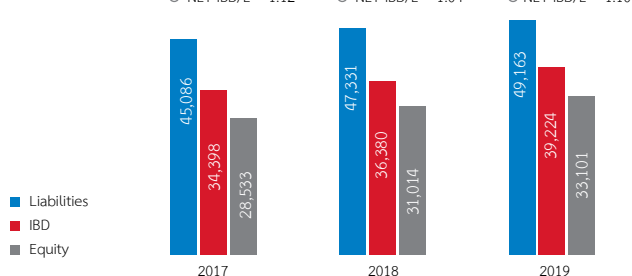
Unit : THB mm)



Others	13,100
Intangible Assets & Goodwill	21,694
Investment Properties	9,422
Investment in Associates	12,339
Non-Current Assets Held for Sale	835
Cost of Real Estate Development	13,740
Cash & ST Investments	2,488

### CAPITAL STRUCTURE

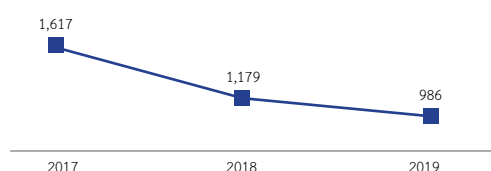
Unit : THB mm)



- Company's financial cost has continued decreasing. In 2019 the financial costs decreased by 16.4% or THB 193.0 mm, compared to the same period of last year, due to accounting impact of early redemption of bond and lower weighted average cost of fund.

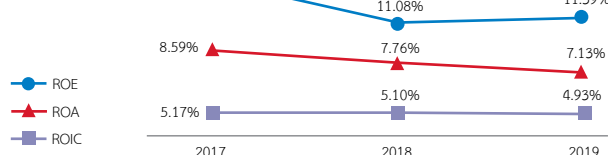
### FINANCIAL COST

(Unit : THB mm)



### RETURN ON INVESTMENT

(Unit : %)



## WHA 50+

### STRATEGIC LOCATIONS IN THAILAND

WHA is a key player in the development of the Eastern Economic Corridor (EEC).

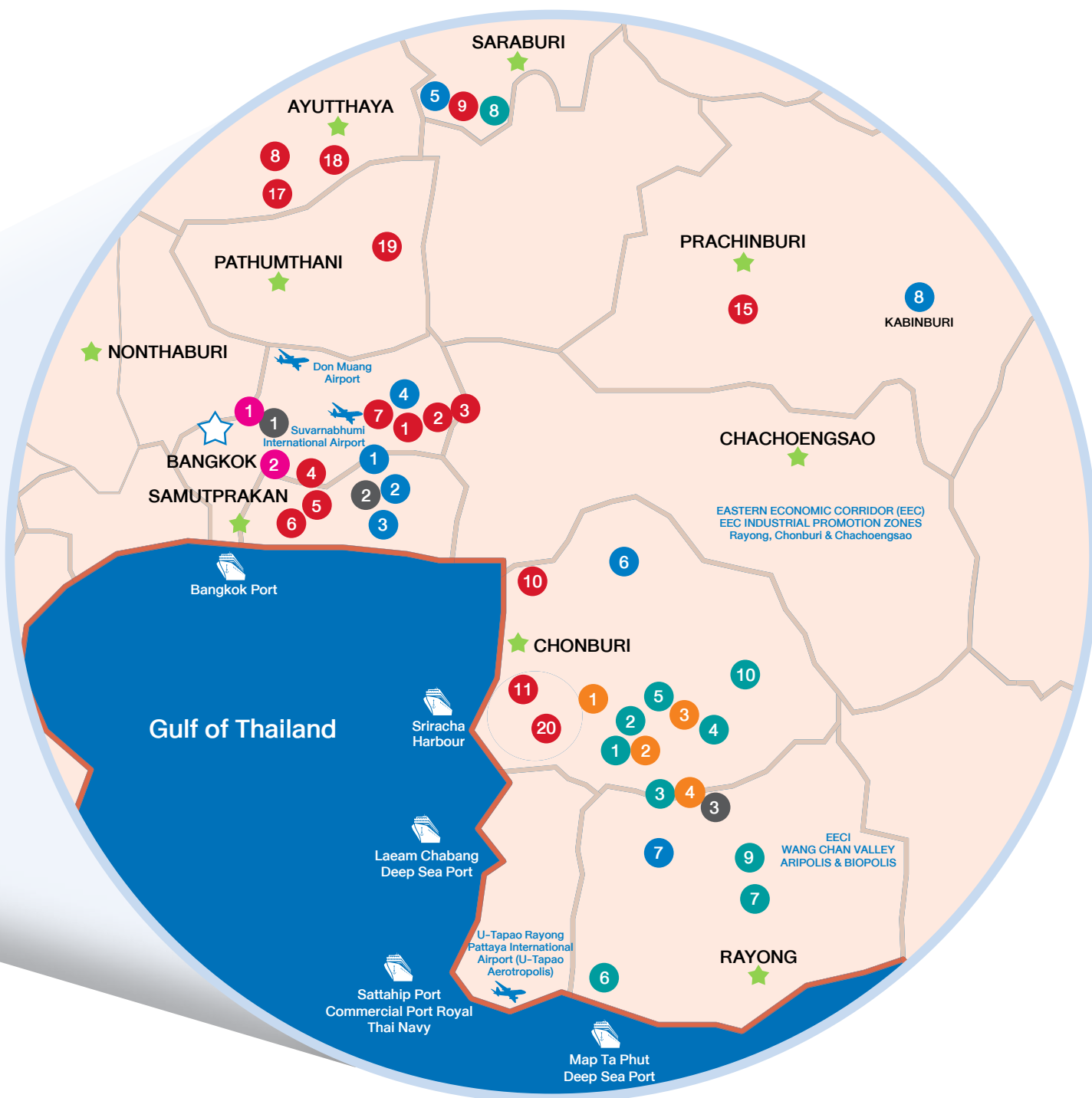


#### WAREHOUSE FARM

1. WHA Mega Logistics Center Bangna-Trad km.18
2. WHA Mega Logistics Center Bangna-Trad km.19
3. WHA Mega Logistics Center Bangna-Trad km.23 (2 Phases)
4. WHA Mega Logistics Center Chonlaharnpichit km.3 (2 Phases)
5. WHA Mega Logistics Center Chonlaharnpichit km.4
6. WHA Mega Logistics Center Chonlaharnpichit km.5
7. WHA Mega Logistics Center Ladkrabang
8. WHA Mega Logistics Center Wangnoi 61
9. WHA Mega Logistics Center Saraburi
10. WHA Mega Logistics Center Panthong, Chonburi (2 Phases)
11. WHA Mega Logistics Center Laemchabang
12. WHA Mega Logistics Center Rama II, km.35
13. WHA Mega Logistics Center Lampoon
14. WHA Mega Logistics Center Khon Kaen
15. WHA Mega Logistics Center Kabinburi
16. WHA Mega Logistics Center Surathani
17. WHA Mega Logistics Centers Wangnoi 61 Phase 2
18. WHA CENTRAL Mega Logistics Center Wangnoi 63
19. WHA Mega Logistics Center Lum Luk Ka
20. WHA Mega Logistics Center Laemchabang 2

#### BUILT-TO-SUIT FACTORIES AND WAREHOUSES

1. Consumer Goods Distribution Center
2. Healthcare Air-Con Distribution Center
3. Hazardous Goods Distribution Center
4. Ladkrabang Logistics Center (2 Phases)
5. Diaper Manufacturing
6. Consumer Goods Distribution Center
7. Aerospace Manufacturing
  - Motorbike Manufacturing
  - Automation & Robotics
  - Aerospace Factory
8. WHA Ready Built Factory Park 1 @Hi-tech Kabin



#### INDUSTRIAL ESTATES/LANDS

1. WHA Chonburi Industrial Estate 1 (WHA CIE 1)
2. WHA Chonburi Industrial Estate 2 (WHA CIE 2)
3. Eastern Seaboard Industrial Estate (Rayong) (ESIE)
4. WHA Eastern Seaboard Industrial Estate 1 (WHA ESIE 1)
5. WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2)
6. WHA Eastern Industrial Estate (Map Ta Phut) (WHA EIE)
7. WHA Rayong Industrial Land (WHA RIL)
8. WHA Saraburi Industrial Land (WHA SIL)
9. WHA Eastern Seaboard Industrial Estate 4 (WHA ESIE 4)
10. WHA Eastern Seaboard Industrial Estate 3 (WHA ESIE 3)
11. WHA Industrial Zone 1 - Nghe An Vietnam

#### WHA LOGISTICS PARKS

1. WHA Logistics Park 1 (WHA LP 1)
2. WHA Logistics Park 2 (WHA LP 2)
3. WHA Logistics Park 3 (WHA LP 3)
4. WHA Logistics Park 4 (WHA LP 4)

#### DIGITAL PLATFORM

1. WHA Mega Center Vibhavadi-Rangsit
2. WHA Mega Center Bangna-Trad
3. WHA Mega Center Eastern Seaboard

#### BUSINESS COMPLEX

1. SJ Infonite / Business Complex
2. Bangna-Trad Business Complex





“

The year 2019 is another important year for WHA Group, particularly for success in terms of outstanding performance. The strong performance indicates WHA Group's capabilities in effective organizational restructuring for dealing with change. Furthermore, WHA Group has identified strategic directions focusing on extending its number 1 position in its core businesses via developing win-win partnerships, further expanding internationally, and maximizing WHA Group synergies of 4 business hubs to create innovative echnology-driven solutions for customers as well as digital transformation which will continually emerge in 2020. WHA will also continue to firmly adhere to operate by driving business forward on the principle of sustainability and consideration to stakeholders covering all three dimensions, including environmental(E), social(S) and governance(G).

”

Miss Jareeporn Jarukornsakul

Chairman and Group CEO

WHA Corporation Public Company Limited



## Message from Chairman and Group CEO

The year 2019 is another important year for WHA Group, particularly for success in terms of outstanding performance. For year 2019, the WHA Group reported total revenue and share of profit at THB 13,386 million, representing a growth rate of 15% from 2018. In addition, net profit is THB 3,229 million. The normalized net profit excluding FX impact and one-time gain/loss item stands at THB 2,933 million, representing growth of 21% with total asset of THB 82,264 million. The strong performance indicates WHA Group's capabilities in effective organizational restructuring for dealing with change. Despite last year's challenging economic situation, WHA Group was able to deliver a solid growth while strengthening our position, as Thailand's number 1 developer of Logistics Properties, Industrial Estates, provider of Industrial Utilities and Power, and Digital Platform. The achievements in 2019 are also an inspiration for the WHA Group to look forward and prepare for challenges, while creating opportunities for future growth.

Significant achievements in 2019 for WHA Group in Thailand included the delivery of the E-Commerce Park project to world-class E-Commerce entrepreneurs with an area of approximately 130,000 square meters located at the Bang Pakong E-Commerce Special Economic Zone. Coupled with this, WHA Eastern Seaboard Industrial Estate 3, WHA's 10th Industrial Estate in Thailand, was officially launched on a 2,198-rai plot. Furthermore, WHA Utilities & Power Public Company Limited, the industrial utilities and power provider and WHA's subsidiary, introduced new products and services such as demineralized water, wastewater treatment and water quality improvement, cooperated with business allies to launch Chonburi Clean Energy (CCE) with a capacity of 8.63 megawatts and supporting disposal of up to 100,000 tons in non-hazardous industrial wastes per year. WHA Group also signed a contract to operate a solar rooftop project for customers in WHA Group's industrial estates for an additional 21.4 megawatts.

Furthermore, WHA Group also pursued international expansion, specifically in Vietnam, with the substantial completion of an initial 145-hectares (906 rai) area as part of the first phase of WHA Industrial Zone 1 - Nghe An, including a new office building to welcome our customers. WHA Group, via its subsidiary WHAUP, signed a partnership agreement with Aqua One Water Corporation and acquired 34% equity in Duong River Surface Water Plant, one of the leading water provider to Vietnam's capital city of Hanoi. Besides, in a strategic move to secure sources of water for its industrial customers in WHA Industrial Zone 1 - Nghe

An, it also purchased 47% in Cua Lo Water Supply in Nghe An province, Vietnam.

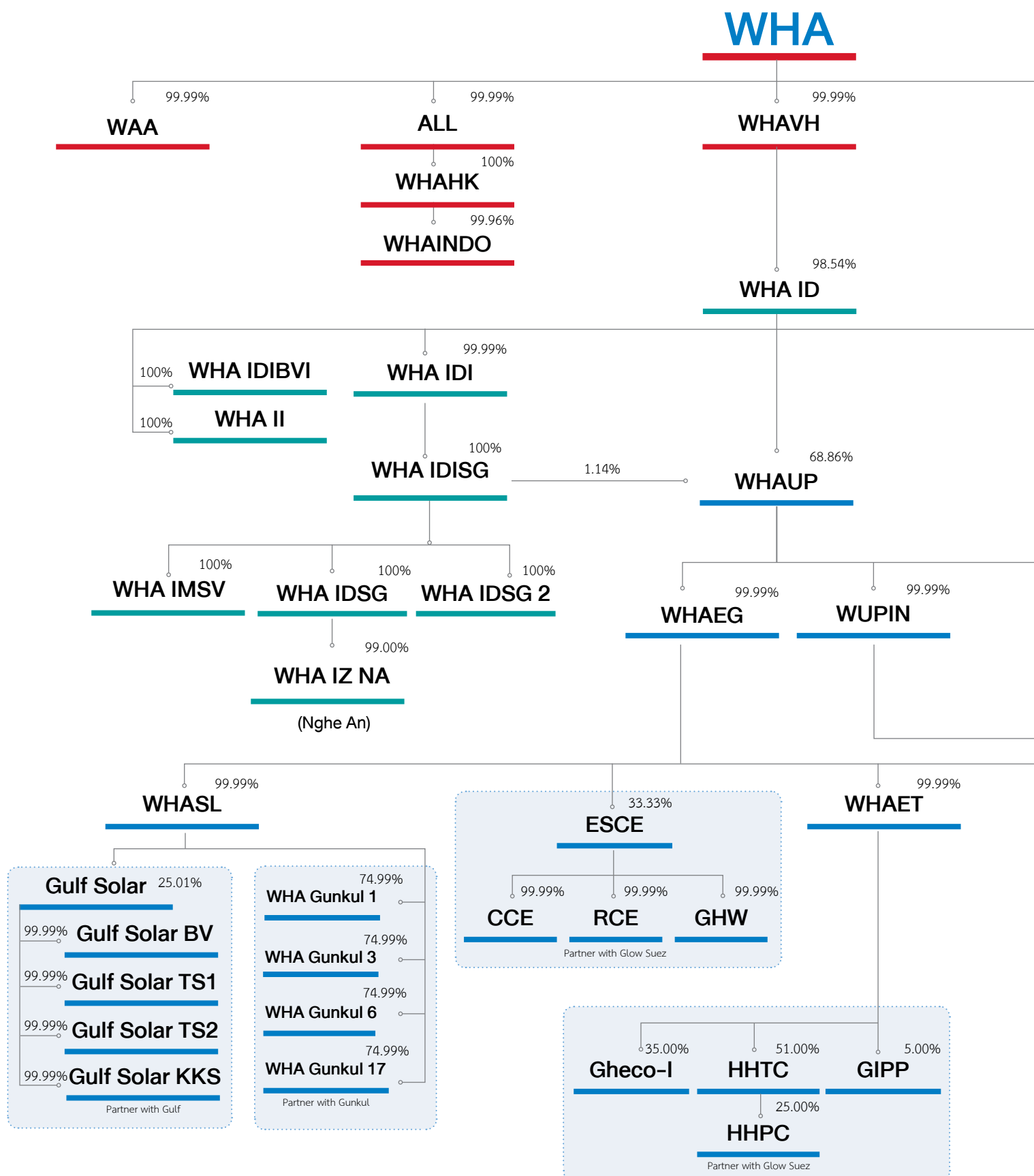
Due to trade war tensions, election of the president of the United States, the COVID-19 epidemic, droughts, dust and air quality problems, strengthening of the Baht and other challenges, it is predicted that 2020 will be an exceptionally challenging year. Thus, WHA Group is constantly assessing various positive and negative factors such as the potential and direction of growth in the e-commerce market on the regional and global levels. The protracted trade war between the United States and China is causing relocations of Chinese investment into Thailand. Although that has slowed somewhat due to COVID-19, large numbers of Chinese investors continue to express interest in investing in the WHA Group's industrial estates. Similarly, progress in the Eastern Economic Corridor's infrastructure projects, such as the high-speed train connecting three airports, Map Ta Phut Port, Eastern Airport City project will integrate the region and benefit WHA Group in the long-term.

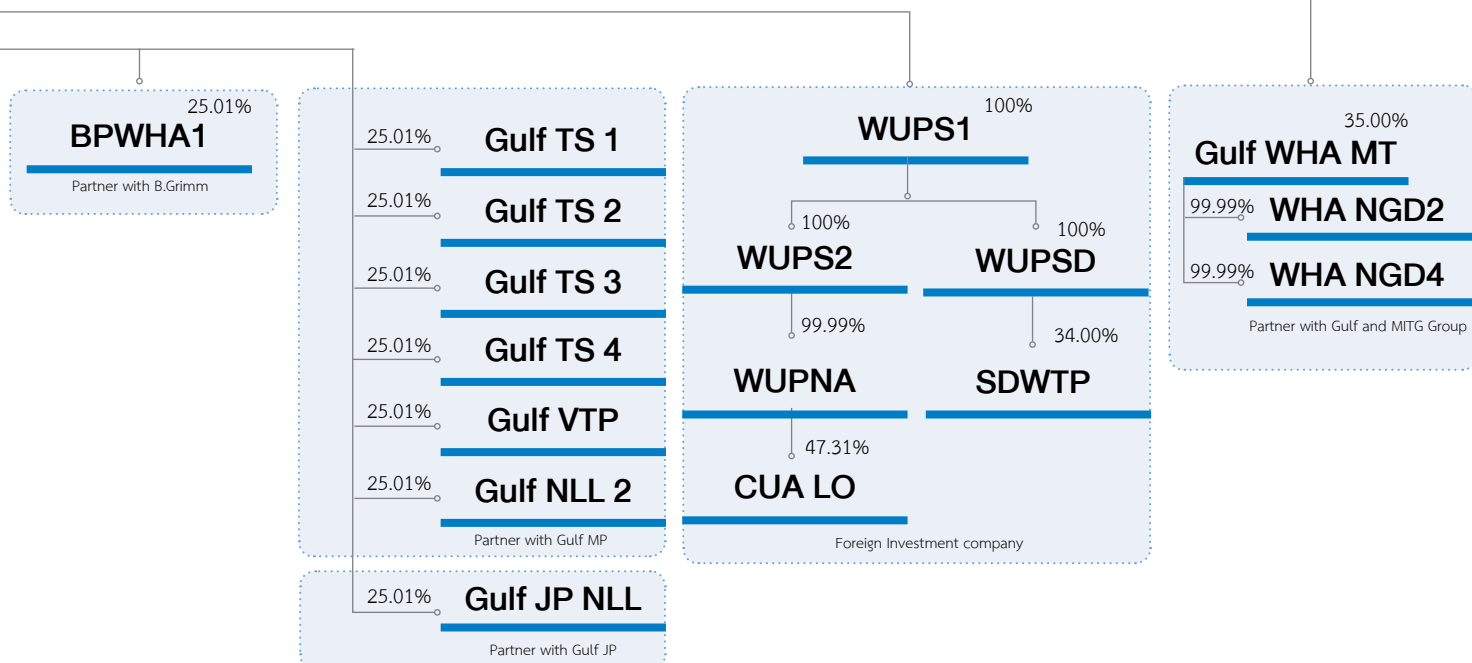
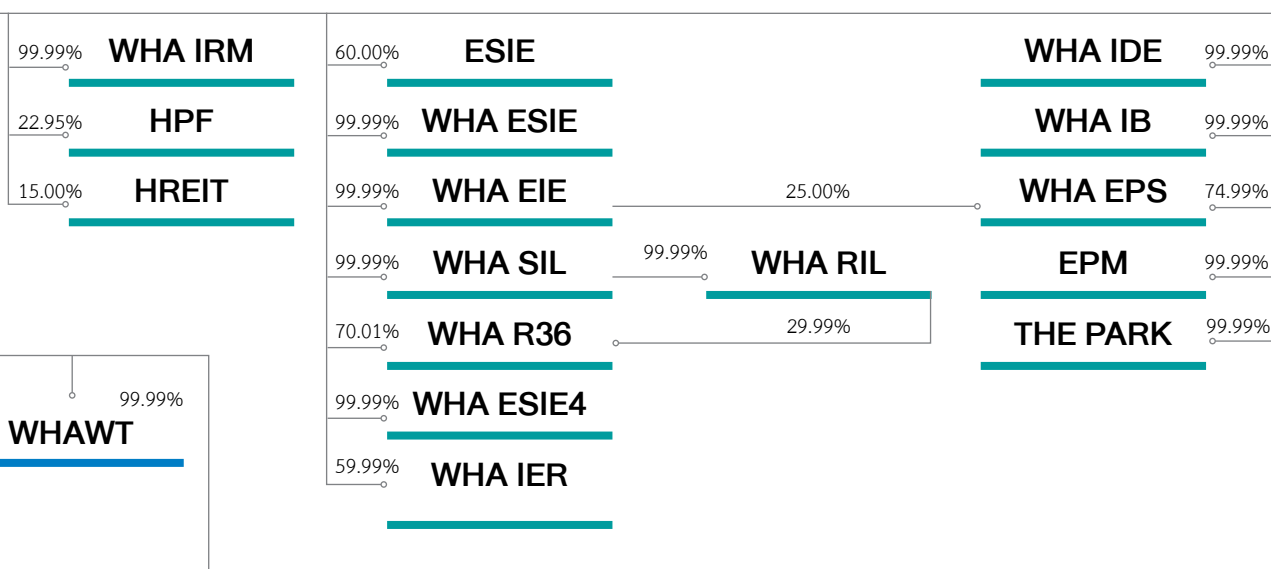
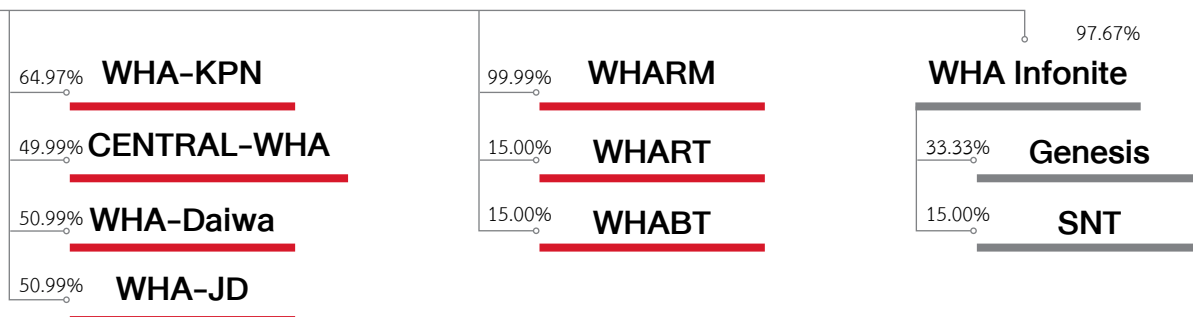
For 2020, WHA Group has identified strategic directions focusing on extending its number 1 position in its core businesses via developing win-win partnerships, further expanding internationally, and maximizing WHA Group synergies of 4 business hubs to create innovative technology-driven solutions for customers. Such synergies include collaboration with potential partners such as developing Smart Microgrid with PEA, collaborating with NBTC Commission and service providers in testing the use of 5G technology inside WHA Group's industrial estates as well as digital transformation which will continually emerge in 2020. WHA will also continue to firmly adhere to operate by driving business forward on the principle of sustainability and consideration to stakeholders covering all three dimensions, including environmental(E), social(S) and governance(G).

Finally, on behalf of the Chairman, the Group CEO, the Board of Directors and executives, I would like to thank you all for your support and contribution to our success. I would like to express my gratitude to all shareholders for your trust, to all customers for allowing us to serve you, our business partners, financial institutions for supporting our growth, and to the Board of Directors, the Executive Committees and all employees for your continued trust and support to drive the businesses forward and grow sustainably, in pursuit of the best value for society, shareholders, customers and all stakeholders.

# GROUP SHAREHOLDING STRUCTURE

AS OF 31 DECEMBER 2019







# GROUP SHAREHOLDING STRUCTURE

AS OF 31 DECEMBER 2019

WHA	WHA Corporation Public Company Limited
WHA VH	WHA Venture Holding Co., Ltd.
WAA	Warehouse Asia Alliance Co., Ltd.
ALL	WHA Alliance Co., Ltd.
WHA HK	WHA Corporation (Hong Kong) Co., Ltd.
WHA IDO	PT. WHA International Indonesia
WHA-KPN	WHA KPN ALLIANCE Co., Ltd.
CENTRAL WHA	CENTRAL-WHA ALLIANCE Co., Ltd.
WHA-Daiwa	WHA Daiwa Logistics Property Co., Ltd.
WHA-JD	WHA-JD Alliance Co., Ltd.
WHARM	WHA Real Estate Management Co., Ltd.
WHART	WHA Premium Growth Freehold and Leasehold REIT
WHABT	WHA Business Complex Freehold and Leasehold REIT

WHA Infonite	WHA Infonite Company Limited
Genesis	Genesis Data Center Co., Ltd.
SNT	Supernap (Thailand) Co., Ltd.

WHAID	WHA Industrial Development Public Company Limited
WHA IDIBVI	WHA Industrial Development International (BVI) Co.Ltd
WHA II	WHA Industrial Development International Ltd. (Cayman)
WHA IDI	WHA Industrial Development International Co., Ltd.
WHA IDISG	WHA Industrial Development International (SG) Pte. Ltd.
WHA IDSG	WHA Industrial Development (SG) Pte. Ltd.
WHA IDSG2	WHA Industrial Development 2 (SG) Pte. Ltd.
WHA IMSV	WHA Industrial Management Services Vietnam Co., Ltd.
WHA IZ NA	WHA Industrial Zone Nghe An Joint Stock Company
WHA IRM	WHA Industrial REIT Management Co., Ltd.
HPF	Hemaraj Industrial Property and Leasehold Fund
HREIT	Hemaraj Leasehold Real Estate Investment Trust
ESIE	Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
WHA ESIE	WHA Eastern Seaboard Industrial Estate Co., Ltd.
WHA EIE	WHA Eastern Industrial Estate Co., Ltd.
WHA SIL	WHA Saraburi Industrial Land Co., Ltd.
WHA RIL	WHA Rayong Industrial Land Co., Ltd.
WHA R36	WHA Rayong 36 Co., Ltd.
WHA ESIE4	WHA Eastern Seaboard Industrial Estate 4 Co., Ltd.
WHA IER	WHA Industrial Estate Rayong Co., Ltd.
WHA IDE	WHA Industrial Development Engineering Co., Ltd.
WHA IB	WHA Industrial Building Co., Ltd.
WHA EPS	WHA Eastern Pipeline Services Co., Ltd.
EPM	Eastern Seaboard Property and Marina Services Co., Ltd.
THE PARK	The Park Residence Co., Ltd.

WHAUP	WHA Utilities and Power Public Company Limited
WHAWT	WHA Water Co., Ltd.
WUPIN	WHAUP International Co., Ltd.
WUPS1	WHAUP (SG) 1 Pte. Ltd.
WUPS2	WHAUP (SG) 2 Pte. Ltd.
WUPSD	WHAUP (SG) 2DR Pte. Ltd.
SDWTP	Duong River Surface Water Plant Joint Stock Company
CUA LO	Cua Lo Water Supply Joint Stock Company
WUPNA	WHAUP Nghe An Joint Stock Company
WHAEG	WHA Energy Co., Ltd.
WHASL	WHA Solar Co., Ltd.
WHAET	WHA Energy 2 Co., Ltd.
BPWHA1	B.Grimm Power (WHA) 1 Ltd.
ESCE	Eastern Seaboard Clean Energy Co., Ltd.
CCE	Chonburi Clean Energy Co., Ltd.
RCE	Rayong Clean Energy Co., Ltd.
GHW	Glow Hemaraj Wind Co., Ltd.
Gheco-1	Glow-One Co., Ltd.
GIPP	Glow IPP Co., Ltd.
HHTC	Houay Ho Thai Co., Ltd.
HHPC	Houay Ho Power Co., Ltd.
Gulf WHA MT	Gulf WHA MT Natural Gas Distribution Co., Ltd.
WHA NGD2	WHA Eastern Seaboard NGD2 Co., Ltd.
WHA NGD4	WHA Eastern Seaboard NGD4 Co., Ltd.
Gulf Solar	Gulf Solar Co., Ltd.
Gulf Solar BV	Gulf Solar BV Co., Ltd.
Gulf Solar TS1	Gulf Solar TS1 Co., Ltd.
Gulf Solar TS2	Gulf Solar TS2 Co., Ltd.
Gulf Solar KKS	Gulf Solar KKS Co., Ltd.
Gulf TS 1	Gulf TS1 Co., Ltd.
Gulf TS 2	Gulf TS2 Co., Ltd.
Gulf TS 3	Gulf TS3 Co., Ltd.
Gulf TS 4	Gulf TS4 Co., Ltd.
Gulf VTP	Gulf VTP Co., Ltd.
Gulf NLL2	Gulf NLL2 Co., Ltd.
Gulf JP NLL	Gulf JP NLL Co., Ltd.
WHA Gunkul 1	WHA Gunkul Green Solar Roof 1 Co., Ltd.
WHA Gunkul 3	WHA Gunkul Green Solar Roof 3 Co., Ltd.
WHA Gunkul 6	WHA Gunkul Green Solar Roof 6 Co., Ltd.
WHA Gunkul 17	WHA Gunkul Green Solar Roof 17 Co., Ltd.

# #1 Logistic Facilities Developer

offering a variety of premium facilities uniquely servicing our clients' needs



## LOGISTICS & INDUSTRIAL PROPERTIES

The Company is committed to be a leading company as a warehouse project developer, distribution center, and high quality factory located in a strategic location around Bangkok, Eastern Economic Corridor, and other provinces.

The Company is able to fully meet the needs of its customers due to its project location, project design with international standards and quality of construction. This could reduce the cost of customer operations and increase long-term competitive advantages.



2.4  
MILLION SQ.M.  
UNDER OWNERSHIP  
& MANAGEMENT



200+  
WORLD-CLASS TENANTS



SUCCESSFUL ASSET  
MONETIZATIONS INTO  
WHART





# NUMBER 1 INDUSTRIAL ESTATE DEVELOPER

delivering world-class solutions to industrial customers



## INDUSTRIAL DEVELOPMENT

Industrial Development Hub is operated through the Company's subsidiary, WHAID Group, responsible for developing industrial estates and/ or zones and selling of land to enterprises who demand to make their investment in industrial estates / zones and industrial promotional zones. Enterprises can gain special privileges provided by Industrial Estate Authority of Thailand and / or Thailand Board of Investment. Another crucial role of WHAID Group is to act as a center for providing utilities and facilities for clients inside the industrial estates/ zones e.g. electricity, water supply, wastewater treatment, waste disposal, telephone, internet and coordinating with the authority on environmental control.



11 

OPERATING  
INDUSTRIAL ESTATES / ZONES AND  
OTHERS IN PIPELINE

816<sup>/1</sup> RAI

LAND SALES

<sup>/1</sup>excluding LOI and MOU in  
Thailand and Vietnam



REAL ESTATE  
DEVELOPMENT OVER

52,000<sup>/2</sup> RAI

<sup>/2</sup>including total Project Area of WHA  
Industrial Zone 1- Nghe An Vietnam  
Phase 1 of 3,110 Rai



NEW OPERATING

WHA ESIE 3

INDUSTRIAL ESTATES IN EEC





# Integrated Industrial Utilities & Power

provider with solid business growth



## UTILITIES & POWER

Utilities & Power Hub is operated through the Company's subsidiary, WHAUP Group, the provider of utilities in the WHAID Group's industrial estates/ zones i.e. raw water, industrial water, and wastewater treatment. WHAUP Group also has investments in power businesses, through joint ventures with both domestic and foreign power plants, who have expertise in the power business field. Our power plants include both Conventional Fuel and Renewable Energy power plants.



**110** MILLION M<sup>3</sup>  
OF UTILITIES AND SALES  
MANAGEMENT VOLUME



INITIATIVE OF VALUE  
ADDED PRODUCTS  
VIA TECHNOLOGY AND  
INNOVATION SUCH AS  
DEMINERALIZED WATER

POWER CAPACITY INCREASED TO



**559**  
EQUITY MW

PARTNERSHIP WITH  
BUSINESS ALLIES **COD**  
WASTE TO ENERGY POWER PLANT  
**CCE**

# Digital Platform

Providing a digital platform solution for leading companies. This fully-integrated and supported initiative adds value to WHA group.



## DIGITAL PLATFORM

Digital Platform Hub is operated through the Company's subsidiary, WHA infonite Company Limited, which was granted NBTC internet services (type 1), providing co-location data centers, fiber optic network (FTTx) and also managed services.



**4 DATA  
CENTERS  
WITH TIER III AND IV STANDARD  
COMMENCED OPERATION  
WITH 459 EQUITY RACKS**



**FTTX IN 7  
INDUSTRIAL ESTATES  
COMMENCED  
OPERATION**

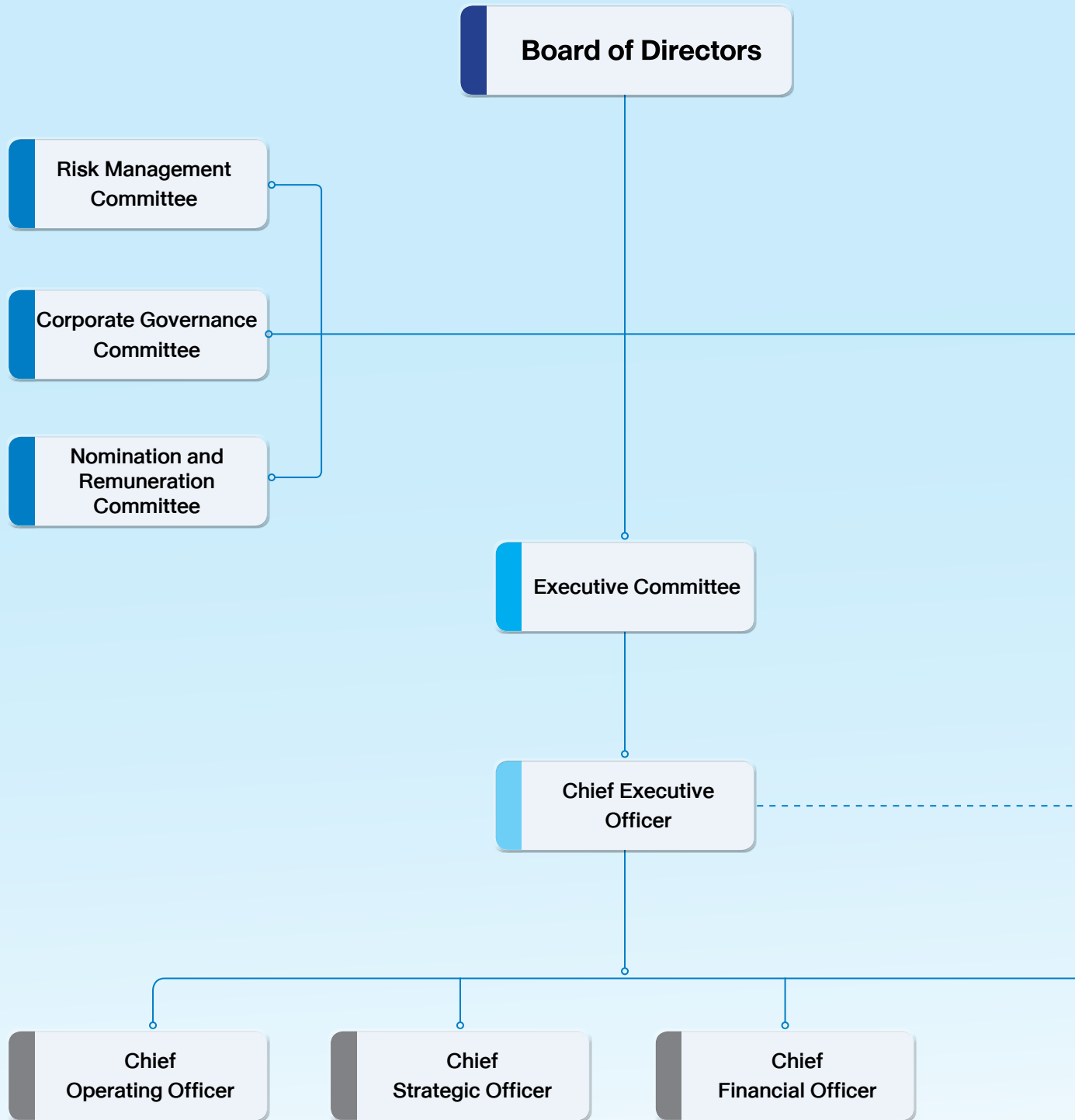


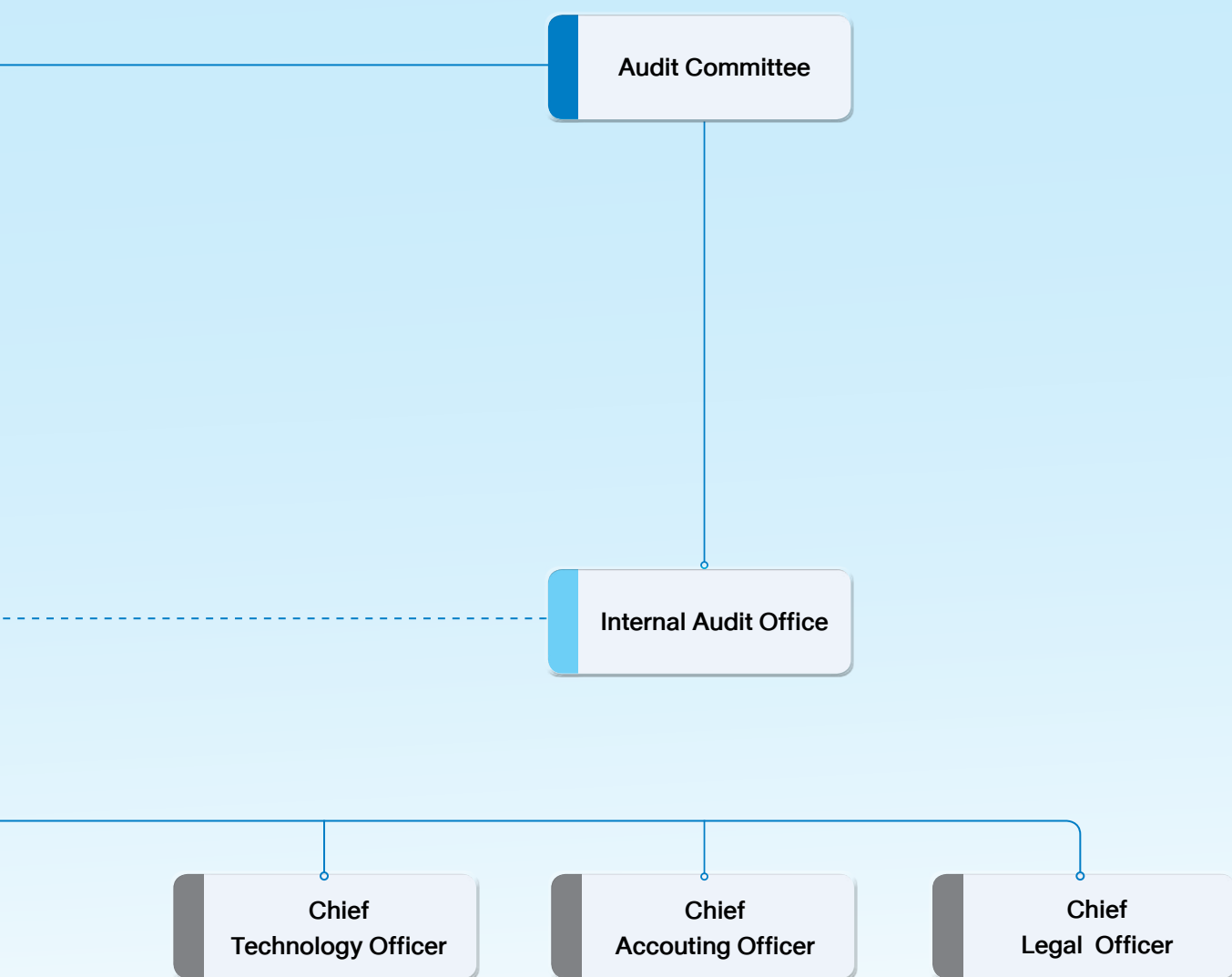
**PARTNERSHIP  
WITH MULTIPLE  
INTERNATIONAL  
COMPANIES**



# The Company's Organization Chart

As At 31 December 2019





# BOARD OF DIRECTORS

AS OF 31 DECEMBER 2019



**1. Ms. Jareeporn Jarukornsakul**

Chairman of the Board of Directors

**2. Mr. David Richard Nardone**

Vice Chairman of the Board of Directors

**3. Mr. Vivat Jiratikarnsakul**

Director

**4. Mr. Jakrit Chaisanit**

Director

**5. Mr. Krailuck Asawachatroj**

Director





**6. Mr. Narong Kritchanchai**  
Director

**7. Mr. Somsak Boonchoyruengchai**  
Director

**8. Dr. Pichit Akrathit**  
Independent Director

**9. Dr. Apichai Boontherawara**  
Independent Director

**10. Dr. Somsak Pratomsrimek**  
Independent Director

**11. Dr. Kritsana Sukboonyasatit**  
Independent Director

## AUDIT COMMITTEE



**Dr. Pichit Akrathit**  
Chairman of the  
Audit Committee



**Dr. Apichai Boontharawara**  
Audit Committee Member



**Dr. Somsak Pratomsrimek**  
Audit Committee Member



**Dr. Somsak Pratomsrimek**  
Audit Committee Member

## EXECUTIVE COMMITTEE



**Ms. Jareeporn Jarukornsakul**  
Chairman of the Executive Committee  
and Group Chief Executive Officer



**Mr. David Richard Nardone**  
Executive Committee Member



**Mr. Vivat Jiratikarnsakul**  
Executive Committee Member



**Mr. Jakrit Chaisanit**  
Executive Committee Member  
and Chief Operating Officer



**Mr. Krailuck Asawachatroj**  
Executive Committee Member  
Chief Strategic Officer  
and Chief Financial Officer



**Mr. Narong Kritchanchai**  
Executive Committee Member  
and Chief Legal Officer



**Mr. Somsak Boonchoyruengchai**  
Executive Committee Member  
and Chief Accounting Officer

# **PROFILES OF DIRECTORS,**

## EXECUTIVES AND COMPANY SECRETARY



# PROFILES OF DIRECTORS, EXECUTIVES AND COMPANY SECRETARY

AS OF 31 DECEMBER 2019

## 1. Ms. Jareeporn Jarukornsakul

- **Chairman of the Board of Directors** Date of Appointment: 9 February 2018
- **Chairman of the Executive Committee** Date of Appointment: 9 February 2018
- **Chairman of the Risk Management Committee** Date of Appointment: 14 May 2015
- **Nomination and Remuneration Committee Member** Date of Appointment: 29 October 2015
- **Group Chief Executive Officer** Date of Appointment: 29 October 2015

**Age (Year) :** 52

### Education

- The Honorary PH. D. Degree, Logistics and Supply Chain Management, Christian University of Thailand
- Master of Business Administration, Bangkok University
- Bachelor of Public Health, Mahidol University

### Training

- Executive Program in Energy Literacy for a Sustainable Future (Class 9/2017), Thailand Energy Academy (TEA)
- National Defense Course (Class 60/2018), National Defense Collage of Thailand
- Corporate Governance for Capital Market Intermediaries (CGI 17/2016), Thailand Institute of Directors (IOD)
- Director Accreditation Program (DAP 210/2015), Thailand Institute of Directors (IOD)
- Senior Executives on Justice Administration Program (Class 20/2015) , National Justice Academy, Office of Judiciary
- Leader Program (Class 18/2014), Capital Market Academy
- Director Certification Program (DCP 94/2012), Thailand Institute of Directors (IOD)

### Shareholding Proportion (%)

- 24.55%

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Listed Companies</b>			
2018 - Present	<ul style="list-style-type: none"> <li>• Chairman of the Board of Directors</li> <li>• Chairman of the Executive Committee</li> <li>• Chairman of the Risk Management Committee</li> <li>• Nomination and Remuneration Committee Member</li> </ul>	WHA Utilities and Power Public Company Limited	Utilities and Power
2019 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	Siam Commercial Bank Public Company Limited	Financial Institution



Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Corporation Public Company Limited</b>			
2018 - Present	<ul style="list-style-type: none"> <li>Chairman of the Board of Directors</li> <li>Chairman of the Executive Committee</li> </ul>	WHA Industrial Development Public Company Limited	Property Developer
2017 - Present	<ul style="list-style-type: none"> <li>Chairman</li> </ul>	WHA Real Estate Management Co., Ltd.	Trust Manager
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Venture Holding Co., Ltd.	Holding company
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Infonite Co., Ltd.	Digital services
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Corporation (International) Co., Ltd.	Holding company
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	PT. WHA International Indonesia	Property developer
2006 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	Warehouse Asia Alliance Co., Ltd.	Property developer on warehouses and factories
2003 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Alliance Co., Ltd.	Property developer on warehouses and factories
<b>Joint Venture of WHA Corporation Public Company Limited</b>			
2019 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA-JD Alliance Co., Ltd.	Property developer on warehouses and factories
2016 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	Genesis Data Center Co., Ltd.	Digital services
2016 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	Central WHA Alliance Co., Ltd.	Property developer on warehouses and factories
2016 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Daiwa Logistics Property Co., Ltd.	Property developer on warehouses and factories
2013 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA KPN Alliance Co., Ltd.	Property developer on warehouses and factories
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2019 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Industrial Development 2 (SG) Co., Ltd.	Holding company
2018 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Industrial Estate Rayong Co., Ltd.	Property developer
2017 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Industrial Zone Nghe An Joint Stock Company	Property Developer
2017 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Industrial Management Services Vietnam Co., Ltd.	Consulting services and general management
2016 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Industrial Development International Co., Ltd.	Holding company
2016 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Industrial Development (SG) Pte. Ltd.	Holding company
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Eastern Industrial Estate Co., Ltd.	Property developer
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.	Property developer
2015 - Present	<ul style="list-style-type: none"> <li>Director</li> </ul>	WHA Eastern Seaboard Industrial Estate Co., Ltd.	Property developer

Period	Position	Company	Type of Business
2015 - Present	• Director	WHA Saraburi Industrial Land Co., Ltd.	Property developer
2015 - Present	• Director	WHA Rayong Industrial Land Co., Ltd.	Property developer
2015 - Present	• Director	WHA Eastern Pipeline Services Co., Ltd.	Pipe Pack Rental
2015 - Present	• Director	WHA Industrial Development International (BVI) Pte. Ltd.	Holding company
2015 - Present	• Director	WHA Industrial Development International Ltd. (Cayman)	Holding company
2015 - Present	• Director	WHA Industrial Development Engineering Co., Ltd.	Design and Construction Supervision Service
2015 - Present	• Director	The Park Residence Co., Ltd.	Real Estate Development and Service Management
2015 - Present	• Director	WHA Industrial Development International (SG) Pte. Ltd.	Investment in associate/ subsidiaries
2015 - Present	• Director	WHA Rayong 36 Co., Ltd.	Property developer
2015 - Present	• Director	Eastern Seaboard Property and Marina Services Co., Ltd.	Property for investment and marina services
2015 - Present	• Director	WHA Eastern Seaboard Industrial Estate 4 Co., Ltd.	Property developer
2015 - Present	• Director	WHA Industrial REIT Management Co., Ltd.	Trust Manager

#### Subsidiaries of WHA Utilities and Power Public Company Limited

2019 - Present	• Chairman of the Board of Directors	WHAUP (SG) 2DR PTE. Limited	Holding company
2018 - Present	• Chairman of the Board of Directors	WHAUP Nghe An Joint Stock Company	Industrial water and wastewater treatment services
2018 - Present	• Chairman of the Board of Directors	WHA Solar Co., Ltd.	Investment and development of renewable energy business
2017 - Present	• Chairman of the Board of Directors	WHAUP (SG) 1 PTE. Limited	Holding company
2017 - Present	• Chairman of the Board of Directors	WHAUP (SG) 2 PTE. Limited	Holding company
2017 - Present	• Chairman of the Board of Directors	WHAUP International Co., Ltd.	Holding company
2015 - Present	• Chairman of the Board of Directors	WHA Water Co., Ltd.	Water resources development and management
2015 - Present	• Chairman of the Board of Directors	WHA Energy Co., Ltd.	Holding company
2015 - Present	• Chairman of the Board of Directors	WHA Energy 2 Co., Ltd.	Holding company

#### Joint Venture of WHA Utilities and Power Public Company Limited

2019 - Present	• Director	Duong River Surface Water Plant Joint Stock Company	Water resources development and management
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Period	Position	Company	Type of Business
2018 – Present	• Chairman of the Board of Directors	Eastern Seaboard Clean Energy Co., Ltd.	Electricity and Power Generation
2018 – Present	• Chairman of the Board of Directors	Chonburi Clean Energy Co., Ltd.	Electricity and Power Generation
2018 – Present	• Director	Gulf JP NLL Co., Ltd.	Generator and distributor of electronic power
2018 – Present	• Director	Gulf Solar Co., Ltd.	Producing and distributing electricity by solar photovoltaic rooftop
2018 – Present	• Director	Gulf Solar TS1 Co., Ltd.	Generator and distributor of electronic power
2018 – Present	• Director	Gulf Solar TS2 Co., Ltd.	Generator and distributor of electronic power
2018 – Present	• Director	Gulf TS1 Co., Ltd.	Generator and distributor of electronic power
2018 – Present	• Director	Gulf TS3 Co., Ltd.	Generator and distributor of electronic power
2017 – Present	• Director	WHA Eastern Seaboard NGD4 Co., Ltd.	Natural Gas Distribution
2016 – Present	• Director	WHA Eastern Seaboard NGD2 Co., Ltd.	Natural Gas Distribution
2015 – Present	• Director	B.Grimm Power (WHA) 1 Limited	Generator and distributor of electronic power
2013 – Present	• Director	WHA Gunkul Green Solar Roof 1 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – Present	• Director	WHA Gunkul Green Solar Roof 3 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – Present	• Director	WHA Gunkul Green Solar Roof 6 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – Present	• Director	WHA Gunkul Green Solar Roof 17 Co., Ltd.	Generator and distributor of electronic power from solar energy
2015 – Present	• Director	Gulf WHA MT Natural Gas Distribution Co., Ltd.	Natural Gas Distribution
2015 – Present	• Director	Gulf Solar BV Co., Ltd.	Generator and distributor of electronic power



Period	Position	Company	Type of Business
2015 – Present	• Director	Gulf Solar KKS Co., Ltd.	Generator and distributor of electronic power
2015 - Present	• Director	Gulf TS2 Co., Ltd.	Generator and distributor of electronic power
2015 - Present	• Director	Gulf TS4 Co., Ltd.	Generator and distributor of electronic power
2015 - Present	• Director	Gulf VTP Co., Ltd.	Generator and distributor of electronic power
2015 - Present	• Director	Gulf NLL2 Co., Ltd.	Generator and distributor of electronic power
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 2 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 4 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 5 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 8 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 9 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 10 Co., Ltd.	Generator and distributor of electronic power from solar energy
2013 – 2017	• Director	WHA Gunkul Green Solar Roof 16 Co., Ltd.	Generator and distributor of electronic power from solar energy

#### Other Companies

2018 - Present	• Director	Supernap Thailand Co., Ltd.	Server Service
2013 - Present	• Director	Asia Wealth Asset Management Co., Ltd.	Securities company
2013 - Present	• Director	Asia Wealth Securities Co., Ltd.	Securities company
2013 - Present	• Director	Asia Wealth Holding Co., Ltd.	Securities trading
2012 - Present	• Director	WHA Holding Co., Ltd.	Holding company
2012 - Present	• Director	S and J Holding Co., Ltd.	Holding company

## 2. Mr. David Richard Nardone

- Vice Chairman of the Board of Directors Date of Appointment: 25 April 2016
- Executive Committee Member Date of Appointment: 12 May 2016

Age (Year) : 64

### Education

- Master of Business Administration, Northeastern University, Boston, USA

### Training

- Director, Certification Program (DCP 57/2005), Thailand Institute of Directors (IOD)

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Listed Companies</b>			
2016 - Present	<ul style="list-style-type: none"> <li>• Executive Committee Member and</li> <li>• Risk Management Committee Member</li> </ul>	WHA Utilities and Power Public Company Limited	Utilities and Power
2008 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Utilities and Power Public Company Limited	Utilities and Power
<b>Subsidiary of WHA Corporation Public Company Limited</b>			
1994 - Present	<ul style="list-style-type: none"> <li>• Director</li> <li>• Executive Committee Member</li> <li>• Group Executive Industrial and International</li> </ul>	WHA Industrial Development Public Company Limited	Property developer
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2019 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Industrial Development 2 (SG) Co., Ltd.	Holding company
2018 - Present	<ul style="list-style-type: none"> <li>• Managing Director</li> </ul>	WHA Industrial Estate Rayong Co., Ltd.	Property developer
2017 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Industrial Zone Nghe An Joint Stock Company	Property Developer
2017 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Industrial Management Services Vietnam Co., Ltd.	Consulting services and general management
2016 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Industrial Development (SG) Pte. Ltd.	Holding company
2016 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Industrial Development International Co., Ltd.	Holding company
2015 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Industrial Development International (SG) Pte. Ltd.	Investment in associate/subsidiaries
Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2014 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Eastern Seaboard Industrial Estate 4 Co., Ltd.	Property developer
2013 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	Eastern Seaboard Property and Marina Services Co., Ltd.	Property for investment and marina services
2012 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Rayong 36 Co., Ltd.	Property developer
2005 - Present	<ul style="list-style-type: none"> <li>• Director</li> </ul>	WHA Rayong Industrial Land Co., Ltd.	Property developer

Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2005 - Present	• Director	WHA Saraburi Industrial Land Co., Ltd.	Property developer
2003 - Present	• Director	The Park Residence Co., Ltd.	Real Estate Development and Service Management
2001 - Present	• Director	WHA Industrial Development Engineering Co., Ltd.	Design and Construction Supervision Service
1997 - Present	• Director	WHA Industrial Development International (BVI) Co., Ltd.	Holding company
1996 - Present	• Director	WHA Eastern Seaboard Industrial Estate Co., Ltd.	Property developer
1995 - Present	• Director	WHA Eastern Pipeline Services Co., Ltd.	Pipe Pack Rental
1994 - Present	• Director	WHA Industrial Development International Ltd. (Cayman)	Holding company
1994 - Present	• Managing Director	Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.	Property developer
1994 - Present	• Director	WHA Eastern Industrial Estate Co., Ltd.	Property developer
<b>Subsidiaries of WHA Utilities and Power Public Company Limited</b>			
2019 - Present	• Director	WHAUP (SG) 2DR PTE. LTD.	Holding company
2018 - Present	• Director	WHA Solar Co., Ltd.	Investment and development of renewable energy business
2018 - Present	• Director	WHAUP Nghe An Joint Stock Company	Industrial water and wastewater treatment services
2017 - Present	• Director	WHAUP International Co., Ltd.	Holding company
2017 - Present	• Director	WHAUP (SG) 1 PTE. Limited	Holding company
2017 - Present	• Director	WHAUP (SG) 2 PTE. Limited	Holding company
2015 - Present	• Director	WHA Energy 2 Co., Ltd.	Holding company
2011 - Present	• Director	WHA Energy Co., Ltd.	Holding company
2005 - Present	• Director	WHA Water Co., Ltd.	Water resources development and management
<b>Joint Venture of WHA Utilities and Power Public Company Limited</b>			
2013 - Present	• Vice Chairman of the Board of Directors	Gheco-One Co., Ltd.	Electricity and Power Generation
2016	• Director	Glow Hemaraj Wind Co., Ltd.	Generator and distributor of electronic power
2010 - 2016	• Director	Houay Ho Thai Co., Ltd.	Holding company
2010 - 2016	• Director	B.Grimm Power (WHA) 1 Ltd.	Generator and distributor of electronic power
2013 - 2016	• Director	Gulf JP NLL Co., Ltd.	Generator and distributor of electronic power
2014 - 2016	• Director	Gulf Solar Co., Ltd.	Producing and distributing electricity by solar photovoltaic rooftop
2015 - 2016	• Director	Gulf TS1 Co., Ltd.	Generator and distributor of electronic power
2015 - 2016	• Director	Gulf TS3 Co., Ltd.	Generator and distributor of electronic power
2015 - 2016	• Director	Gulf TS4 Co., Ltd.	Generator and distributor of electronic power



### 3. Mr. Vivat Jiratikarnsakul

- **Director** Date of Appointment: 25 April 2016
- **Executive Committee Member** Date of Appointment: 12 May 2016
- **Chief Operation Officer**

**Age (Year) :** 63

#### Education

- Bachelor of Engineering (Sanitary Engineering), Chulalongkorn University

#### Training

- Anti-Corruption for Executive Program (ACEP 2/2014), Thailand Institute of Directors (IOD)
- IOD Luncheon briefing 1/2013 : Thailand Economic Outlook 2013, Thailand Institute of Directors (IOD)
- Director Accreditation Program (DAP 2/2003), Thailand Institute of Directors (IOD)
- Director Certification Program (DCP 38/2003), Thailand Institute of Directors (IOD)

#### Shareholding Proportion (%)

- None

#### Family relationship between the director

- None

#### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Listed Companies</b>			
2016 - Present	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Corporate Governance Committee Member</li> </ul>	WHA Utilities and Power Public Company Limited	Utilities and Power
2008 - Present	• Director	WHA Utilities and Power Public Company Limited	Utilities and Power
<b>Subsidiary of WHA Corporation Public Company Limited</b>			
1995 - Present	<ul style="list-style-type: none"> <li>• Executive Committee Member</li> <li>• Chief Operating Officer</li> </ul>	WHA Industrial Development Public Company Limited	Property Developer
1994 - Present	• Director	WHA Industrial Development Public Company Limited	Property Developer
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2019 - Present	• Director	WHA Industrial Estate Development 2 (SG) Co., Ltd.	Holding company
2018 - Present	• Director	WHA Industrial Estate Rayong Co., Ltd.	Property Developer
2017 - Present	• Director	WHA Industrial Zone Nghe An Joint Stock Company	Property Developer
2017 - Present	• Director	WHA Industrial Management Services Vietnam Co., Ltd.	Consulting services and general management
2016 - Present	• Director	WHA Industrial Development (SG) Pte. Ltd.	Holding company
2016 - Present	• Director	WHA Industrial Development International Co., Ltd.	Holding company
2015 - Present	• Director	WHA Industrial Development International (SG) Pte. Ltd.	Holding company
2014 - Present	• Director	WHA Eastern Seaboard Industrial Estate 4 Co., Ltd.	Property developer
2013 - Present	• Director	Eastern Seaboard Property and Marina Services Co., Ltd.	Property developer

Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2012 - Present	• Director	WHA Rayong 36 Co., Ltd.	Property developer
2005 - Present	• Director	WHA Saraburi Industrial Land Co., Ltd.	Property developer
2005 - Present	• Director	WHA Rayong Industrial Land Co., Ltd.	Property developer
2003 - Present	• Director	The Park Residence Co., Ltd.	Real Estate Development and Service Management
2001 - Present	• Director	WHA Industrial Development Engineering Co., Ltd.	Design and Construction Supervision Service
1997 - Present	• Director	WHA Industrial Development International (BVI) Co., Ltd.	Holding company
1996 - Present	• Director	WHA Eastern Seaboard Industrial Estate Co., Ltd.	Property developer
1995 - Present	• Director	WHA Eastern Pipeline Services Co., Ltd.	Pipe Pack Rental
1994 - Present	• Director	Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.	Property developer
1994 - Present	• Director	WHA Eastern Industrial Estate Co., Ltd.	Property developer
1994 - Present	• Director	WHA Industrial Development International Ltd. (Cayman)	Holding company
<b>Subsidiaries of WHA Utilities and Power Public Company Limited</b>			
2019 - Present	• Director	WHAUP (SG) 2 DR PTE. LTD.	Holding company
2018 - Present	• Director	WHA Solar Co., Ltd.	Investment and development of renewable energy business
2018 - Present	• Director	WHAUP Nghe An Joint Stock Company	Industrial water and wastewater treatment services
2017 - Present	• Director	WHAUP (SG) 1 PTE. Limited	Holding company
2017 - Present	• Director	WHAUP (SG) 2 PTE. Limited	Holding company
2017 - Present	• Director	WHAUP International Co., Ltd.	Holding company
2015 - Present	• Director	WHA Energy 2 Co., Ltd.	Holding company
2011 - Present	• Director	WHA Energy Co., Ltd.	Holding company
2005 - Present	• Director	WHA Water Co., Ltd.	Water resources development and management
<b>Joint Venture of WHA Utilities and Power Public Company Limited</b>			
2019 - Present	• Director	Duong River Surface Water Plant Joint Stock Company	Water resources development and management
2018 - Present	• Director	Gheco-One Co., Ltd.	Holding company
2008 - Present	• Director	Houay Ho Thai Co., Ltd.	Holding company
2008 - Present	• Director	Houay Ho Power Co., Ltd.	Holding company

#### 4. Mr. Jakrit Chaisanit

- **Director** Date of Appointment: 23 April 2012
- **Executive Committee Member** Date of Appointment: 25 May 2012
- **Corporate Governance Committee Member** Date of Appointment: 18 February 2014
- **Chief Operating Officer** Date of Appointment: 29 October 2015

**Age (Year) :** 46

#### Education

- Master of Engineering in Project Management, Faculty of Engineering, University of Maryland, USA
- Bachelor Degree of Engineering Program in Environmental Engineering, Chulalongkorn University

#### Training

- Director Accreditation Program (DAP 94/2012), Thailand Institute of Directors (IOD)

#### Shareholding Proportion (%)

- 0.48

#### Family relationship between the director

- None

#### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Corporation Public Company Limited</b>			
2018 - Present	• Director	Warehouses Asia Alliance Co., Ltd.	Property developer on warehouses and factories
2018 - Present	• Director	WHA Venture Holding Co., Ltd.	Holding Company
2018 - Present	• Director	WHA Alliance Co., Ltd.	Property developer on warehouses and factories
2014 - Present	• Director	WHA Corporation (International) Company Limited	Holding Company
<b>Joint Venture of WHA Corporation Public Company Limited</b>			
2018 - Present	• Director	WHA KPN Alliance Co., Ltd.	Property developer on warehouses and factories
2018 - Present	• Director	WHA Daiwa Logistics Property Co., Ltd.	Property developer on warehouses and factories
2018 - Present	• Director	Genesis Data Center Co., Ltd.	Digital Services
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2019 - Present	• Director	WHA Industrial Development 2 (SG) Co., Ltd.	Holding Company
2017 - Present	• Director	WHA Industrial Zone Nghe An Joint Stock Company	Property developer
2016 - Present	• Director	WHA Industrial Development International Co., Ltd.	Holding Company
2016 - Present	• Director	WHA Industrial Development (SG) Pte. Ltd.	Holding Company
2015 - Present	• Director	WHA Industrial Development Engineering Co., Ltd.	Design and Construction Supervision Service
2015 - Present	• Director	WHA Industrial Building Co., Ltd.	Sell and Lease of Factory
<b>Other Company</b>			
2003 - Present	• Managing Director	A & J Builder Co., Ltd.	Constructor Business



## 5. Mr. Krailuck Asawachatroj

- **Director** Date of Appointment: 25 April 2016
- **Executive Committee Member** Date of Appointment: 12 May 2016
- **Chief Strategic Officer** Date of Appointment: 24 February 2016
- **Chief Financial Officer** Date of Appointment: 16 August 2019

**Age (Year) :** 47

### Education

- Master of Financial Engineering, New York University, USA
- Master of Business Administration, Majoring Finance, Claremont Graduate University, USA
- Bachelor of Industrial Engineering, Thammasat University

### Training

- CPD Course - Financial Statement 2019, CPD Tutor
- Director Certification Program (DCP 175/2014), Thailand Institute of Directors (IOD)

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Subsidiary of WHA Corporation Public Company Limited</b>			
2019 - Present	• Chief Financial Officer	WHA Industrial Development Public Company Limited	Property developer
2015 - Present	• Director • Executive Committee Member • Chief Strategic Officer	WHA Industrial Development Public Company Limited	Property developer
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2018 - Present	• Director	WHA Industrial Estate Rayong Co., Ltd.	Property Developer
2017 - Present	• Director	WHA Industrial Zone Nghe An Joint Stock Company	Property Developer
2017 - Present	• Director	WHA Industrial Management Services Vietnam Co., Ltd.	Consulting services and general management
2016 - Present	• Director	WHA Industrial Development (SG) Pte. Ltd.	Holding Company
2015 - Present	• Director	WHA Eastern Industrial Estate Co., Ltd.	Property Developer
2015 - Present	• Director	Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.	Property Developer
2015 - Present	• Director	WHA Eastern Seaboard Industrial Estate Co., Ltd.	Property Developer
2015 - Present	• Director	WHA Saraburi Industrial Land Co., Ltd.	Property Developer
2015 - Present	• Director	WHA Rayong Industrial Land Co., Ltd.	Property Developer
2015 - Present	• Director	WHA Eastern Pipeline Services Co., Ltd.	Pipe Pack Rental
2015 - Present	• Director	WHA Industrial Development International (BVI) Co., Ltd.	Holding Company
2015 - Present	• Director	WHA Industrial Development International Ltd. (Cayman)	Holding Company

Period	Position	Company	Type of Business
2015 - Present	• Director	The Park Residence Co., Ltd.	Real Estate Development and Service Management
2015 - Present	• Director	WHA Industrial Development Engineering Co., Ltd.	Design and Construction Supervision Service
2015 - Present	• Director	WHA Industrial Development (SG) International (SG) Pte. Ltd.	Holding company in overseas
2015 - Present	• Director	WHA Rayong 36 Co., Ltd.	Property developer
2015 - Present	• Director	Eastern Seaboard Property and Marina Services Co., Ltd.	Property developer
2015 - Present	• Director	WHA Eastern Seaboard Industrial Estate 4 Co., Ltd.	Property developer
2015 - Present	• Director	WHA Industrial REIT Management Co., Ltd.	Trust Manager

## 6. Mr. Narong Kritchanchai

- **Director** Date of Appointment: 23 April 2012
- **Executive Committee Member** Date of Appointment: 25 May 2012
- **Corporate Governance Committee Member** Date of Appointment: 18 February 2014
- **Chief Legal Officer** Date of Appointment: 24 February 2016

**Age (Year) :** 43

### Education

- Master of Laws, Cornell University, New York, USA
- Bachelor of Laws, Thammasat University

### Training

- Director Accreditation Program (DAP 94/2012), Thailand Institute of Directors (IOD)

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Corporation Public Company Limited</b>			
2017 - Present	• Director	WHA Venture Holding Co., Ltd.	Holding company
2017 - Present	• Director	WHA Alliance Co., Ltd.	Property developer on warehouses and factories
2017 - Present	• Director	Warehouse Asia Alliance Co., Ltd.	Property developer on warehouses and factories
<b>Subsidiary of WHA Industrial Development Public Company Limited</b>			
2017 - Present	• Director	WHA Industrial Zone Nghe An Joint Stock Company	Property developer
2015 - Present	• Director	WHA Industrial Building Co., Ltd.	Sell and Lease of Factory
<b>Joint Venture of WHA Corporation Public Company Limited</b>			
2019 - Present	• Director	WHA KPN Alliance Co., Ltd.	Property developer on warehouses and factories
<b>Other Company</b>			
2006 - Present	• Director	Nakit Property Co., Ltd.	Property developer
2006 - Present	• Director	RL Counsel Co., Ltd.	Legal Counsel



## 7. Mr. Somsak Boonchoyruengchai

- **Director** Date of Appointment: 23 April 2012
- **Executive Committee Member** Date of Appointment: 25 May 2012
- **Chairman of the Corporate Governance Committee** Date of Appointment: 18 February 2014
- **Chief Accounting Officer (Accountant)** Date of Appointment: 16 August 2019

**Age (Year) :** 49

### Education

- Master of Accounting, Faculty of Commerce and Accounting, Chulalongkorn University
- Bachelor of Accounting, Faculty of Business Administration, Rajamangala University of Technology

### Training

- Director Accreditation Program (DAP 94/2012), Thailand Institute of Directors (IOD)
- Accountant Training Program: TFRS 15 (Income from contract), TFRS 16 (Leases), TFRS 9 (Classification and Measurement), TFRS 9 (Impairment), TFRS 9 (Hedge Accounting), DST

### Shareholding Proportion (%)

- 0.01

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Subsidiaries of WHA Corporation Public Company Limited</b>			
2018 - Present	• Director	WHA Venture Holding Co., Ltd.	Holding company
2018 - Present	• Director	WHA Alliance Co., Ltd.	Property developer on warehouses and factories
2018 - Present	• Director	Warehouse Asia Alliance Co., Ltd.	Property developer on warehouses and factories
<b>Joint Venture of WHA Corporation Public Company Limited</b>			
2013 - Present	• Director	WHA KPN Alliance Co., Ltd.	Property developer on warehouses and factories
<b>Subsidiaries of WHA Industrial Development Public Company Limited</b>			
2018 - Present	• Director	WHA Industrial Building Co., Ltd.	Sell and Lease of Factory
2017 - Present	• Director	WHA Industrial Zone Nghe An Joint Stock Company	Property developer
<b>Other Companies</b>			
2018 - Present	• Director	S and J Holding Co., Ltd.	Holding company
2004 - Present	• Director	Honesty Auditing Co., Ltd.	Accounting Audit Service
1995 - Present	• Director and Managing Partner	A. Ruengroj Furniture Part., Ltd.	Furniture Producer and Interior Design
2019 - Present	• Director	WHA Real Estate Management Co., Ltd.	Property Developer
2019 - Present	• Director	Genesis Data Center Company Ltd.	Digital Services

## 8. Dr. Pichit Akrathit

- **Independent Director** Date of Appointment: 30 April 2018
- **Chairman of the Audit Committee** Date of Appointment: 10 August 2018

**Age (Year) :** 64

### Education

- Ph.D. in Economics, University of Texas at Austin, USA
- Master of Business Administration, Thammasat University
- Bachelor of Economics, Thammasat University

### Certifications

- Corporate Governance for Capital Market Intermediaries Program (CGI 8/2015), Thailand Institute of Directors (IOD)
- Role of the Chairman Program (RCP 24/2010), Thailand Institute of Directors (IOD)
- Director Accreditation Program (DAP 7/2004), Thailand Institute of Directors (IOD)
- Director Certification Program (DCP 42/2004), Thailand Institute of Directors (IOD)
- Leader Program (Class No. 3), Capital Market Academy

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Companies</b>			
2019 - Present	• Advisor Financial Economics of Development Economics	National Institute of Development Administration (NIDA)	Educational Institution
2016 - 2017	• Deputy Minister of Transport	Ministry of Transport	Government Agency
2013 - 2016	• Chief Executive Officer	Asia Wealth Securities Co., Ltd.	Finance & Securities

## 9. Dr. Apichai Boontherawara

- **Independent Director** Date of Appointment: 29 April 2014
- **Audit Committee Member** Date of Appointment: 29 April 2014
- **Chairman of the Nomination and Remuneration Committee** Date of Appointment: 23 January 2017

**Age (Year) :** 65

### Education

- Ph. D. in Economics, University of Washington, USA
- Master of Business Administration, Thammasat University
- Bachelor of Economics, Thammasat University

### Certifications

- Monitoring the Internal Audit Function Program (MIA 12/2012), Thailand Institute of Directors (IOD)
- Director Certification Program (DCP 53/2005), Thailand Institute of Directors (IOD)
- Audit Committee and Continuing Development Program (ACP 8/2005, Thailand Institute of Directors (IOD)
- Director Accreditation Program (DAP 17/2004), Thailand Institute of Directors (IOD)

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Companies</b>			
2017 - Present	• Director	Kand Yong Electric Public Company Limited	Electricity Producer
2017 - Present	• Director	Southeast Group Co., Ltd.	Holding Company
2017 - Present	• Director	Thailand Group Holding Public Company Limited	Holding Company
2011 - Present	• Director and Vice Chairman of Executive Committee	Southeast Capital Co., Ltd.	Finance and Insurance
2011 - Present	• Director and Vice Chairman of Executive Committee	Southeast Insurance Public Company Limited	Finance & Insurance
2011 - Present	• Director and Vice Chairman of Executive Committee	Southeast Life Public Company Limited	Finance & Insurance
2009 - Present	• Audit Committee Member and Risk Management	Chiang Mai University	Educational Institution



## 10. Dr. Somsak Pratomsrimek

- **Independent Director** Date of Appointment: 23 April 2012
- **Audit Committee Member** Date of Appointment: 23 April 2012
- **Risk Management Committee Member** Date of Appointment: 18 February 2014

**Age (Year) :** 47

### Education

- Ph.D. in Accounting, Chulalongkorn University
- Master of Science in Accounting, Thammasat University
- Bachelor of Accountancy, Burapha University

### Certifications

- Certificate of Thai Financial Reporting Standard, 2013
- Director Accreditation Program, (DAP 94/2012), Thailand Institute of Directors (IOD)
- Certified Public Accountant (CPA) Thailand
- Diploma of Thai Financial Reporting Standards (DipTFR) Issued by TFAC (Thailand)

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Companies</b>			
2016 - Present	• Managing Director	CPA Solution Co., Ltd.	Accounting Training Consultant
2017 - 2018	• Executive Committee Member	Bangkok Mass Transit Authority (BMTA)	State Enterprise, Ministry of Transport

## 11. Dr. Kritsana Sukboonyasatit

- Independent Director Date of Appointment: 23 April 2012
- Audit Committee Member Date of Appointment: 23 April 2012
- Nomination and Remuneration Committee Member Date of Appointment: 18 February 2014
- Risk Management Committee Member Date of Appointment: 18 February 2014

Age (Year) : 48

### Education

- Ph. D. in Arts, Khon Kaen University
- Master of Business Administration, Chulalongkorn University
- Bachelor of Business Administration, Chiang Mai University

### Certifications

- Director Accreditation Program, (DAP 96/2012), Thailand Institute of Directors (IOD)
- Thailand Quality Award Lead Assessor (TQA 2004), Office of Thailand Quality Award
- Productivity Improvement Japan Productivity Center, (1998)

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
Other Companies			
2003 - Present	• Managing Director	Business Excellence Consulting Co., Ltd.	Consultant
2003 - Present	• Auditor of the Award Thailand	Office of Thailand Quality Award	Government Agency

## 12. Mr. Sirisak Kijruksa

- **Company Secretary** Date of Appointment: 12 May 2016

**Age (Year) :** 58

### Education

- Bachelor Degree of Accounting, Bangkok University

### Shareholding Proportion (%)

- None

### Family relationship between the director

- None

### Work Experience (past 5 years)

Period	Position	Company	Type of Business
<b>Other Companies</b>			
2016 - Present	• Director	WHA Industrial Development Engineering Co., Ltd.	Design and Construction Supervision Service
2009 - Present	• Director of Legal	WHA Industrial Development Public Company Limited	Property developer
2009 - Present	• Company Secretary	WHA Industrial Development Public Company Limited	Property developer



# MAJOR DEVELOPMENTS

The Company had series of major developments summarized per below tables

## Business and Operation

### Major Development

- Year 2017**
- On 9 February, the Company launched “WHA Eastern Seaboard Industrial Estate 4 (“WHA ESIE4”) which is the ninth Industrial Estate of WHAID located at Pluak Daeng, Rayong, totally area 1,900 rais.
  - WHAUP was permitted from the Securities and Exchange Commission “SEC” by the issuance of filling effective date on 20 March 2016 and proposed the Initial Public Offering (“IPO”) between 22 March to 3 April 2016 by entering ordinary shares to register in the Stock Exchange of Thailand had the first day trade on April 10, 2016.
  - The Company has been expanded Industrial Estate Development to Vietnam and obtained by Investment Registration Certificate (“IRC”) from Vietnam Governance in May. It allows the Company to develop long term Project totally area 20,000 rais and the Company prospected first phrase of Industrial Estate Developmental Project at the approximately area 3,100 rais under the Project’s name “WHA Industrial Zone Nghe An” in Nghe An Province, and had the Ceremony of Laying Foundation on 10 March 2017.
  - Five Joint Venture of Small Power Plant (“SPP”) Projects between WHAUP and Gluf MP Co., Ltd. (Gulf, VTP, and Gluf TS 1-4) started commercial operations on 16 May , 8 July, 1 September, 1 November, 2017 and 1 January 2018, respectively with total capacity of 160.1 megawatts in accordance with the proportion of shares held.
  - On 18 August, the Company has been certified as the Member of Thailand’s Private Sector Collective Action Coalition Against Corruption: CAC.
  - In the fourth quarter, the Company Group has been operated 3 Data Centers comprising 357 equity racks which are the additional services of Fiber Optic (“FTTx”) in WHAID’s Industrial Estate.
  - In November, TRIS rating Company assigned Credit Rating Level A- rating to the Company.
  - On 29 November, the Company Group sold and leased long term assets of warehouses in four projects ie. WHA Mega Center Logistic Center Project km. 19 Building C and M, WHA Mega Logistics Center Project in Lam Luk Ka and Omada Aerospace Factory Project in Rayong to WHA Premium Growth Real Estate Investment Trust “WHART” totally lease area 85,867 square meters with the total asset value of THB 3,090 mm.
  - In November, WHA Eastern Seaboard Industrial Estate 4 (“WHA ESIE4”) has been approved from the Eastern Economic Corridor Policy Committee (“EEC Committee”) to be the promotional zone supporting industry businesses, future automotive industry, robot industry, as well as aerospace and logistics industry on 23 January, 2018. Furthermore, there are eight industrial estates of the Company Group which were approved from EEC Committee to be the promotional zone supporting industry businesses in February 2018 and being process for the publication.

- Year 2018**
- On 4 January, the Company Group sold 19 leasehold units of factory buildings, and 2 leasehold units of warehouses, located in the industrial estates of the Company Group in Rayong and Chonburi and WHA industrial area in Saraburi, with a total area of 55,131 sq.m. or equivalent to the asset value of THB 1,589.85 mm to HREIT trust.
  - In January, WHAUP operated commercially to sell water for industry and waste water treatment in WHA Eastern Seaboard Industrial Estate No. 4 (WHA ESIE4) with 3,600 m3 of industrial water production capacity per day and the amount of waste water treatment capacity of 1,500 m3 per day.
  - In April, the WHAUP received a corporate credit rating and subordinated debentures without guarantee at the A- level and the rating outlook at Stable by TRIS Rating.
  - On 16 May, WHAID entered into Shareholder Agreement with IRPC PCL.(“IRPC”) so as to establish a joint venture company with registered capital of THB 650 mm in which WHAID holds 60%, and IRPC holds 40% of the shares in order to develop industrial estate on land area of approximately 2,152 rai located at Ban Khai, Rayong.
  - In May, WHAUP established a subsidiary in order to invest in industrial water business in WHA Industrial Zone Nghe An project, Vietnam and obtained 49-year right to operate the business in the area. WHAUP will develop water utilities covering the first phase of the project with total area of approximately 3,100 rai and demand for industrial water, and wastewater treatment of approximately 12,000 m3, and 9,600 m3 per day.
  - In June, WHA Infonite, a subsidiary of the Company has invested in shares purchase of SuperNap (Thailand) Company Limited (“SuperNap”) in the amount of 15% of the total shares or equivalent to THB 211.5 mm (SuperNap has the registered and paid-up capital of THB 2,000 mm and THB 1,410 mm, respectively). SuperNap operates a data center certified by Tier IV standard and provides a server co-location, consulting services, training in term of data center building and data center operating as well as related services.
  - In July, after the land expropriation was completed, the Company was handed over the area in the WHA Industrial Zone Nghe An Phase 1 project from the Vietnamese government, so as to start developing the project.
  - In 2018, WHAUP, the company’s subsidiaries, has started to operate commercially additional solar power plants so as to generate electricity with the production capacity of 2.6 equity megawatts.
  - In the third quarter, the Reclaimed Water Project (RO) project of WHAUP in WHA Eastern Industrial Estate (WHA EIE) has started commercial operations with a production capacity of 7,500 m3 per day.
  - In October, the Company received 5 Star Rating for Good Corporate Governance evaluated by Thai Institute of Directors (IOD).
  - On 19 November, the Company signed a Memorandum of Understanding (MoU) with Yunnan Energy Investment Group (YEIG) to develop strategic logistics cooperation between Yunnan, Laos and Thailand under “One Belt, One Road” policy. Overall, the MoU covers cooperation in the areas of industrial properties, road and rail transportation, cold chain transportation, central Asia railway, the construction of an Asia-Pacific Model E-port network, car trading and others between China, Thailand and ASEAN countries.

- On 4 December, the Company Group had and long-term leased assets of warehouses, factories and offices in four projects ie. WHA Mega Logistic Center Project Rama 2 km.35, WHA KPN Mega Logistics Center Project km.23, DSGHSIL Project, and WHA Central Mega Logistic Center Wang Noi 63 to WHART totally leased area of 156,534.61 square meters accounting for asset value of THB 4,464.5 mm.
- In December, WHA Eastern Seaboard NGD2 Company Limited (“NGD2”), joint venture company held indirectly by WHAUP 35% through Gulf WHA MT Company Limited (“Gulf WHA MT”), officially CODs Natural Gas Distribution Project to customers in WHA Eastern Seaboard Industrial Estate 2.
- On 24 December, the Company Group sold 9 leasehold units of factory buildings located in the Saraburi Industrial Zone, with a total area of 15,916 sq.m. accounting for asset value of THB 477 mm.

**Year 2019** • In January, Gulf NLL 2 Power Plant Project (SPP) officially started COD with the installed capacity of 127 megawatts or equivalent to 32 equity megawatts.

- In March, the Company Group signed additional solar power plants with the production capacity of 5.0 megawatts, accumulated to 14.3 megawatts owned by the Group. The power plant is under construction and expected to be COD within first quarter 2020.
- on 28 March, WHAUP Nghe An Joint Stock Company (“WUPNA”), a subsidiary of WHAUP, acquired 47.31% of shares in Cua Lo Water Supply Joint Stock Company, a company in Vietnam, with total water production capacity of 13,000 cubic meters per day.
- On 1 April, WHAID launched WHA Eastern Seaboard Industrial Estate 3 (WHA ESIE 3), the Group’s 10th newly-operated industrial estate in Thailand located in the EEC area comprising a total of 2,198 rai
- WHA Industrial Zone Nghe An Project Phase 1 Milestone 1 was substantially completed and expected to be ready for transfer in 2020.
- On 25 October, WHAUP (SG) 2DR PTE. LTD. (“WUPSD”), a subsidiary of WHAUP (SG) 1 PTE. LTD. acquired 34 percent shares of Duong River Surface Waterplant Joint Stock Company (“SDWTP”), a leading water supplier in Hanoi, Vietnam. As of 31 December 2019, SDWTP has a production capacity of 110 million cubic meters per year.

- In November, WHAID bagged the 2019 “People’s Choice” Award and the 2019 AMCHAM CSR Excellence (ACE) Recognition Award, “Platinum Level”, during the annual award ceremony organized by the American Chamber of Commerce in Thailand (AMCHAM).
- In November, WHA Industrial Estate Rayong (WHA IER) received a Smart Industrial Estate certificate in the New City category during a presentation ceremony at the Digital Thailand Big Bang. The industrial estate was recognized by Digital Economy Promotion Agency’s Smart City Thailand Office for its commitment to developing a smart industrial estate (Smart IE). The certificate program is aimed at supporting sustainable city management using technology and innovations, in line with the government’s Thailand 4.0 initiative.

- In November, Chonburi Clean Energy Company Limited, an associate of WHAUP holding 33.33 percent shares, started COD industrial waste to energy power plant in WHA CIE 1 with an installed power generating capacity of 8.63 megawatts or equivalent to 2.88 equity megawatts supporting disposal of up to 400 tons in non-hazardous industrial wastes per day or 100,000 tons per year.
- In December, the Company Group sold and leased long term assets of warehouses factories, and offices in 5 projects ie. WHA Mega Logistics Center Project (Chonharnpichit Km.3, phase1), DTS Factory Project, Roechling Factory Project, WHA KPN Mega Logistics Center Project (Bangna-Trad Km.23, phase 2), and WHA Mega Logistics Center Project (Chonharnpichit Km.3, phase2) to WHA Premium Growth Real Estate Investment Trust “WHART” totally lease area 155,237 square meters with the total asset value of THB 4,880.3 mm.

## Company's Capital

- Year 2017**
- On 28 April, the Company issued THB 2,600 mm debentures No. 1/2560 to institutional investors and/or high net worth investors, having a tenor of 3 years at a fixed rate of 3.50% per annum.
  - On 25 August, the Company issued THB 100 mm debentures No. 2/2560 to Private Placement less than 10 investors (PP10), having a tenor of 2 years, 11 Month, 24 days at a fixed rate of 3.15% per annum.

- Year 2018**
- On January 5, the Company has increased the paid-up capital from THB 1,432,243,032.10 to THB 1,432,630,019.10 from the exercise of WHA-W1 warrants on 25 December 2017.
  - On 27 April, the Company issued debentures No.1/2561 to institutional investors and/or high net worth investors in the amount of THB 3,000 mm which comprises of 2 tranches as shown in the table below: tenor

No.	No. of units	Size (THB mm)	Fixed interest rate (per annum)	Tenor (years)
1	1,900,000	1,900	2.39	3
2	1,100,000	1,100	2.87	5

- On 26 June, WHAUP issued THB debentures No.1/2561 to institutional investors and high net worth investors in the amount of THB 5,000 mm which comprises of 3 tranches as shown in the table below:



No.	No. of units	Size (THB mm)	Fixed interest rate (per annum)	Tenor (years)
1	2,390,000	2,390	2.65	3
2	1,290,000	1,290	3.17	5
3	1,320,000	1,320	3.66	7

- On 9 July, the Company has increased the paid-up capital from THB 1,432,630,019.10 to THB 1,433,426,716.90 from the exercise of WHA-W1 warrants on 25 June 2018.
- On 18 September, the Company issued THB 300 mm debentures No.2/2561 to Private Placement less than 10 investors (PP10), having a tenor of 1 year at a fixed rate of 2.00% per annum.
- On 19 October, the Company issued debentures No.3/2561 to institutional investors and/or high net worth investors in the amount of THB 3,500 mm which comprises of 4 tranches as shown in the table below:









No.	No. of units	Size (THB mm)	Fixed interest rate (per annum)	Tenor (years)
1	337,800	337.80	2.77	2
2	454,200	454.20	3.48	3.5
3	328,000	328.00	3.74	5
4	2,380,000	2,380.00	4.03	7

- On 25 December, there were 5,581,379 units of warrants exercised by WHA-W1 and the Company has increased the paid-up capital from THB 1,433,426,716.90 to THB 1,439,141,825.20 on 7 January 2019 tenor

- 
- Year 2019**
- On 24 April, the Company issued debentures No.1/2562 for to institutional investors and/or high net worth investors in the amount of THB 3,500 mm which comprises of 3 tranches as shown below:
    - ▲ THB 2,100 mm, tenor 3 years at a fixed rate of 2.95%
    - ▲ THB 1,000 mm, tenor 5 years at a fixed rate of 3.40%
    - ▲ THB 400 mm, tenor 7 years at a fixed rate of 3.69%
  - On 27 June, the Company issued THB 200 mm debentures No.2/2562 to Private Placement less than 10 investors (PP10), having a tenor of 3 years 3 days at a fixed rate of 2.75% per annum.
  - On 1 July, the Company has increased the paid-up capital from THB 1,439,141,825.20 to THB 1,470,909,845.20 from the exercise of WHA-W1 warrants on 25 June 2019.
  - On 2 July, the Company issued THB 2,000 mm debentures No.3/2562 to Institutional investors, having a tenor of 2 years 11 months and 24 days at a fixed rate of 2.75% per annum.
  - On 25 December, there were 23,194,565 units of warrants exercised by WHA-W1 and the Company has increased the paid-up capital from THB 1,470,909,845.20 to THB 1,494,660,151.90 on 3 January 2019.
-

## NATURE OF BUSINESS OPERATION

The Company is the leader of one-stop service which covers all of customer demands relating to logistics service of which classifies into 4 business hubs as follows;

	1. Logistics Hub	
	2. Industrial Development Hub	
	3. Utilities & Power Hub	
	4. Digital Platform Hub	

Revenue structure, as recorded in consolidated financial statement of the Company and its subsidiaries during 2017-2019, can be summarized as follows;

Unit: THB mm	2017		2018		2019	
	(Audited)		(Audited)		(Audited)	
<b>Rental, service and utilities income</b>	<b>3,263.7</b>	<b>26.3%</b>	<b>3,279.3</b>	<b>28.2%</b>	<b>3,306.6</b>	<b>24.7%</b>
: Rental and service income from warehouses, distribution centers and factories	1,188.5	9.6%	1,183.1	10.2%	1,048.0	7.8%
: Utilities income	2,075.2	16.7%	2,096.2	18.0%	2,258.7	16.9%
<b>Income from sales of real estate</b>	<b>6,290.1</b>	<b>50.7%</b>	<b>5,130.5</b>	<b>44.1%</b>	<b>7,156.4</b>	<b>53.5%</b>
: Income from industrial land sale	3,210.8	25.9%	2,124.9	18.3%	3,505.0	26.2%
: Income from investment properties	3,079.3	24.8%	3,005.6	25.9%	3,651.3	27.3%
<b>Total income from sales and services</b>	<b>9,553.8</b>	<b>77.0%</b>	<b>8,409.8</b>	<b>72.4%</b>	<b>10,463.0</b>	<b>78.2%</b>
<b>Other income</b>	<b>892.7</b>	<b>7.2%</b>	<b>669.8</b>	<b>5.8%</b>	<b>977.1</b>	<b>7.3%</b>
: Dividend income from Property Fund and REIT & Trust management fee for REIT, and property management fee for Property Fund and REIT	471.6	3.8%	399.6	3.4%	540.7	4.0%
: Other income <sup>1</sup>	421.1	3.4%	270.2	2.3%	436.4	3.3%
<b>Total Revenue</b>	<b>10,446.5</b>	<b>84.2%</b>	<b>9,079.6</b>	<b>78.1%</b>	<b>11,440.1</b>	<b>85.5%</b>
Share of profit (loss) of associates and joint ventures <sup>2</sup>	1,963.5	15.8%	2,542.6	21.9%	1,945.693	14.5%
<b>Total income with share of profit (loss)</b>	<b>12,410.0</b>	<b>100.0%</b>	<b>11,622.2</b>	<b>100.0%</b>	<b>13,385.8</b>	<b>100.0%</b>

**Remark:**

<sup>1</sup> Other income consisted of interest income, gain from sale of short-term investments and others.

<sup>2</sup> Share of profit of associates and joint ventures mainly came from power business.

## Products and services

### 1. Logistic Hub

The Company is committed to be a leading company as a warehouse project developer, distribution center, and high quality factory located in a strategic location around Bangkok, Eastern Economic Corridor, and other provinces. The Company is able to fully meet the needs of its customers due to its project location, project design with international standards and quality of construction. This could reduce the cost of customer operations and increase long-term competitive advantages. Real estate business development and management could be described in accordance with the types of products and the services provided, details are as follows;

a) Real estate development business for rental and service income

1) Warehouse and Distribution Center

- Built-to-suit project
- Warehouse Farm project
- WHA Logistics Parks project (Ready-Built)

2) Factory

- Built-to-Suit Project
- Ready-Built Project

3) Other projects

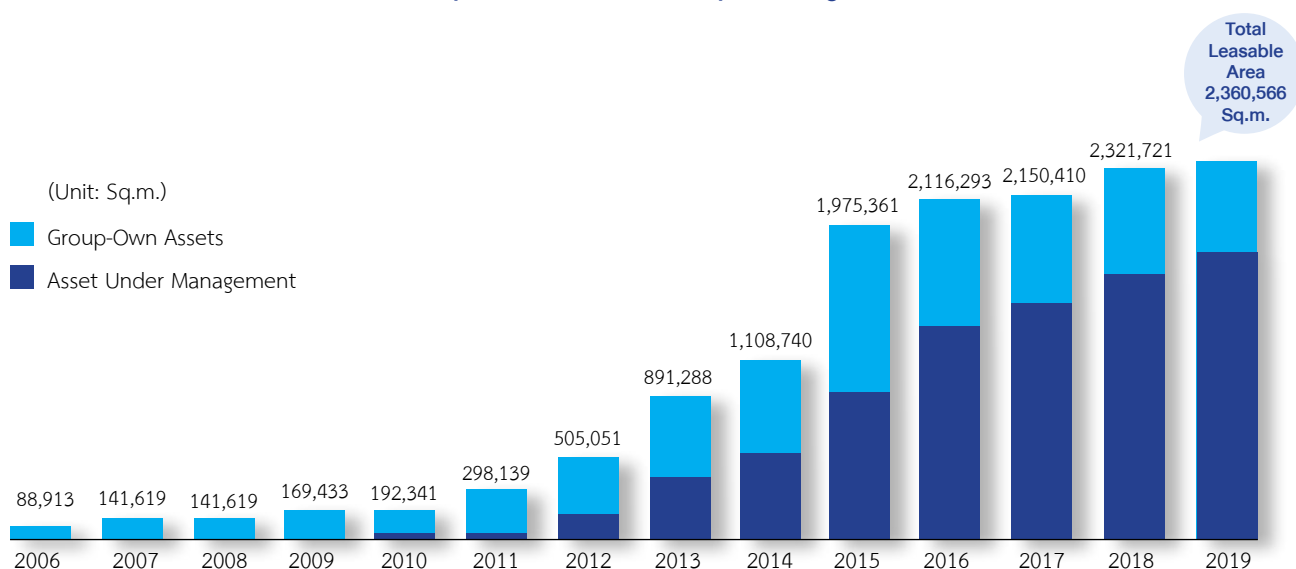
b) Real estate development business for sale

c) Investment and real estate management business

d) Trust management business

Real Estate development and management business is a major source of revenue for the Company. As of year-end 2019, the Company has expended its business in connection to its space rental business and space rental under the Company's management of more than 2,360,566 square meters, as the Company has offered a more variety of project types to its customers.

#### Rental Space Under WHA Group's Management



**Remark:** Total leasable area includes occupied space which generates income, preleased area and to be developed area.

## **A) Real estate development business for rental and service income**

Real estate development business for rental and service income is a real estate development project for the warehouse building, distribution centers, factories in order to rent and provide services to customers who emphasis on quality and high construction standards. They are located in strategic locations in the logistic areas, such as Bangna-Trad km 18-23 Ladkrabang Rama II and areas in the Eastern Economic Corridor project, including provincial cities such as Ayutthaya, Saraburi, Khon Kaen, Surat Thani and Lamphun etc. The Company's projects are located near to industrial estate, industrial area and/or Industrial zone, in providing our customers with competitive landscape. The projects are classified by product type and services offered, details are as follows:

### **1) Warehouse buildings and distribution centers**

- **Built-to-Suit Project**

Built-to-Suit Project is a project development according to the needs of customers. Most of the projects are large-scale building, ranging from 5,000 to 70,000 square meters which were designed and developed to meet complex, variety usage and best suit the need of each customer to give most benefit to their business nature and working procedure. Most of Built-to-Suit contracts are long-term lease with an average rental period between 5 and 15 years, and the tenant shall deposit for contract and service guarantee in cash and/or bank guarantees at the rate equivalent to approximately 3-12 months of rental fee, under the condition that If the tenant cancels the lease contract before the lease expiration specified in the lease agreement, the lessee shall compensate the rent for the remaining lease term to the Company.

- **Warehouse Farm Project**

The Warehouse Farm project is a combination of Built-to-Suit and Ready-Built project with premium quality construction concept. It is a project developed to meet the increasing demand of both existing and new customers. Built-to-Suit buildings in Warehouse Farm are ranged from 5,000 to 30,000 square meters, while Ready-Built buildings in Warehouse Farm are approximately 3,000 to 5,000 square meters. The majorities of Built-to-Suit contract are long-term contracts for more than 5-10 years, while Ready-Built buildings in Warehouse Farm are short-term contract of approximately 3 years term. In addition, the Company provides options for renewal with the same condition as Built-to-Suit project.

Furthermore, the Company also looks after the common area of the projects such as central electricity services, security services, road repair services, public utilities and facilities, etc.

- **WHA Logistics Park**

The WHA Logistics Park project is a high-quality Ready-Built project with the average area ranging from 2,400 to 25,000 square meters per site. The project is located in the logistics center and surrounded by industrial estates. The location is close to the deep sea port, and Eastern Economic Corridor zone which can meet the needs of the customers as well as third party logistics service providers. WHA Logistics Park offers four projects as follows:



Project	Location	Unit Size	Outstanding
WHA Logistics Park 1	Highway No. 331, Chonburi	195 Rai	Located between Laem Chabang Port and WHAID's Industrial Estates. It is only 20 kilometers from the port in Free Zone and the General Zone.
WHA Logistics Park 2	WHA Eastern Seaboard Industrial Estate 1 (WHA ESIE 1) on Highway No. 3574, Rayong	63 Rai	Located in the Free Zone with target customers in the automotive cluster and others.
WHA Logistics Park 3	WHA Eastern Seaboard Industrial Estate 1, on Highway No. 3574, Rayong	18 Rai	Located in General Zone
WHA Logistics Park 4	Nearby Eastern Seaboard Industrial Estate (ESIE), Rayong	63 Rai	Located in General Zone which is the center of Eastern Industrial area

## 2) Warehouse and Factory Buildings

### • Built-to-Suit

The Company has a design and development team with extensive experience in design and construction of various projects. In order to meet the complex needs of our customers. In the design phase, the factory layout will be adjusted to suit with customer's production process, allowing for continuity of the production process and defects reduction. As a result, this project will best benefit our customers in terms of cost reduction and enhanced production efficiency.

### • Ready-Built

Ready-Built project is developed to cater for small and medium-sized industry (SMEs), an average warehouse area ranging from 450 to 10,000 square meters. Most of the projects located in industrial zones and duty free zones in many industrial estates of WHAID Group. Therefore, the Ready-Built buildings will provide customers with greater flexibility, in terms of financial investments as well as business growth opportunities.

Further, WHA Ready-Built Factory Park 1 has an approximate area of 13 Rai, which located in Kabinburi Hi-Tech Industrial Estate, Prachin Buri. (The first factory project located outside WHA Industrial Estate / Industrial Area). The project is located in the middle of Bangkok and the Northeast of Thailand. It is convenient to transport by land, water and air.

## 3) Other projects

### • The projects in which the Group invests for development and lease

The Company plans to acquire the property which has been completely built and/or the property which have been partially built for development and lease. The target property should be in good condition and reasonably priced so that they can be further developed and leased to interested clients (including the existing tenants). This investment will enhance the Company's opportunity to increase the leased space while reducing the construction period. Also, the Company can implement its expertise in space design and improvement to meet the clients' requirements.

- **Office buildings for rent**

The Company has built and developed built-to-suit office buildings for rent for clients who want and/or purchase the fully completed office buildings for rent and/or partially completed property for development and lease. The Company will consider investing in the projects which are in good condition and reasonably priced. This will also help expand the Company's client base.

#### **Examples of design which aims to meet different needs of tenants**

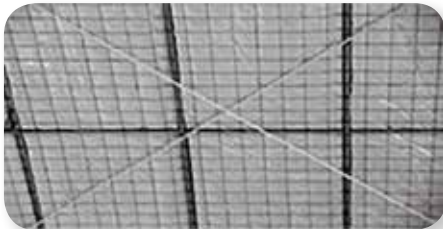
- Interior space design for the most effective inventory turnover
- Determination of the appropriate height of floor and access for large vehicles to facilitate goods delivery and transfer
- Shelf design for flexibility of adjustability of tenant operations to facilitate the product arrangement/ packaging and lessen the mistakes
- Temperature control of both Multi-Temperature and Cold Storage type which enables the control of the quality of the stored products

#### **Examples of project specifications**



##### **Seamless metal sheet roof**

Seamless metal sheet roof helps reduce the problem of leaking through seams.



##### **Insulating roof**

Insulating materials are installed under the roof which consist of ventilation holes to help cooling down the heat within the building and maintain the quality of the stored products.



##### **Natural ventilation system**

Louvers and bird screens installed around the building and the higher position of the roof improve the air circulation within the building.



### Environmental management principles

Infrastructure in the project such as product distribution system, warehouse and production plant have been developed in accordance with the international standards. These include the design of building structure to reduce dust and dirt accumulation and prevention of termites and insects.



### Strong Burnished Floor

The floor structure is made of the specific concrete material which is much stronger than general concrete. Also, the Burnished Floor, which is an innovative technology of surface polishing, is used in the project to prevent scratches from heavy operations and reduce dust accumulation and floor cracks.

## EXAMPLES OF BUILT-TO-SUIT PROJECT



**Project location:** Laemchabang, Chonburi

**Leased space:** 20,000 sq.m.

**Project type:** Distribution center



**Project location:** Bangna-Trad km. 19

**Leased space:** 20,000 sq.m.

**Project type:** Distribution center



**Project location:** Saraburi Province

**Leased space:** 55,000 sq.m.

**Project type:** Plant and distribution center

### Examples of Warehouse Farm Project



Project location: Chonlaharnpichit km. 5  
 Leased space: 64,000 sq.m.  
 Project type: Warehouse Farm



Project location: Ladkrabang  
 Leased space: 90,000 sq.m.  
 Project type: Warehouse Farm

### Examples of Ready-Built Project



Project location: WHA Logistics Park 1



Project location: WHA Logistics Park 2



Project location: WHA Logistics Park 4



Project location: WHA Ready-Built Factory Park 1



## **B) Property development for sale**

The Company has a clear policy to sell the property to Property Funds or Real Estate Investment Trusts to generate capital resources for development of the Company's future projects. However, the sale of property to Property Funds or Real Estate Investment Trusts requires an approval from investment unit holders, and the Company, as one of the investment unit holders of Property Funds or Real Estate Investment Trusts, is not eligible for casting votes. In addition, the sale the Company's property depends on other uncontrollable factors such as the market situations which affect the capital raising of Property Funds or Real Estate Investment Trusts. Nevertheless, the Company may consider selling the certain property to support the needs of capital use and the investment policy of the Company.

The Company will select the property to sell to Property Funds or Real Estate Investment Trusts on the basis that such property has to be completely developed and fully eligible for sale according to the investment policy of Property Funds or Real Estate Investment Trusts and the relevant laws and regulations. The quantity and the size of the projects to be sold to Property Funds or Real Estate Investment Trusts will be determined based on the amount of capital in need for the expansion of the new project or the profits expected to be received from the sale.

In 2019, WHART has additionally invested in 5 projects of the Group. This investment results in WHART having the total of 29 projects under its investment as at 31 December 2019, amounting for 1,283,351 sq.m. of the leased space in buildings and 423,601 sq.m. of roofed leased space. The overall value of assets is THB 38,154 mm.

Furthermore, in 2018, Hemaraj Leasehold Real Estate Investment Trust ("HREIT") raised capital by issuing and offering the investment units for sale for investing in the leasehold of another 55,131 sq.m. of the finished factory buildings and warehouses within WHA industrial estates/industrial zones. HREIT finished its additional investment on 4 January 2018. In December 2018, HREIT had additional investment in leasehold factories located in industrial zone of the company comprising area of 15,916 sq.m., resulting in HREIT having 332,505 sq.m. of the leased space and the total value of assets as at 31 December 2019 of THB 9,914 mm.

Also, the Company plans to sell the developed projects to the third parties, especially the current tenants of the projects, which will increase the Company's income.

## **C) Real Estate investment and management**

The Company plans to invest in the real estate business through Property Funds or Real Estate Investment Trusts in the proportion of not over 20 percent of all investment units for consistently gaining the dividends every year. However, the decision to invest in Property Funds or Real Estate Investment Trusts depends on the needs of capital and the amount of money raised by the sale of assets to Property Funds or Real Estate Investment Trusts at the time. Therefore, the investment in Property Funds or Real Estate Investment Trusts may be different from the indicated policy. In addition, the Company has been appointed as the manager of real estate for the assets of Property Funds or Real Estate Investment Trusts, from which the Company receives the income for management of the real estate of Property Funds or Real Estate Investment Trusts for investment in the real estate.

## **D) Real Estate Investment Trusts Management**

The Company has established WHA Real Estate Management Co., Ltd. as a subsidiary for conducting the business related to WHART management and established Hemaraj REIT Management Co., Ltd. to manage HREIT. The two companies receive the management fee on annual basis as well as the fee for acquisition and distribution of assets according to the asset value.

## Summary of the projects of the Group of Companies and the projects of the Property Funds or Real Estate Investment Trusts

(The area of the completed projects and the projects under construction as of 31 December 2019)

Unit: square meters

Project status	Group	WHART	HPF	HREIT	WHABT
Completed projects	210,124	1,283,351	150,117	332,505	30,215
Projects under construction	50,010	-	-	-	-

## 2. Industrial Development Hub

Industrial Development Hub is operated through the Company's subsidiary, with WHAID Group responsible for developing Industrial estates and/or zones and selling of land to enterprises who demand to make their investment in Industrial estates/zones and Industrial Promotional zones. Enterprises can gain special privileges provided by Industrial Estate Authority of Thailand and/or Thailand Board of Investment. Another crucial role of WHAID Group is to act as a center for providing utilities and facilities for clients inside the Industrial Estate e.g. electricity, water supply, wastewater treatment, waste disposal, telephone, internet and coordinating with the authority on environmental control.

By the end of 2019, there are 10 industrial estates and industrial zones summarized in the following table:

Industrial Estate/ Zone			Location	Project size (Rai)	Prominent Features
1.	WHA Chonburi Industrial Estate 1	WHA CIE 1	Sriracha, Chonburi	3,482	This industrial estate is situated at general industrial zone and industrial zone particularly for export. Major customers are comprised of heavy steel, energy, automotive parts, electrical parts, and building materials.
2.	WHA Chonburi Industrial Estate 2	WHA CIE 2	Sriracha, Chonburi	632	This industrial estate is located near to an accessible highway i.e. a new highway no. 331 and highway 3241, linked to Laemchabang Port which is good for transportation and shortly connected to Sriracha district which is roughly 25 km away.
3.	WHA Eastern Industrial Estate (Map Ta Phut)	WHA EIE	Map Ta Phut, Rayong (connect with National Petrochemical Complex)	3,760	This industrial estate is catered for some heavy industries including steel, petrochemical and chemical. This industrial estate is equipped with large-scale utilities with a capability to distribute untreated water, clarified water, tap water, high voltage electricity and wastewater treatment system. Apart from large-scale utilities, this industrial estate has additional services provided such as Electricity procurement, water steam, demineralized water for industries and pipe installation system for liquid and gas transportation.

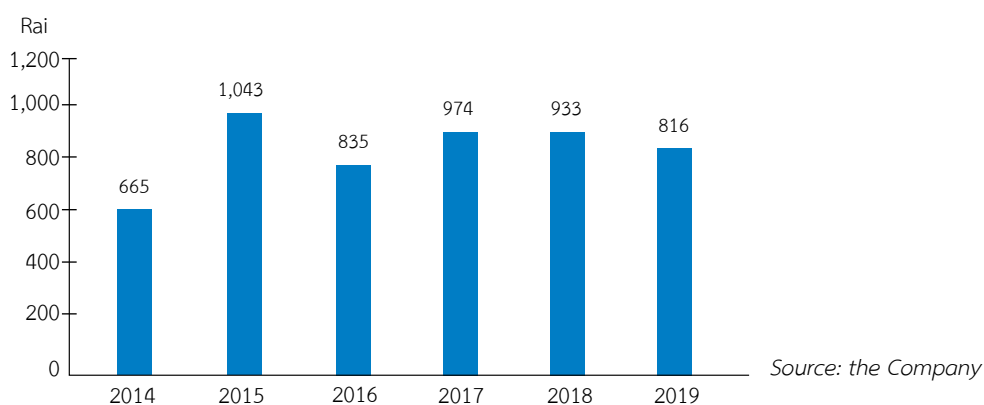
Industrial Estate/ Zone			Location	Project size (Rai)	Prominent Features
4.	Eastern Seaboard Industrial Estate (Rayong)	ESIE	Pluakdaeng, Rayong	9,688	This industrial estate is a joint venture between WHAID Group and Siam Food Products PCL, with a proportional of 60:40 respectively. It was established in 1995. This industrial estate is proclaimed to be a fully-integrated industrial hub and one of the world's largest automotive cluster, occupied with major automobile manufacturers together with more than 100 downstream automotive manufacturers, most of which are the world's most renowned automobile brands. This industrial estate has become the central hub of automotive production with a combined capacity contributing to one-third of Thailand's total automotive production.
5.	WHA Eastern Seaboard Industrial Estate 1	WHA ESIE 1	Pluakdaeng, Rayong	8,003	The industrial estate is connected to Eastern Seaboard (Rayong) Industrial Estate (ESIE), easily commutable by car. Additionally, ESIE is only 12 km from WHA Chonburi Industrial Estate 1 (WHA CIE 1). This industrial estate is a cluster for automobile manufacturers and automobile downstream industries.
6.	WHA Saraburi Industrial Land	WHA SIL	Nong Kae, Saraburi	3,619	This industrial zone is catered for building materials, ceramics, paper, packaging, metal, and electricity industries.
7.	WHA Rayong Industrial Land	WHA RIL	Bankai, Rayong	3,438	This industrial zone is for machinery, automotive equipment, electrical metals and other downstream industries. At the present, this industrial zone has a strategic location in the eyes of domestic and foreign industrial enterprises. It is considered to be the production base for industrial machinery, mining, and construction materials, exported worldwide.
8.	WHA Eastern Seaboard Industrial Estate 2	WHA ESIE 2	Sriracha , Chonburi	3,650	This industrial estate is located approximately 25 km from Laemchabang port and close to automotive cluster which is in WHA Industrial Estate such as WHA CIE 1, WHA CIE 2, ESIE and WHA ESIE 1. Customer groups include automobile manufacturers and downstream manufacturers.

Industrial Estate/ Zone			Location	Project size (Rai)	Prominent Features
9.	WHA Eastern Seaboard Industrial Estate 4	WHA ESIE 4	Pluakdaeng, Rayong	1,870	This industrial estate is for Next-generation Automotive, Aviation and Logistics, Robotics and Automation industry and easily access to highway no.3578, only 20 km. from WHA ESIE 1 & ESIE.
10.	WHA Eastern Seaboard Industrial Estate 3	WHA ESIE 3	Nongyai, Chonburi	2,198	This industrial estate is an industrial promotion zone that will serve investors in next generation industries such as Next Generation Automotive, Robotics and Automation, Aviation and Logistics.

At the end of 2019, WHAID Group is managing 8 Industrial Estates and 2 Industrial Zones in Thailand, together with an undeveloped land bank, totaling to 48,897 Rai, with a total 818 customers, and over USD 33,000 mm has been invested by our clients in the industrial estates/ zones. WHAID Group is targeting at customers who require a full service solution i.e. Industrial Estate fully equipped with utilities, power, capable to heavy production manufacturer, with good supporting infrastructure e.g. automobile industries, petrochemical industries, steel industries, energy industries etc.

Complimenting to WHAID Group's full services solution, the figures of land sale have been increasing steadily. In 2018 and 2019, land presale in industrial estates/ zones added up to 933 Rai (excluded MOU and LOI in Thailand and Vietnam of 43 rai), and 816 Rai (excluded MOU and LOI in Thailand and Vietnam of 195 rai) , contributing to a land sale revenue of approximately THB 2,124.9 mm and THB 3,505.0 mm, respectively. WHAID Group is still having a land bank for future development of approximately 10,400 Rai plus another 3,110 rai in Vietnam (Nghe An Phase 1, milestone 1). WHAID Group is now considered to be the largest industrial estate developer in Thailand, with accumulated land presale from 2014 to 2019 of 5,266 Rai constituting to approximately 48% of a total market share.

**Land presale in industrial estates/ zones of WHAID Group**





### Details of Industrial Estate Zoning

WHAID Group categories its industrial estates and industrial zoning into 6 different zones, in according with its use of land, details are as follows:

Zoning by Usage	Definition of Each Zoning
General Industrial Zone	The zone is designated for industrial and industrial-related activities.
Free Zone / Export Processing Zone-EPZ	The zone is designated for industrial, commercial operations and other related-activities, which are beneficial to the nation as a whole. Import duties on machinery under the Free Zone Economic are tax exempted.
Commercial Zone	The zone is designated for commercial operations including banks, post office, hospital, gas station and educational institution etc.
Residential Zone	The zone is designated for residential area such as apartments, condominiums and houses etc.
Logistics Zone	The Zone is designated for construction of warehouses or factories for rent in relation to logistic business.
Common Area and Public Utility System	The area is designated for construction of public utility and public infrastructure such as road, water supply system, waste water treatment system, reservoir, public parks etc.

Moreover, WHAID Group has established WHA Industrial Zone Nghe An Joint Stock Company to develop WHA Industrial Zone Nghe An, Vietnam, covering the potential area of 3,200 hectare (20,000 rai) which was approved the investment registration to develop first phase on the area of 498 hectare (3,110 rai). The Group has developed first milestone of the first phase covering 145 hectare (906 rai) which all of them substantially completed and available for potential customers by end of 2019.

### 3. Utilities & Power Hub

Utilities & Power Hub is operated through the Company's subsidiary, WHAUP Group, the provider of utilities in the WHAID Group's industrial estates/zones i.e. raw water, industrial water, and wastewater treatment. WHAUP Group is also into power business, through joint ventures with both domestic and foreign power plants, who have expertise in the power business field. Our power plants include both Conventional Fuel and Renewable Fuel power plants.

## A) Utilities

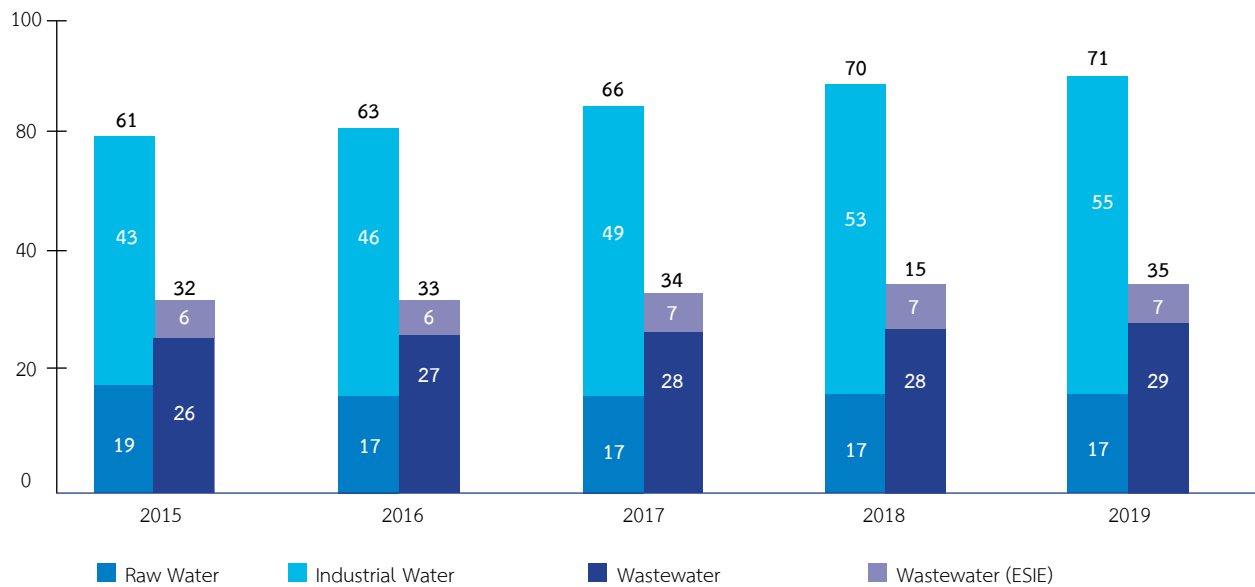
can be categorized as follows:

Products and Services	Prominent Features
1. Raw Water	Procuring and distributing raw, untreated water to enterprises in WHAID Group's Industrial Estate with focusing mainly on heavy steel manufacturers, Independent Power Plant Producers (IPP), and Small Power Plant Producers (SPP).
2. Industrial Water	<p>Producing and distributing industrial water to enterprises in industrial estate which can be divided into two main categories as followings:</p> <ol style="list-style-type: none"> <li>(1) Processed Water – Purified water through precipitation, filtration, and sterilization with Chlorine. Target customers include automobile manufacturers, automobile part manufacturers, food processing manufacturers, electronic manufacturers etc.</li> <li>(2) Clarified Water – Purified water through precipitation, filtration, and sterilization with Chlorine (adding higher Chlorine concentration compared to the processed water). The Concentrated Chlorine Solution added to the clarified water will evaporate prior to distributing to the customers, as it can be ensured that the Chlorine will not be eroding customers' machinery. The target customers include heavy metal industries, petrochemicals and power plants.</li> <li>(3) Demineralized Water – Demineralized water is the highly pure water used in some industry such as Power plant, Petrochemical, Electronics etc. WHAUP has started to sell the Demineralized water in 2019.</li> </ol>
3. Wastewater Treatment	Providing wastewater treatment for customers inside the industrial estates in compliance with the Ministry of Industry, prior to draining into the natural water resource or recycling to be reuse in the production process.

Currently, WHAUP Group is one of the largest utilities providers in Thailand's industrial estates, with water production capacity of 284,976 m<sup>3</sup>/Day and waste water treatment capability of up to 150,956 m<sup>3</sup>/Day. In 2018, WHAUP Group has sold raw water and industrial water on an average of 192,927 m<sup>3</sup>/Day. Moreover, WHAUP Group has been treating wastewater on an average of 97,192 m<sup>3</sup>/Day.

### Utilities Production by WHAUP Group

(Unit : million m<sup>3</sup> per year)



Furthermore, WHAUP Group is on plan to offer enterprises with other utilities such as gas pipeline and waste disposal. Moreover, WHAUP Group also plans to expand its business outside the industrial estates, providing utilities to clients outside the industrial estates. WHAUP Group is certified by International Organization for ISO 9001:2008 and ISO 14001:2004 (environmental standards).



## B) Power

a joint venture power plant projects with highly-skilled enterprises who currently are in the power business, generating electricity via conventional fuel and alternative fuel. As of 31 December 2018, WHAUP Group has a combined electrical generating capacity of 521 Shareholder Equity Megawatts and another 43 Shareholder Equity Megawatts are still under-construction. Details are as follows:

Power Plant Project	Location	Fuel Type	Power Produce Type	Investment Proportion	Total Installed Capacity			Capacity by shareholding proportion		COD
1) Operated Power Plant Projects (Already-COD)										
Joint Venture Projects with Glow’s Group										
Gheco-One	Industrial Estate Map Ta Phut	Coal	IPP	35.00%	Electricity	660	MW	231	MW	Aug 2012
Glow IPP	WHA CIE	Combined-Cycle Power Plant with Natural Gas	IPP	5.00%	Electricity	713	MW	36	MW	Jan 2003
Houay Power	Lao PDR	Hydro Power	IPP	12.75%	Electricity	152	MW	19	MW	Sep 1999
Joint Venture Projects with Gulf’s Group										
Gulf JP NLL	WHA RIL	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	123	MW	31	MW	May 2013
					Stream	8	TPH	2	TPH	
					Cold water	4,600	RT	1,150	RT	
Gulf Solar KKS	WHA PL1	Solar Power	VSPP	25.01%	Electricity	0.25	MW	0.06	MW	Dec 2014
Gulf Solar BV	WHA CIE	Solar Power	VSPP	25.01%	Electricity	0.13	MW	0.03	MW	Jun 2014
Gulf Solar TS1	WHA ESIE 1	Solar Power	VSPP	25.01%	Electricity	0.13	MW	0.03	MW	Aug 2014
Gulf Solar TS2	ESIE	Solar Power	VSPP	25.01%	Electricity	0.09	MW	0.02	MW	Jan 2015
Joint Venture Projects with Gunkul Engineering’s Group										
WHA Gunkul Green Solar Roof 17	WHA Mega Logistic Center Wangnoi 61 Ayuthaya	Solar Power	VSPP	74.99%	Electricity	1.00	MW	0.73	MW	Jul 2014
WHA Gunkul Green Solar Roof 3	WHA Mega Logistic Center Bangna-Trad Km.18	Solar Power	VSPP	74.99%	Electricity	0.83	MW	0.62	MW	Apr 2014
WHA Gunkul Green Solar Roof 6	WHA Mega Logistic Center Bangna-Trad Km.18	Solar Power	VSPP	74.99%	Electricity	0.83	MW	0.62	MW	Apr 2014
WHA Gunkul Green Solar Roof 1	WHA Mega Logistic Center Bangna-Trad Km.18	Solar Power	VSPP	74.99%	Electricity	0.64	MW	0.48	MW	Apr 2014

Power Plant Project	Location	Fuel Type	Power Produce Type	Investment Proportion	Total Installed Capacity			Capacity by shareholding proportion		COD
Joint Venture Projects with B Grim Power’s Group										
B.GRIMM Power (WHA) 1	WHA CIE 1	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	130	MW	33	MW	Nov 2016
Joint Venture Projects with Gulf MP’s Group										
Gulf VTP	ESIE	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	137	MW	34	MW	May 2017
					Stream	20	TPH	5	TPH	
Gulf TS1	ESIE	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	134	MW	34	MW	Jul 2017
					Stream	30	TPH	8	TPH	
Gulf TS2	ESIE	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	134	MW	34	MW	Sep 2017
					Stream	30	TPH	8	TPH	
Gulf TS3	WHA ESIE 1	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	130	MW	32	MW	Nov 2017
					Stream	25	TPH	6	TPH	
Gulf TS4	WHA ESIE 1	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	130	MW	32	MW	Jan 2018
					Stream	25	TPH	6	TPH	
Gulf NLL2	WHA RIL	Cogeneration System with Natural Gas	SPP	25.01%	Electricity	127	MW	32	MW	Jan 2019
					Stream	10	TPH	3	TPH	
CCE	WHA CIE	Waste-to-energy	VSPP	33.33%	Electricity	8.6	MW	2.9	MW	Nov 2019
Solar Rooftop	-	Solar Power	Private PPA	100%	Electricity	6.0	MW	6.0	MW	Nov 2018-Dec 2019
Total					Electricity	2,588	MW	559	MW	
					Stream	148	TPH	38	TPH	
					Cold water	4,600	RT	1,150	RT	
2) Power Plant Projects (Under Construction)										
Solar Rooftop	-	Solar Power	Private PPA	100%	Electricity	24.8	MW	24.8	MW	1Q-3Q 2020
Total					Electricity	24.8	MW	24.8	MW	



## 4. Digital Platform Hub

WHA Group offered Digital Platform services through its subsidiary, WHA Infonite Company Limited which was granted NBTC internet services (type 1) by office of The National Broadcasting and Telecommunications Commission, and currently is in the process of submitting for NBTC (type 3), an operating license for a mass telecommunication service provider. The offered services are described as follows:

### A. Data Center

A dedicated space for rent to house computer systems and associated components, such as telecommunications and storage systems, with a world-class standard, a high-security operating system, an experienced consultant service in accordance with the information security management system ISO/IEC 27001: 2013. A customer will prepare a server and lease out a storage space in our data center. Currently, WHA Group has 4 operating data centers, 3 of which are constructed in equivalent to Tier III data center standard and start operation since late 2017. In 2018, WHA Group has acquired 15 percent equity stake in Supernap (Thailand) Company Limited, operating a Tier V Gold standard data center located in Chonburi Province. All of the data centers are to be connected with high-speed fiber optic, enabling the customers to conveniently access to the data center from their working stations and/or offices. The data centers are to obtain a world-class standard, in which electricity backup generators are installed in order to prevent from downtime, 24-hours ambience monitoring i.e. controlled temperature and humidity, allowing server to function efficiently together with longer machine life expectancy, 24-hours onsite staffs and security guards, installation of security cameras and fire alarm. Data centers are also designed to support as a Disaster Recovery site. Data centers are looked after by expertise with more than 20 years of working experience in the field, who is certified with Certified Accredited Tier Design from Uptime Institute. Last but not least, 24-hours Business Continuity Plan (BCP) is provided on-site in order to assist our clients to manage their IT system contentedly.

WHA Group is currently providing data center service as an infrastructure service, known as co-location. Co-location service is for corporations, government entities or state enterprises, who are looking for a dedicated space for rental server hosting services to be used as main site and back up (Disaster Recovery) site in order to prevent company's database from any unexpected situation or natural disaster that might cause damage to customer's main sites

In 2019, the Company has introduced the management of renewable energy by installing the Solar Rooftop at the Data Center located at Bang Na Trad Km. 1. Such solar rooftop is considered the first and the only place in Thailand that uses renewable energy in the Data Center. In 2020, the Company will request for the Certified PCI-DSS "Payment Card Industry Data Security Standard", standard for customers' financial transactions, for financial and banking customers to build trust among customers and storing financial information.

## B. Fiber Optic FTTx Service

WHA Group has invested in laying of the fiber optic network (FTTx) in WHA Group's industrial estates, providing infrastructure to support high-speed connection for clients in industrial estates. Service operators have no longer need to invest in the FTTx infrastructure. Our clients in industrial estates can now enjoy a better high speed connection with their head quarter/office branches all over the world, through an enhanced network security system. FTTx network is a fundamental communication service with high speed and high security, allowing for various communication types such as images, sounds and data.

In 2019 the Company has laid the fiber optic network (FTTx) in seven WHA Group's industrial estates namely WHA CIE2, ESIE, WHA ESIE1, WHA ESIE2, WHA ESIE4, WHA EIE and WHA SIL. There are several service providers interested in providing their services through the Company's fiber optic network, i.e. CAT, TOT, TRUE, UIH, SYMPHONY, INTERLINK, AWN which is benefit for industrial estates customers in having alternatives with reasonable price and service providers. In 2020 the Company plans to further lay the fiber optic network in all other WHA Group's industrial estates.

## C. Managed Services

A full service of system and technology management provided to organizations, such as IT hardware, software, and/or solutions procurements, technical team recruitment, and IT system planning. The Company has various kinds of managed services to offer for customers' extended needs as following.

### ● IT Outsourcing and Business Process Outsourcing (BPO)

A service provider to deliver IT-enabled business process, IT human resources, applications and infrastructure solutions to enhance our clients' business outcomes. WHA Group can assist our clients outsourcing their IT facilities, enabling for an efficient IT resource management, thus reducing their overall IT expenses. The service is popular among clients in industrial estates, due to the fact that most of the clients are foreign manufacturing companies. These groups of clients have their expertise on the production facilities while IT department is considered as their supporting business unit. Thus, this group of clients would gain most benefits from our IT outsourcing service.

The Company has started to provide IT outsourcing services to automotive customer, and has a plan to expand its IT outsourcing and BPO services to target customers in banking and other industries who would like to improve their efficiency and reduce cost.

### ● System Integration Service

The Company gives advice, designs, acquires, implements, maintains and brings together IT component subsystem in providing a comprehensive IT solution for our clients. The Company will be taking care throughout the whole process from design, installation, implementation and training as well as system maintenance throughout the lifetime, or other as agreed.

The Company has various business partnerships to increase diversity in products and services, hardware, software, applications, and new technology, to meet customers' needs such as DELL, HP, HITACHI, CISCO, ADVA, HUAWEI, SAMSUNG, ORACLE, RUBIX, CHECKPOINT, etc.

### ● Cloud Services

Cloud services are innovative services on top of the data center infrastructure service, co-location service. The Company will provide computer resources, both hardware and software, and computer network preparation, along with a team of experienced professionals who have been certified by world-class agencies such as Dell Certification, Hitachi Data System Certification, VM Ware Certification and OpenStack Certificate, to provide advice and control the computer network system for customers. This is to serve customers who want to reduce the cost of purchasing IT equipment, applications, software, and system maintenance. Cloud services will be an alternative for organizations with no expertise or IT personnel. The company has divided cloud services into 3 types as follows:

- 1) Infrastructure as a Service (IaaS) is the service that provides infrastructure such as virtualized server, storage, network and firewall. WHA Group helps customer to reduce number of physical servers, to monitor IT security system as well as to provide high-speed internet network. WHA Group will be responsible for an investment on IT infrastructure and the maintenance of the system, given the benefit to the clients in reducing their IT expenses, enabling for an efficient management of the IT resources in the most cost-effective manner.
- 2) Platform as a Service (PaaS) is a service suitable for corporations with IT professionals, who are able to develop their own applications or those who need to develop complex applications. WHA Group will prepare IT infrastructure and application developing software e.g. hardware, operating system, middleware, database, software development tools and database. The service enables clients to effectively manage their IT resources, minimize the set-up time and having no need to invest on IT infrastructure.
- 3) Software as a Service (SaaS) is a service of pay-per-use or renting of software/applications, via the utilization of WHA Group's data processing units. Clients do not need to invest on IT system, not to mention hardware nor software because the software/applications provided are on cloud which can be accessed from anywhere via web browser or internet connection. All of the data processing is done through WHA Group's server. Examples of SaaS are Email on cloud, Anti-Virus, Firewall, Information back up system and Workflow cloud based ERP. SaaS facilitates smooth operations connectivity and enables a fully-automated workplace. Switching to SaaS can enhance operation efficiency, allowing for an in-depth data analysis. It is highly recommended for a corporation with high growth potential, as it enables a comprehensive business solution.

### ● Rental/Leasing IT Equipment and Software

The Company will rent or lease out IT hardware, software, and IT peripheral to clients, as well as looking after of the maintenance of the rented or leased out equipment as contracted for 3 to 5 years or as agreed upon. Clients will benefit from after sale service such as having expert IT consultants, equipment sourcing, system maintenance which can best suit clients' requirements at the most cost effective manner. Clients do not need to have a huge investment on the IT equipment.

## Benefits from the Board of Investment of Thailand (BOI)

As at 31 December 2019, WHA Group has received the benefits from the Board of Investment of Thailand (BOI) for activities as follows:

- **The Company's subsidiaries have received the benefits from the Board of Investment of Thailand (BOI) totally 74 certificates for activities as follows;**

Type of Business	Amount of certificates
- Building factories and warehouses activities	51
- Real estate development for industrial	15
- Logistics parks	1
- Public utilities and basis services Production of tap water or water supply for industry	5
- Data Center activities	2

Significant privileges consist of:

- 1) Tax exemption on the profit that the Company gains for 8 years since the first date of revenue generated. If the Company has loss from the operation, BOI allows the Company to deduct the loss from the profit that might occur in another 5 years after BOI expiry date. In addition, the Company can also choose to deduct the loss in one year or multiple years combine.
- 2) Tax exemption on the profit that the Company gains (no more than 100% of the finance cost that is not included in land cost and working capital that have 7 years of useful life). If the Company has loss from the operation, BOI allows the Company to deduct the loss from the profit that might occur in another 5 years after BOI expiry date. In addition, the Company can also choose to deduct the loss in one year or multiple years combine.
- 3) Tax exemption on the profit that the Company gains (no more than 100% of the finance cost that is not included in land cost and working capital that have 8 years of useful life). If the Company has loss from the operation, BOI allows the Company to deduct the loss from the profit that might occur in another 5 years after BOI expiry date. In addition, the Company can also choose to deduct the loss in one year or multiple years combine.
- 4) The Group does not need to include dividend received from a BOI-promoted entity to calculate the income tax expense during the exemption period.
- 5) Tax deduction (50% of normal rate) on net profit within 5 years after the end of the right period as mentioned in 1 above.
- 6) Two times deduction on travel, electricity, and water supply cost within 10 years starting from the date that the Group receives its first profit from the operation.
- 7) Deduction on investment cost (25% of investment cost that is not included in the normal depreciation rate).
- 8) Import duty tax exemption on machinery, as per Board of Investment of Thailand's (BOI) approval

## Marketing and Competition

### 1. Real estate development and management business

The Company realizes the importance of creating value to tenants in terms of logistics cost management by understanding clients' specific needs and models of business to develop and design special projects. We select the location which address clients' needs and hand over the project in timely manner under reasonable rents so that tenants can rest assured that, by renting the projects, the logistics management will be more effective, which results in the Company being trusted and winning biddings for several projects. To maintain its leadership in real estate development and management and sustainable growth, the Company has implemented the following business strategies:

- **Business strategies**

- 1) **Domestic and International Expansion in CLMVI and China Linkage**

WHA Group is striving to develop Built-to-Suit projects to meet the needs of domestic clients and tenants while emphasizing on quality, expertise, experience, and long-term reputation of the Company. The Company also aims to extend credentials to capture new demand in strategic logistics locations such as Bangna-Trad and EEC provinces by leveraging on WHA's premium brand, solid track record of high quality standards. Regarding international markets, the Company currently has a footprint in Indonesia for built-to-suit project to serve multinational clients. WHA Group also plans to expand and look for business opportunities in CLMVI countries and China linkage since these countries have a large and growing population especially labors while the labor cost is quite competitive and the economic growth rate is still high. In order to do this, the Company targets to reap benefit from group-wide synergy for business expansion in CLMVI, especially Vietnam in which WHA Industrial Development Plc. has already had a strong foundation. In additions, WHA will leverage on existing relationship with our clients and establish partnership with foreign partners with experiences and footprint in target countries to explore international opportunity.

- 2) **Focus on High-Growth Industries as well as the Government Promoting Sectors**

WHA Group emphasizes on High-Growth Industries e.g. E-Commerce, Healthcare sector, Aviation and Aerospace, automotive and food processing. The Company also aims to capture opportunities from EEC and other government's policies specifically an upgrade of Thai's industry clusters to be future industries (S-Curve Industries or High-value Industries) and those infrastructure development investment or upgrade projects e.g. High-speed Rail, Sea Port, Airport.



**3) Emphasis on Disruptive Technology and Innovative Practices Embrace**

WHA Group will continuously improve its products and services in order to stay ahead of the competition. The company aims to create digital innovation by embracing disruptive technologies such as Internet of Things (IoT), automation, robotics, big data to offer new and value-added products and services to customers. In particular, WHA Group is currently studying smart warehouse and logistics 4.0 concept. The Company will also implement innovative practices in terms of business, financial and construction to create new business model as well as increase the Company's productivity, efficiency and reliability.

**4) Long-term Partnership with Global/Regional Players Establishment**

WHA Group has been focusing on establishing long-term and mutually beneficial partnerships with global and regional players. The Company plans to escalate relationship with existing customers and key players in E-Commerce sector, Third-party Logistics (3PLs) sector as well as other Thai and multinational corporations to expand business opportunities both domestic and internationally.

**5) Organization and People Development**

WHA Group emphasizes on organization and people development to create a strong foundation for the Company's sustainable growth. The Company prepares 5-year manpower plan to align with WHA Group's business plan and strategy. During the past years, the Company has completed numerous people development programs to develop employees' well-rounded skills and enhance employee engagement. Apart from maximizing WHA Group synergies, the Company plans to leverage on digital technology to transform organizational activities and processes as well as create key competencies such as real-time information, data-driven decision, and operational efficiency improvement.

● **Target Customers**

**1) Domestic and international manufacturers and distributors of products, including**

- a. International manufacturers and retailers who need and realize the importance of complicated and high-quality of distribution center. Also, these multinational companies are in need of the business operators whom they can trust in terms of quality, cost, delivery time, and pre- and post-delivery service. Therefore, these companies express their interest in renting the projects from professional business operators more than other groups of tenants.
- b. Domestic manufacturers and distributors are the tenants who see the importance and are in need of the logistics system development. In the past, these tenants built and managed the inventory, product distribution centers and plants by themselves, which require high costs but generate low efficiency. At present, these clients choose to use outsourcing service (this trend has occurred in Australia, USA and Japan) to increase competitiveness to an international level.

**2) Third Party Logistics providers (3PLs)**

Most of this group of clients are leading international companies who have expertise in logistics management. They manage distribution and transportation of the goods which are not the main business or ability of the owners. These companies will invest in the creation of product distribution network from the provision of vehicles, warehouse, operators, equipment, and operation supporting system.

### 3) Electronic Commerce Business (e-Commerce)

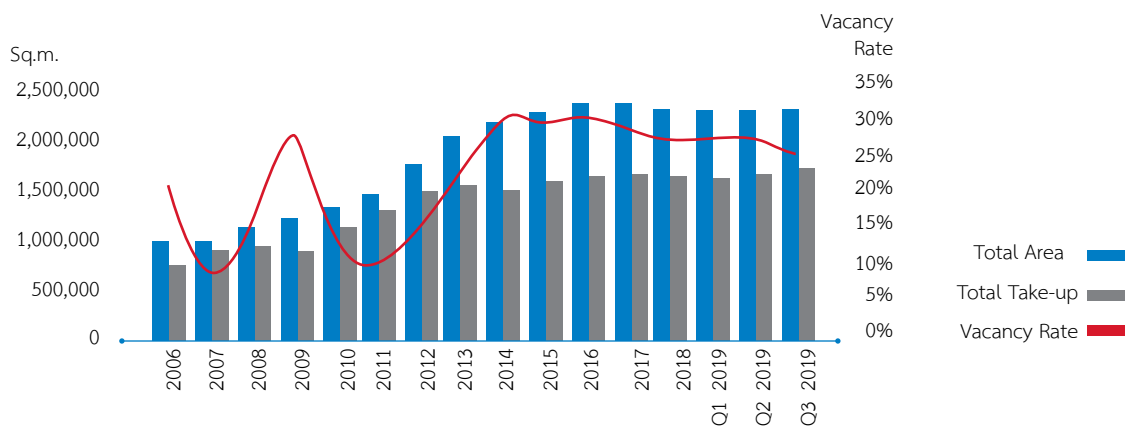
Currently, most of business operators both domestic and international use technologies or electronic tools to help them sell products. Thus, Technologies play the important role in the ease of selling products, fasten delivery time, decrease cost of selling channels, and increase its efficiency. This increase the demand in warehouse and distribution center in strategic locations where they can distribute their products promptly.

#### • Industry situation

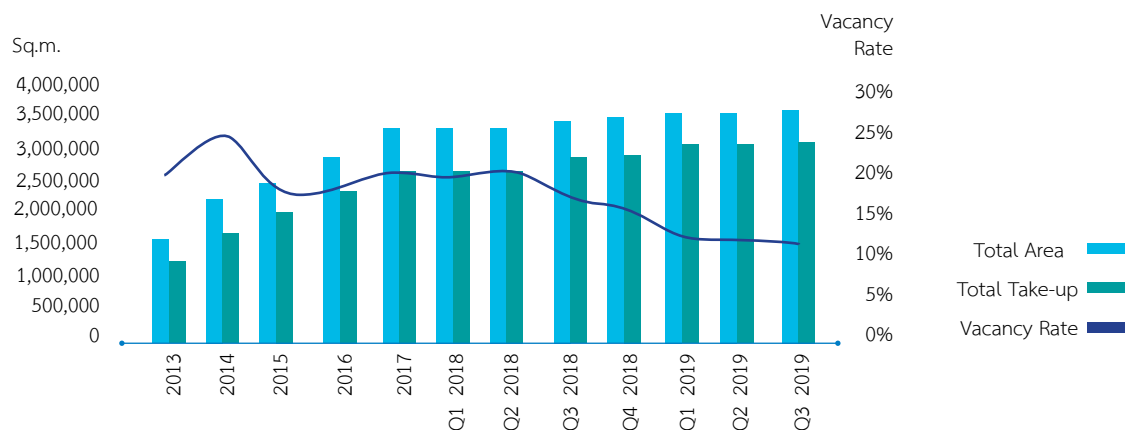
Logistics business is very important for business operators as well as national development. Thailand also realizes the importance of logistics and is established as the logistics hub to support the ASEAN Economic Community (AEC). In addition, the Eastern Economic Corridor (EEC) Policy encourages Thailand to develop the national logistics system at regional and international level to increase the competitiveness and to support the ASEAN Economic Community (AEC).

To increase the competitiveness of business operators and to support the ASEAN Economic Community (AEC), therefore, the government is trying to push forward the development of infrastructure which supports the multimodal transport focusing on the cost-effective transport, rail transport and regional and international link. Also, the efficiency of Supply Chain Optimization of the industrial sector is also emphasized.

**Demand of Factory for Rent**



**Demand of Warehouse for Rent**



In 2019, Thailand's manufacturing and export sector has been affected by US-China trade war, as a result, the net flow of Foreign Direct Investment into the manufacturing sector decreased during third quarter 2019. However, the trade tension had positive impact to industrial rental market both (factory and warehouse) as many Chinese companies decided to move their production base to Thailand to diversify and avoid the US-China tariff.

In the third quarter of 2019, supply of the factory space have been consistently increasing while the demand has slightly dropped comparing to the same period of previous year. In addition, supply and demand of warehouse space have been steadily increasing. The vacancy rate decreased as the business operators have built new warehouses and plants to support the demand which was expected to be higher as a result of EEC and the relocation of Chinese manufactures due to the US policy (US-China Trade Wall).

In addition, the supply of warehouses, distribution centers and plants for rent are still available partly because of positive impact from US-China Trade Wall (as mentioned above) and the improvement of the national economy and by international business operators who wish to control the capital invested in the activities which are not the main business of the companies which do not have much expertise or high management cost as they do not benefit from the economies of scale. Most of the multinational companies do not want to hold ownership over the warehouses and plants, which limits the risks which may occur during the uncertainty of investment and demand of products and services of the Company. Furthermore, Thailand has advantage in terms of logistics because of high-quality utility system, location, labor skills, and banking and financial system, as well as the investment development and promotion plan of the government which will enable Thailand to continue being the logistics hub of the region.

Business owners in Thailand are also becoming increasingly interested in using various logistic services. These business owners usually do not want to invest in real estate that is not part of their main activity because it is costly and time consuming. They will also need to put their investments in developing information technology, transport vehicle, and personnel. Furthermore, they do not have the expertise to invest and develop real estate by themselves. Therefore, companies in the industry expects that someone with the expertise and experience in real estate to develop projects and provide them with the services they need.

## • Competition

### Direct competition from other developers

There is currently a small number of warehouse, distribution centers, and high quality factory for rent developers which are located in the same strategic location as the Company. These other developers include Frasers Property (Thailand) Public Company Limited (former "TICON Industrial Connection Public Company Limited") and its subsidiaries (Frasers group), Pinthong Industrial Park Limited, and Thai Pattana Industrial Factory Public Company Limited. All three companies develop ready-built and built-to-suit warehouses and factories for rent. However, Pinthong Industrial Park and Thai Pattana Industrial Factory are not considered as our direct competition because they focus on building warehouses and factories for sale or rent to small or medium enterprises.

### Competition from industrial estate developers

The Company's competition also includes business owners that start from developing industrial estates and later on expands to develop their own warehouses and factories in their estate in order to add to the products and services they are able to provide. Competition includes Amata Summit Ready Built Company Limited who develops ready-built factory buildings for sale and rent to medium and small operators. These industrial estate developers' opportunity is limited to their own industrial estates or in the industrial estates for which they provide service. On the contrary, the Company can freely develop properties in any location seen that the Company and tenants want without limitation. Furthermore, because the Company bought common shares of WHAID Group (former "Hemaraj Group"), the Company has various locations to offer to the tenants which responds to their needs and the Company's flexibility puts us at the advantage when compared to other industrial estate developers.

### **Competition from other small-scale developers of warehouses for sale and rent**

At present, there are several small-scale developers of warehouses and factory buildings for sale and rent located in strategic areas for logistics business. This group of developers only target small to mid-sized businesses who are looking for low-cost warehouses for rent; therefore, these developers are not in direct competition with the Company.

## **2. Industrial Development Hub**

### **• Business Strategy**

#### **1) No. 1 Leading Industrial Estate Developer in Thailand sustainably**

- Ensure success of estates currently under development such as WHA ESIE 3, WHA ESIE 4, RY 36, WHA SIL2 and WHA IER (Joint Venture with IRPC).
- Leverage on its premium brand and track-record of high quality standards to target higher value industries. Focus on potential customers in the list of promoted business or selected industries benefiting from various incentive schemes.
- Create ultimate customer satisfaction by improving current products/services and introducing ones new products/services, including partnerships with industry experts.
- Adopt new technologies and innovation to increase productivity, efficiency and redundancy of its products and services as well its internal processes.
- Continue the roll out its unique SMART ECO Industrial Estate concept.
- Develop new partnerships and advance existing ones with land owners for land acquisition and increasing land bank in strategic locations.

#### **2) Brand building for investment opportunities, starting at Vietnam and other countries in the region to allocate assets appropriately**

- Ensure success of Nghe An Project.
- Leverage on growing Vietnam capability to expand to new locations.
- Develop strategic partnerships with land owners or significant corporates for land acquisition or new products and services.
- Explore international expansion opportunities in other regional countries that meet required investment criteria such as target locations and characteristics as well as financial returns threshold.
- Create WHA Group regional growth platform.

#### **3) Expand businesses to the Industrial Estate Development Project (High-Value Industrial Projects) in Thailand and Vietnam**

- Capture opportunities resulting from EEC or other government schemes / S-Curve industries or successful concepts from neighbor countries
- Explore potential partnerships and collaboration with Educational Institutions or Industry Experts.

#### **4) Build Company Group into a High Performance Organization**

- Embrace Digital Transformation and develop Digital / Technology and Innovation / Entrepreneurship capabilities
- Maximize WHA Group synergies

### 3. Utilities & Power Hub

- **Business Strategy**

#### **Utilities Business Strategy**

- 1) Continuous expansion of utilities services in tandem with the new WHAID's Industrial Estates**  
WHA Utilities and Power Public Company Limited ("WHAUP") will continue to expand its utilities facilities in the new WHAID's industrial estates both in Thailand and in regional countries in order to provide industrial water distribution and wastewater management services to industrial customers as well as introduce other water solutions to satisfy the needs of customers in term of operation management and financial.
- 2) Proactive in expanding utilities business outside WHAID's industrial estates**  
WHAUP aims to capture business opportunities from the increasing demand of raw water, industrial water and wastewater management in both industrial and non-industrial markets particularly in the EEC area. The company is developing business alliances with other industrial estate developers to expand utilities business in non-WHA industrial estates by leveraging on its expertise and experience in utilities business, the ability to control cost as well as its well understanding of industrial customers' need. For non-industrial market, the company plans to build up strong relationship with local authorities as well as communities to develop potential collaborations on utilities distribution and management services to serve growing water consumptions.
- 3) Introduction of new solutions, innovation of utilities business to the market**  
In order to satisfy various and sophisticated needs of industrial customers, WHAUP targets to offer a more variety of products to customers with a focus on membrane technology and reclamation concept adoption in creating new types of industrial water such as Recycled Water/Reclamation Water, Demineralized Water, Desalination System, Wastewater Pre-treatment, etc. These new solutions or innovations will help reduce raw water cost and offer alternative raw water sources which will not only to serve existing customers but will also help create new customer base.
- 4) Expansion to CLMV, particularly in Vietnam as the highest potential market**  
The company plans to expand its utility business to regional countries, especially to countries with high utility consumption, so it targets CLMV countries especially Vietnam which is a high potential country since the number of populations is growing, the economic growth is strong leading to the increasing manufacturing activities. Currently, WHAUP has started to operate utility business in Vietnam by establishing a subsidiary to operate since May 2018 and in year 2019, the Company invested in 2 tap water companies. Moreover, the Company Group has gained several business partners, which allow the Company to find investment opportunities in the water business.

#### **Power Business Strategy**

- 1) Deliver cheaper energy to industrial customers**  
With technology competent in energy business, efficient operation management and choosing an appropriate fuel will enable the company to generate and distribute energy to industrial customers at a cheaper price than competitors which helps reduce production costs for customers.



## **2) Power Plant Project Strategy**

The Company is studying the feasibility of developing Microgrid and Captive Energy, particularly Gas-Fired Cogeneration Power Plant, to distribute electricity within industrial areas by starting from industrial areas of WHA Group. This will help the Company to distribute electricity to industrial customers in various industrial areas at a lower price and more stable because it can manage the production of electricity from various types of production units to be effective and in line with the character of users in that area. In addition, users get benefits of installing a solar rooftop system that has low production costs and reduces energy loss from electricity distribution through the transmission system over long distances.

## **3) Research, Development and Innovation in Smart and Energy and Smart Microgrid in the industrial estate of WHA Group**

The Company has brought innovation to improve products and services for customers such as Peer-to-Peer Energy Trading, Net Metering, Net Billing, Energy Storage, and Microgrid within the industrial area of WHA Group. The goal of this innovation to adapt to the changing trend of the energy industry that will reduce the cost, increase energy stability in the industrial estate and increase investment opportunities for the Company.

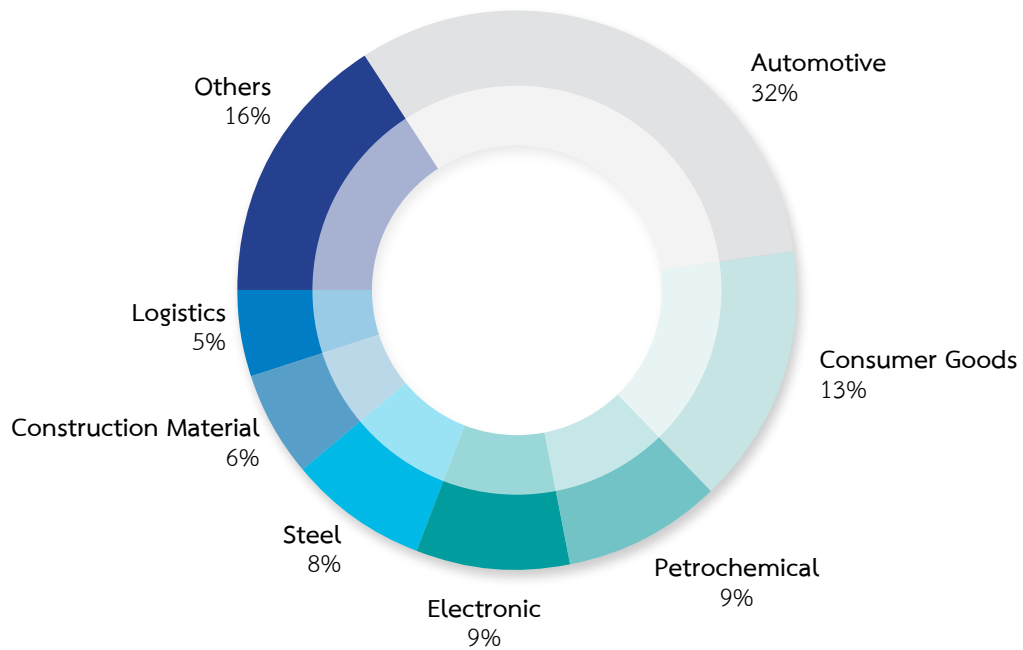
## **4) Business Expansion Strategy to foreign countries**

The Company plans to expand its power business as mentioned above to foreign market, particularly in countries with high growth in population, economic and demand for power. The CLMV countries (i.e. Cambodia, Laos, Myanmar and Vietnam), particularly Vietnam, are viewed as potential countries and attractive for investment. Currently, the Company is researching to invest in Solar Farm that governs by Long-Term Power Supply Agreement with Vietnam Electricity Authority or EVN.

## **• Target Customers**

Industrial Development Hub and Utilities & Power Hub have similar customer base, mostly based in Industrial Estates. The two-business hubs are accommodating/complimenting one another in providing a full-service business model. The two hubs are focused on International Clients who are looking to expand their investment tapping into Thailand. The majority of the clients are the Japanese manufacturers which has contributed to half of clients' portfolio. Remaining clients consist of those from Europe, the USA and ASEAN (Singapore, Malaysia and Thai). Our clients come from various industrial clusters e.g. automotive, auto-parts, electronic, construction materials, metal casting, consumer products, logistic etc. As of year-end 2019, there were 818 clients with total of 1,235 contracts in the industrial estate with the following client proportion in each industry:

**Customer Profile by Industry**



The amount of water usage (utilities) varies across industry in accordance with the production process and the product outcome. Energy Industry (electricity power producer) and Petrochemical Industry are the heaviest water consumption industries, as the fact can be seen in the table below:

Type of Industry	Average water consumption (cubic meter / rai / day)
Electricity power producer	80 - 120
Petrochemical	40 - 60
Others <sup>1/</sup>	4 - 7

Remark: <sup>1/</sup> Others consist of Automotive industry, Consumer product industry, Electronic industry etc.

Source: The Company

## • Industry Trend

### 1) Industrial Development Hub

The key success factors in operating a decent industrial estate business is to develop a large piece of land plot, allowing for factories/warehouses to be allocated into cluster, in a uniform orderly manner. Together with providing all necessary infrastructure in accordance with standards of Industrial Estate Authority of Thailand (IEAT). Industrial estate could be divided as 3 types as follows

1. Industrial estate owned and managed by IEAT
2. Industrial estate owned and managed by private sector with contract of co-operation with IEAT
3. Industrial estate operated by private sector, normally known as “Industrial park” or “Industrial land”

As of 30 September 2019, the Industrial Estate Authority of Thailand had 59 operated industrial estates; located in 16 provinces, 13 estates were operated independently, 46 estates were mutually operated with developers and one was recently signed in 2019.

(Source : <http://www.ieat.go.th> for data as of 13 December 2019)

In order to deeply understand and able to analyze the industry trend of the industrial estates, it is important to take into consideration industrial trend of major industries which play a significant role in industrial estates i.e. automotive, plastic, petrochemicals and electronic parts, as well as, to consider on the foreign direct investment trend. Thailand was ranked as the 21st in the world, up from the 27th in the previous year and 3rd among Southeast Asia as the country with ease of doing business. Thailand is on a prime strategic location, together with many supporting factors promoting an investment in industrial estates, as a result, Thailand has continuously been bringing in foreign direct investment, which is a major business driver steering the growth of Thailand’s industrial estate. The overview of investment promotion application in 2019 could be summarized as follows;

	Investment Promotion Application in 2019	
	Number of Project	Investment (Million baht)
Promotion Application	1,624	756,104
Promotion Approval	1,500	447,360
Promotion Issuance	1,327	357,680

Source: <http://www.boi.go.th>

According to the figure of such investment promotion, the business obtaining investment promotion mostly was the business corresponds to the governmental supporting policy. BOI promotion is targeted at 10 new growth engine industries in accordance with the Eastern Economic Corridor (EEC), total 838 projects with investment value of 286,517 million Baht (accounted for 52% of total approval projects or 38% of total project value). The most projects are from digital industry while the highest investment value contributes from home appliance, electronic and automotive industry, respectively.

As of 30 September 2019, the combined area of industrial estates in Thailand was approximately 175,939 Rais, which can be classified into salable area of 110,558. The area of 88,906 rai has already sold/rented, and the remaining of 21,652 rai to be sold/rented, accounted accumulated investment value of THB 3.9 trillion with approximate 499,000 industrial employments. The top 3 industries situated in the industrial estates are steel & metals, automotive& logistic/transportation and rubber& plastic& leatherette with the top 3 investment from Japan, China and Hongkong, respectively. (Source : [https://www.innnews.co.th/economy/news\\_562431/](https://www.innnews.co.th/economy/news_562431/))

Industrial estate land price is depended on location, road network connection, infrastructure, and close to material supplier. Additionally, the Industrial estate land price in Bangkok is the most expensive, as it locates on the center of transportation and near the port and international airport, followed by the land in Samutprakan and Prachinburi, respectively. The reasons behind Samutprakan having a land price higher than other part of Thailand are mainly due to Samutprakan’s location, with its close proximity to Bangkok and it is readily equipped with good transportation infrastructure.

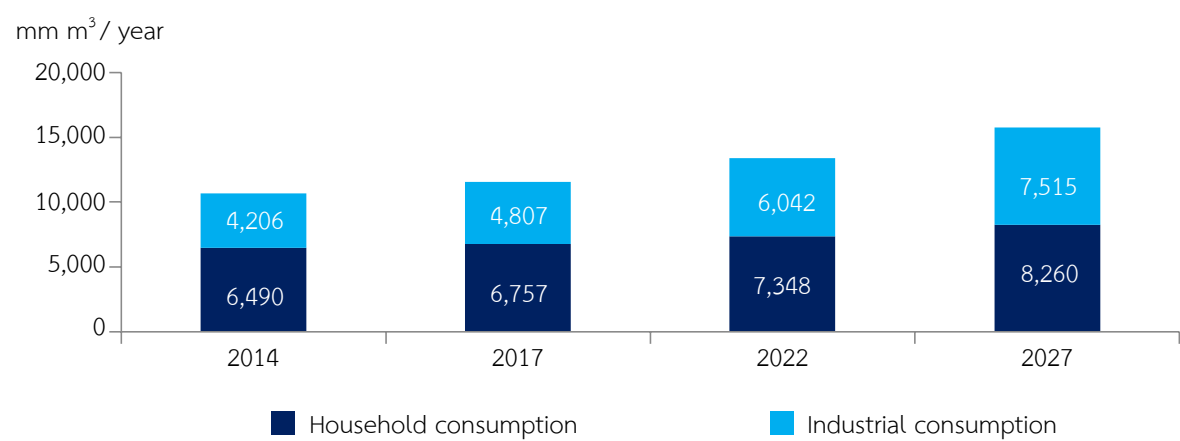
The competition pressure of industrial estate industry is quite high from the growth of the new industrial estates and expansion of the existing industrial estates especially in the eastern side of Thailand. However, the aftermath of the great flood in 2011 caused for a continuous relocation of manufacturing base to the eastern seaboard area as it is close to Bangkok and Laemchabang Port and approx. 70-111 meter higher from sea level.

2) Utilities & Power Hub

Utilities

Thailand is among the top-ranking nation in Southeast Asia that is known to have a high water consumption rate. Water consumption can be divided into 2 categories, based on consumption purposes, i.e. 1) household consumption such as household usage and tourism 2) Industrial consumption such as industrial production line. Referring to the water resources management master plan, constituted by the Committee of Water Resources Policy and Management the Department of Groundwater Resources, has shown that the household and tourism water consumption in 2015 demanded for consumable water at 4,783 million cubic meters. Also, it is anticipated that in the year 2037, consumable water consumption will increase up to 5,991 million cubic meters. For the industrial consumption in the year 2015, the water consumption is 1,913 million cubic meters with the expectation that water consumption will increase up to 3,448 million cubic meters in the year 2037. The area where factories and industrial groups are found; Bangkok, nearby provinces including the eastern region which are the main industrial area of the country.

Water consumption level in Thailand



Source : Strategic planning for water resource management 2015-2026, Committee of Water Resources Policy and Management, Department of Groundwater Resource

## Power Hub

The power business in Thailand is an infrastructure service under the supervision and regulation of the Ministry of Energy, the ERC and the National Energy Policy Board (NEPB), which are in charge of development to ensure the stability and sustainability of the national power utility. Originally, EGAT was solely responsible for generating power to support nationwide consumption. After demand for electricity sharply rose as a result of economic expansion and population increase, past governments promoted private partnership in the power generation business with a view to mitigating EGAT's investment burden to construct power plants to respond to growing demand for electricity. Starting in 1992, the government launched a policy encouraging the private sector's participation in power generation and invited it to bid for the construction of power plants. Such policy inaugurated a new role of IPPs and SPPs in the country's power generation business in 1994. As there is great support for alternative energy power generation, VSPPs are taking an active role in the country's power industry.

## 4. Digital Platform Hub

### • Business Strategy

#### 1) Strengthen market share in the domestic market of digital platform services

The Company will continue to focus on expanding market share in the domestic market by providing Data Centers, FTTx, and Managed services to WHA Group's customer-base of more than 1,000 customers. In addition, the global trend of digital economy as well as the Thai government's new economic initiative, Thailand 4.0, with an aim to transform Thailand into value-based economy will translate into higher demands for IT related services, which the Company has various of services to accommodate future needs.

Another way that the Company aims to boost its market shares is to expand new product offerings. The existing platforms will allow the Company to create new products, reaching larger market demands and, hence, market shares. The new products that the Company studies includes Cloud Solution services. With the completion of data center, the company can package product to better suit customer needs. For example, the Company can collaborate with existing System Integration (SI) and Telecom Provider companies to bring their IT infrastructure and Cloud services into the Company's data center facilities to deliver the best services to their customers.

The Company understands the dynamic nature of digital market and stays on guard for any changes in technologies (i.e. Big Data, and Internet of Things - IoT) in order to attract new market demand and supply.

#### 2) Implement digital platforms within WHA group to upgrade facilities and enhance business values

The Company plans to implement digital platforms across other business hubs in order for these hubs to install new technologies such as automations and Internet of Things (IoT) into their infrastructures and facilities. These technologies will not only enhance operation efficiency, but also increase value of the assets by attracting innovation-prone industries.

#### 3) Expand the digital infrastructure and solution along with the rapid movement of technology by offering to CLMV region

In the meantime, the Company also studies opportunity to expand operations overseas by following footstep of other business hubs. The target locations under the Company's radar being Cambodia, Laos, Myanmar, and Vietnam (CLMV) markets as studies have shown that such market has a high growth potential in digital platform services because the demand for IT related services outpace the available digital infrastructures. The overseas experiences and facilities from other business hubs will allow the digital platform hub to reduce some risks associating with overseas investments.



- **Target Customers**

- 1) **Customers in WHA Group's Core Business**

More than 1,000 customers in all main business hub of WHA Group. The Company expands to serve in digital platform which the company would focus to customer in group of medium and large business size such as Automotive Industry, Logistics Industry, Electronics Industry etc. in order to meet the increasing demand for digital services. In addition, the trend of using the technology in the production process to enhance the customer's business operation which it is rapid growth and technological change in this time. However, the government has promoted investment in the country by focusing to develop the Eastern Economic Corridor (EEC) has been promoted. The EEC has supported the investment in 10 target industries which is a business innovation and IT services is the necessary key for running a business. Therefore, the Company have continually improved our digital services capabilities in order to serve our target customers in the future.

- 2) **Customers in WHA's collaborative System Integration**

The Company plans to grow with its partners by providing a full range of support services such as the provision of data center services to its integrated System Integrator (SI), Managed Service and Business Process Outsourcing (BPO) customers. To provide full service to customers. This enables customers to efficiently manage their resources.

- 3) **Customers in international country and CLMV market.**

The Company has realized to foresee the business opportunity growth in international country especially in Cambodia, Laos, Myanmar, Vietnam and Indonesia as WHA Group has started expanding its presence abroad. For example, the Logistic Hub is building a warehouse and factory for rent in Indonesia. In addition, there are plans to further develop the industrial estates in Vietnam. As a result, the Company foresee this opportunities to expand its digital services to cover the customer in these countries which they have high demand.

## **Product or Service Procurement**

- 1) **Logistics Hub**

Land is the major cost of the Company's business. The Company has set out the following policy on land acquisition:

- **Land Procurement**

The Company's policy is to acquire land when needed rather than holding the land bank without development for long period of time. Land acquisition is made in accordance with the investment plan to match specific needs of customers (Built-to-Suit) and to reduce interest obligations incurred from acquisition and accumulation of a large number of lands with no potential projects. However, the Company may consider acquiring larger piece of land if the land is connected to the existing projects which can be developed for expansion for tenants who clearly express their interest in expansion of the leasable area in the future.

The Company acquires land from the owners directly or by leasing land from the Company's partners or by purchasing land through agents. In this respect, the Company usually selects land plots in at least two locations to allow the Company to have bargaining power and to acquire the land at the preferred location at a good price.

#### **The Company's criteria for land acquisition are as follows:**

- Location of the land must be connected to a road network according to the requirement and the need of tenants and it must be in a strategic location for logistics business near a port or in a zone entitled to privileges from the Board of Investment (BOI) which will also meet the need of other and new tenants once existing lease agreement expires.
- Land price must not be too high for both freehold and leasehold land. Land must generate a competitive monthly lease for the Company.
- Land must be of an appropriate size for first development as well as for expansion of future projects of tenants. It should also be flexible in terms of suitability for the need of new tenants.

The Company's land management team studies, analyze, retain and update land data so that the Company has data on location and land with potential for development of new projects and the Company can evaluate and set a strategy for acquisition and budget required accurately. Such data will be transferred to Finance Department for financial planning for the most appropriate and the most economical capital sourcing for land acquisition.

#### **Selection of Construction Contractor**

The Company divides selection of construction contractors into two categories based on type of projects as follows:

1. Contractor selection for Built-to-Suit project: The Group of the Companies sends an invitation to bid to construction companies and makes preliminary agreement on pricing before proposing the price to customers. However, not all decisions for selections are made by the Company. Tenants may want to select a construction company themselves or it has already been nominated.
2. Contractor selection for Ready-Built Warehouse Project: The Company invites all bids from construction companies, negotiate and select construction companies based on the procedure and the criteria set out by the Company.

Since the Company selects a contractor regularly, the process for contractor selection and the evaluation process has been established in the light of transparency, fairness and in accordance with a good corporate governance, details are as followed:

#### **Procedure for the selection of the construction company**

- Send out the requirement and the Terms of Reference (TOR) to construction companies listed in the pre-approved list. For new construction companies, their qualification and project history will be thoroughly verified.
- Consider bidders' proposal for both technical aspect and pricing aspect.
- Make selection by the selection committee.
- Enter into a contract with the selected construction company, most of which are turnkey contract, which includes project design, sourcing of construction materials and construction agreement. The construction agreement will clearly indicate labor cost and cost of raw materials.

- **Criteria and policy for selecting construction company**

- The Company specifies and verifies construction companies in the pre-approved list while promoting fair, transparent and open competition by providing detailed requirements and scope of work in advance to at least two construction companies for bidding.
- Factors used for consideration and selection of construction companies are past projects, quality upon hand over, construction time, offered price and after-sale service.
- Selection of a construction company must be approved in accordance with the approval authority and the regulations of the Company.
- Contracts are reviewed by an expert legal advisor.
- There is a segregation of duties for contract execution, inspection for hand over and account recording.
  - Contracts will be executed by the authorized directors of the Company.
  - The Company' construction management team is responsible for inspection for hand over. They will inspect completed projects and provide a monthly progress report to the management. Inspection for hand over includes quality inspection and progress inspection against the terms and conditions in the contract.
  - Finance & Accounting Department verifies all documents and makes a record and payment upon due as specified in the contract after the project management team has inspected and received the project.
- The Company establishes guidelines for relevant units, for example, Guideline on Selection of Construction Companies, Operation Guideline for Project Management Team. All units must comply with the guidelines and the specified work process.

### **Environmental Impact**

The Company' policy on construction of warehouse, distribution center and factory buildings is based on good practice and strict control with a focus on construction process that minimizes impact on the environment. The Company also promotes and encourages preservation and energy saving. Before the tenants commence their operation, the Company will glance at their credibility, company profile, products and financial statements.

The Company also specifies in the lease agreement entered between the Company and a tenant who stores hazardous substances that the tenant must strictly comply with the regulations on environment preservation so that the Company's business does not have negative impact on the environment. Based on such practice, the Company has never breached any environmental law or had any environmental dispute.

## **2) Industrial Development Hub**

Land is the major cost for the industrial estate development. The Company has set up land procurement policy, details are as followed:

- **Land Procurement**

WHAID Group purchase lands from local owners directly or from allies of by considering from the location of the project with connection to a road network, near a port or in a zone entitled to privileges from the Board of Investment (BOI) with affordable term condition. Land price must not be too high in order to develop in industrial estate and sell off the clients with sufficient profit margin and to be competitive in the market. Additionally, land must be accumulated into a large land plot in order to gain the benefit from economy of scale.

The project must be a nearby water source to drain wastewater and the land size shall be appropriate for development. Land soil is another crucial factor, it must have adequate strength to support the fundamental work of the structural buildings.

## Environmental Impact

WHA ID's industrial estates provides wastewater treatment system, waste disposal system and public utility system with standard in accordance with the specification defined by Industrial Estate Authority of Thailand and approved by Office of Natural Resources and Environmental Policy and Planning. WHA ID's industrial estates have been complied with all relevant laws and regulations.

### 3) Utilities & Power Hub

Raw water and fuel for electricity generation are vital raw materials for business of utility & power hub. WHAUP Group pays high attention to its procurement of the raw materials, in which the policy has been set up as follows:

#### • Raw Water Procurement

WHAUP is the exclusive operation on the utility business in WHAID. One of the key success factor in operating the utility business is to have access to sufficient raw water source to supply to all enterprises inside the industrial estates. As well as, to have adequate capability of supplying clarified water to cater for the water demand in the industrial estates. Three main raw water sources are described as follows:

- (1) Eastern Water Resources Development and Management Public Company Limited ("EASTW") has been granted with concession to supply raw water in the Eastern part of Thailand, covering Chonburi, Rayong and Chachoengsao provinces.
- (2) Royal Irrigation Department WHA Saraburi Industrial Land Co., Ltd., a subsidiary of WHAID Group, has been purchasing raw water directly from the Royal Irrigation Department.
- (3) WHAID Group such as water reservoir in WHAID, of which is built in prevention of water shortage event, to drain of water from the industrial estate, as well as to prevent the sites from flooding.

#### • Fuel Procurement

WHAUP is operating in the power business, thru joint venture with our business alliances, with an objective to operate Conventional Fuel Power Plant and Renewable Fuel Power Plant. The fuel use for electricity generation can be categorized into 2 categories, details as followed:

##### (1) Commercial Fuel

#### • Coal

WHAUP has entered into a Coal Supply and Transport Agreements with Indonesia large conglomerate business partner to supply Bituminous coal to Gheco-I power plant as its raw material for electricity generation, in accordance with power purchase agreement.

#### • Natural Gas

WHAUP has entered into a 25-years purchasing agreements with PTT for the supply of natural gas to Glow IPP, GJP NLL, BPWHA-1, Gulf VTP, Gulf TS1, Gulf TS2, Gulf TS3, Gulf TS4 power plants.

##### (2) Non-commercial Fuel

#### • Water

Water is a raw material for hydro power plant. WHAUP obtains water from the natural source, a cost-free procurement process. Nevertheless, quantity of water acquired may throughout the year according to weather pattern and the change in seasons.

- **Solar**

Solar is another source of alternative or renewable energy. It is the main source of energy for solar farm power plant, with a main advantage that it is a free source of energy. Nevertheless, quantity of solar obtained may vary in accordance with seasons and weather pattern.

- **Environmental Impact**

WHAUP pays close attention to environmental impact from the process of clarified and waste water treatment. The by-products of such activities include precipitation and waste water disposal. WHAUP is strictly adhered to its code of conduct and to be compliance with all relevant laws and regulations, in order to control and to protect its by-products from causing a damage to the environment. The following describes the steps of control taken to protect our environment

- (1) **Precipitation** WHAUP hires a licensed waste disposal enterprise to dispose such waste by means of landfill.
- (2) **Waste water** disposal waste water is thoroughly inspected for quality qualified for disposal in accordance with Office of Natural Resources and Environmental Policy and Planning. Moreover, WHAID Group has installed an innovated equipment for quantifying the quality of waste water i.e. Online Monitoring System (EMC2 system), in order for the staff to closely monitor the quality of water prior to its disposal.

WHAUP has been certified with ISO 14000:2004 on environmental preservation. WHAUP is strictly adhered to its code-of-conduct on the environmental preservation act. Thus, WHAUP has never once been filed a complaint nor having any litigation in relation to the environmental impact.

## Backlog Projects

### 1) Logistics Hub

As of 31 December 2019, the Group of Companies has the following projects under construction and having not recognized revenue.

Location	Company	Leasable area (sq.m.)	Project Status	Project Progress (% of Completion)	Expected completion and revenue recognition
1. Laemchabang	WHA Venture Holding Co., Ltd.	36,695	Under development	86%	Q2 / 2020
2. Laemchabang	WHA Venture Holding Co., Ltd.	10,103	Under development	86%	Q2 / 2020
3. Bangna-Trad KM. 23	WHA KPN Alliance Co., Ltd.	8,349	Completed	100%	Q4 /2020
4. Bangna-Trad KM. 23	WHA KPN Alliance Co., Ltd.	3,212	Under development	0%	Q4 /2020



## 2) Industrial Development Hub

As of 31 December 2019, the Group of Companies has backlog in 6 locations totaling 364 rais.

Location	Company	Area (rai)	Project Status	Project Progress (% of Completion)	Expected completion and revenue recognition
1. WHA Eastern Industrial Estate (Map Ta Phut) (WHA EIE)	WHA Eastern Industrial Estate (Map Ta Phut) Co., Ltd.	5	Completed	100%	2020
2. WHA Eastern Seaboard Industrial Estate 1 (WHA ESIE 1)	WHA Eastern Seaboard Industrial Estate Co., Ltd.	19	Completed	100%	2020
3. WHA Eastern Seaboard Industrial Estate 4 (WHA ESIE 4)	WHA Eastern Seaboard 4 Industrial Estate Co., Ltd.	39	Completed	100%	2020
4. WHA Eastern Seaboard Industrial Estate 2 (WHA ESIE 2)	WHA Industrial Development PCL	230	Completed	100%	2020
5. WHA Chonburi Industrial Estate 2 (WHA CIE 2)	WHA Industrial Development PCL	35	Completed	100%	2020
6. WHA Rayong Industrial Land (WHA RIL)	WHA Rayong Industrial Land Co., Ltd.	36	Completed	100%	2020

## 3) Utilities & Power Hub

-None-

## 4) Digital Platform Hub

-None-

# RISK FACTORS

## 1. Overall Risks From Business Operation

### 1.1 Risks from Changes in Economy, Domestic Politics, and other Macro Environment Factors

As many of the Company's clients are transnational companies, the economic changes in both the national level and the global level have an effect on the Company's clients and revenue. For example, the Brexit in 2016 to 2018 might affect the manufacturers exporting products to England, and in 2018, FED raised interest policy rate which consequently increase cost of fund. This might delay the clients investment plan. The political uncertainties might have a negative impact on the image of the country and the interest and confidence of the clients to make investment. In addition, the frequent changes in the government or the working groups concerned, resulting in the discontinuity and uncertainty in terms of public policies, might have adverse effects on the Company, especially the policies relating to the investment promotion and the development of industrial areas.

Nevertheless, Thailand remains attractive to the foreign investors who want to invest in South East Asia due to the better labor quality and the acceptable wage rate in comparison to those in European countries, the United States, and other Asian countries. Moreover, many manufacturers in China tend to move to Thailand due to the Trade War between US and China, this has a positive impact to the Company and also, Thai infrastructures and public utilities are sufficient and ready. Besides, Thai Government has supporting policies on Eastern Economic Corridor (EEC); thus, the overall investment in Thailand has been able to grow. Meanwhile, the economic uncertainties have had favorable effects on the Company because, in such circumstances, most companies decided to lease or outsource the businesses that are not the core activities of the companies in order to cut the operational costs. Even in the time of economic and political uncertainties, the Company has grown continuously as can be seen from the expansion of the revenue base whereby the Company does not have to rely on any business too much; the constant revenue from the rental service and the utility service, which helps balance the revenue structure; the significant increase in the number of clients in all 11 industrial estates and industrial zones; and the investment in industrial estate projects for niche markets, which helps reduce the risks.

### 1.2 Risks from Interest Rate Fluctuations

The business operation of the Company requires high investment. The current portion of long-term loans due in a year from financial institutions at the end of 2017 are approximately THB 3,936.9 mm, respectively. In 2018, the Company repaid the whole loans; thus, at the end of 2018, the Company did not has any remaining long-term loans from financial institutions. Nevertheless, at the end of 2019, the Company has the loans are approximately THB 1,379.3 mm, which are subject to a floating interest rate. Therefore, if the interest rate in the market increases, the Company would have to pay higher amount of interests, resulting in a decrease in the Company's profit.

However, the interest rates of most of the loans from financial institutions are currently below the Minimum Lending Rate (MLR) determines by each institution. In addition, the financing plan for project development of the Company does not rely solely on the loans from financial institutions as the Company also has other financial sources, especially through the stock market and the sale of assets to trust, which would be the key financial

sources for the future investments. Since the Company is listed on the Stock Exchange of Thailand, it is able to raise funds from the capital market. In 2017, 2018 and 2019, the Group of Companies issued debentures worth THB 6,700 mm, THB 11,800 mm, and THB 5,700 mm, respectively, with fixed interest rates to lower the risk from the interest rate fluctuation. However, in order to lower the interest rate while maintaining the risk at the acceptable level, the Company adopted the Interest Rate Swap measure to change the interest rate of some debentures worth THB 7,100 mm as at 31 December 2019 to a floating interest rate for certain periods of time while maintaining the fixed interest rates of the remaining debentures. This is in order to reduce the risk from interest rate fluctuations and create a balance between the fixed interest rate and the floating interest rate.

### **1.3 Risk from Investment in Future Projects**

The Company plans on investment expansion continuously inside and outside industrial estates, zones, parks both domestically and overseas. It is common that there are risks involved in any development and investment plan of new projects might turn out differently from initial estimation, objective plans or expected return (for examples, delays due to factory construction progress, resource allocation, change in legislation and uncertain politic in foreign country, and risk from fluctuation in exchange rate and interest rate, etc.). These situations possibly cause notable consequences to business operation and financial circumstances for the Group of Companies.

To minimize the risks, the Company carefully considers investment projects that have potential in rewarding equity internal rate of return at appropriate levels and perform feasibility study to foresee possibilities of project as well as sensitivity analysis thoroughly and for joint venture cases, the Company's policy is to consider partnership very carefully by evaluating from potential partner's knowledge, ability, experiences, expertise, financial status and historical performance.

## **2. Risk From Logistics and Industrial Properties**

### **2.1 Risk from Competition from Industrial Estate Developers and Other Developers**

Currently, the industrial estate developers and other developers, like the Company, are constructing factories and warehouses for rent. However, most of them are selling and leasing ready-built factories and warehouses and providing service in their own industrial estates, whereas the Company is focusing on the Built-to-Suit scheme, which is the development of premium-quality projects that require sophisticated designs to respond the needs of each client. In addition, the Company is using its expertise in the Built-to-Suit design to develop a project under the concept of the Warehouse Farm. The Company is currently providing the Built- to-Suit design service and construction to serve the needs of certain clients such as those who want to preserve a part of the land for future expansion; and the ready-built warehouses for prompt response to new clients. The Company's main policy is to find the location that is favorable in terms of transportation and distribution in accordance with the client's need. As it can be seen, the Company is able to satisfy the clients differently from the competitors in the same market.

At present, there are few high-quality Built-to-Suit providers due to the high barrier of entry and difficulty to succeed. This service requires the expertise and detail orientation to understand the complicated requirements of each client, a lot of investment, and the knowledge and understanding about locations and in the procurement of and investment in land in accordance with the requirements of each client. The expertise and flexibility as well as the patience to conduct the product design to achieve the utmost benefit of the clients are also important. Also, the achievements in the past of the Company make the Company more credible to the lessees, who are mostly transnational companies with high standard of selection criteria. In addition, the Company has a policy to promote the continuous learning development and continuously improve the quality of the warehouses and services.

## **2.2 Risk of No Tenant in the Developing Projects and Risk of No Renewal in the Existing Projects**

The Company's rental business includes the Built-to-Suit service, in which a contract is signed prior to the construction, and the Ready-Built service.

For the Built-to-Suit service, a lease agreement is signed prior to the construction and mostly is long-term lease. Therefore, the occupancy risk is low and most of the tenants are likely to renew the contract as the agreements between the Company and the tenants start with finding the locations and the Company focuses on the design, construction, and service to ensure the maximum benefits for the tenants and the maximum satisfaction and confidence in the Company. Moreover, the cost of relocation is rather high. The risk that the main tenants would not renew the lease term is, therefore, low. At the end of 2019, most of the tenants (such as Central Group, DKSH Group, Thaibev Group, and Hitachi Group) not only renewed the contracts, but also agreed to lease additional areas with the Company. Most of them started doing business with the Company by leasing Ready-Built warehouses and subsequently leased Built-to-Suit warehouses.

Moreover, when a tenant decides not to renew the lease term, the Company is able to provide the Built-to-Suit factory or warehouse to a new tenant by modifying the property in accordance with the new tenant's need. With the advantages in terms of location, quality of construction and work system, and understanding and in-depth knowledge in the design and construction management, the Company is confident that it would be able to obtain a new tenant within the appropriate period of time. In addition, the Company would have sufficient time to seek new tenant as the lease agreement requires the existing tenant to notify its decision at least 3-12 months in advance.

For the Ready-Built Warehouses/Factories, there might be risk of unoccupancy because the projects are developed the lease agreement is signed. Nevertheless, the Company has developed such leasable area in order to serve the tenants who want the properties immediately as well as to ensure the appropriate construction cost management and the utilization of land. Unless being severely affected by the external environment factors, the Ready-Built clients would renew the contracts because of the quality of the properties which are satisfying and acceptable to the tenants. In case a tenant doesn't renew the contract, the Company is able to find a new tenant in a short time. The Company focuses on the location of the projects, which makes the Company confident in finding new tenants promptly. The Company also focuses on the design and quality of the structure of the projects and maintains the high standard, resulting in high interest from the prospective tenants.

## **2.3 Risks on Overdue Rental Payment under Lease Agreements**

The risk arising from overdue rental payment under lease agreements may arise in case clients suffer from the economic and industry downturn or their business operation that affects their financial status and, thus, their ability to pay rent. The Company may be affected by a drop in rental revenue as it has an effect on the financial liquidity.

However, the Company foresees that the impact will be minimal because the key clients are leading and reliable companies with high financial stability. Moreover, the Company requires tenants to place cash deposit and/or a bank guarantee as security against payment of rental and service fee. It's stipulated in the lease agreements for Built-to-Suit projects that in the event of early termination by the tenants, the tenants must pay the compensation of the amount equal to the total rental charges for the remaining period.

## 2.4 Risk from the Reliance on Few Contractors

The core business of the Company includes developing projects for rent and sale, whereby the Company would hire contractors under turnkey contracts for the construction in accordance with the designs agreed by the clients. The Company has a process of selecting well-known contractors having the qualifications specified by the Company and putting them in the short list. However, B.S.Y. Construction Co., Ltd. is the contractor that won the auctions for almost every project, especially the Ready-Built one. The contractor possesses the qualification according to the selection criteria in terms of the quality, construction cost, expertise and experience, capability to deliver the projects on time as well as after sale service. For the Built-to-Suit projects, the tenants are also involved in the contractor selection process. Therefore, the Company is having the risk of relying on B.S.Y. Construction Co., Ltd. for the development of the Company's projects.

However, the Company does not have a policy to hire only B.S.Y. Construction Co., Ltd. and always seek cooperation with other contractors of high standard. The process to select contractors is carried out in a systematic and transparent manner through the bidding process, except the Built-to-Suit projects, in which the tenants or the existing tenants would specify the contractor.

The Company's business is made up with different elements, for example, the source of funds, expertise in selecting locations, design and layout planning, and good relationship with tenants. It's the capability of the Company to develop high quality projects without depending on a single contractor. The Company integrates the elements and builds a close cooperation with the clients, contractors and state agencies concerned. B.S.Y. Construction Co., Ltd. has engaged in the construction business and been widely recognized in the market for more than 20 years. It does not intend to engage in the same business as that of the Company. In addition, the executive members of B.S.Y. Construction Co., Ltd. are not related to those of the Company. The Company regards it as a good business partner.

In addition, the Company has signed a Memorandum of Understanding (MOU) with B.S.Y. Construction Co., Ltd. on 22 March 2012 to determine the collaboration between the two parties by specifying the framework of product development in terms of quality and price with the intention to allow the tenants to efficiently compete with their competitors. Such agreement also entails the application of knowledge in the development of products, technical data and/or relevant know-how that are beneficial for the construction of warehouses, distribution centers, or factories, which have been registered to the joint ownership of the Company and B.S.Y. Construction Co., Ltd. Moreover, B.S.Y. Construction Co., Ltd. has agreed to bid in a Built-to-Suit project upon the request from the Company. B.S.Y. Construction Co., Ltd. has also agreed not to disclose the technical data and knowledge developed with the Company, or to use it in the projects of the Company's competitors, or to agree on a similar agreement with the Company competitors without consent from the Company. On the other hand, the Company does not have the obligation to hire a specific contractor. Therefore, the Company may hire any contractors apart from B.S.Y. Contractor Co., Ltd. The Company, thus, may work with other contractors by applying the jointly-developed knowledge in accordance with the standard determined by the Company to ensure the maximum benefits for the Company and the tenants without breaching any provisions in the MoU.

## **2.5 Risk from the Land Procurement Policy for the Development of Future Projects**

The Company has a land procurement policy focusing on procuring the land that have potential and could be developed immediately or in the near future. Therefore, the Company does not have policy to purchase land without development plans or if it's uncertain whether there would be tenants or not. However, due to the higher competition in the land acquisition in good locations, the Company has the risk of higher land price and, as a result, being unable to purchase the land in good locations at the desired prices. The Company may have to bear the higher cost of project development or may have to abandon the investment plan because the return on the investment may be in accordance with the criteria specified by the Company.

However, the Company has prepared a land survey and purchasing plan in accordance with the project development plan. The Company considers that purchasing many pieces of land without a development plan or pending tenant does not correspond to the business plan of the Company because it might affect the financial liquidity of the Company. Therefore, the Company ensures that the land acquisition is in accordance with its business plan and that the land to be purchased must be able to be developed immediately or in the foreseeable future or have been selected by the clients for future expansion of clients' projects. The Company also has a policy to invest in leasehold land for some locations, taking into account of the possible return on investment. Such policies allow the Company to acquire the land with potentials with the agreement from the clients, which is better than the policy of other companies to collect land beforehand. They also allow the Company to efficiently respond to the clients' need to expand the projects and to control the land costs to be at the appropriate level.

## **2.6 Risk of revenue fluctuation from selling properties to REIT for property investment purposes**

The Company's main sources of income are property rental, services and sales of properties. Income from properties sales is mainly sales to REIT which required approval from REIT's unit holders. In addition, the Companies is a unit holder with no right to vote as the Company is considered a related party on this behalf. Therefore, any year time that the Company does not have any property sales activity to a REIT or property sales plan is delayed, total income and profit can be fluctuated.

During 2017, 2018 and 2019, the Company recorded income from sales of properties to REITs including share of profit from joint ventures from sales of properties to REITs for THB 2,875 mm, THB 3,280 mm and THB 1,800 mm, respectively. (During 2016, the Company has set up a new investment trust namely, Hemaraj Leasehold Real Estate Investment Trust "HRIET") There is indeed possibility of risks for the Company selling of properties to REIT if the REITs delay their new asset acquisition due to insufficient fund raising. However, the Company monetized the properties to REITs which are consider as Investment Grade from Credit Rating, resulting, increase REIT's loan capacity from normally maximum loan at 35% of total asset value to 60% of total asset value. As a result, REIT will have a lower cost of fund, and increase investment return to the unit holders which makes REIT investment more interesting. The Company expects continuation of selling more properties to REIT. Moreover, the Company will consider selling properties to other potential parties such as tenants of existing projects or other investors, etc.

## **2.7 Risk from the Competition with the property fund and REIT**

The main revenue of the property fund and REIT derives from the lease of properties in which the property fund and REIT invested, which are similar to those developed by the Company. The Company is responsible for the lease management of those properties. Therefore, there is a risk of the conflict of interest between the Company and the property fund or REIT. In the case that both the Company and the property fund or REIT have vacant areas that are located in nearby location and meet the tenants' requirements at the same time and the risk of the current tenants relocating to the conflict of interest party's area.



However, the prospect tenants regularly make decisions based on their own criteria, for example, the location, size, specifications, and timeframe. Moreover, the possibility that the existing tenants for Built- to-Suit properties not renewing the lease term is rather low because those lease terms are long-term agreements, and the tenants have invested in the installation of equipment and local labor, resulting in high relocation cost.

The competition between the Company and the property fund or REIT, if any, will be transparent on the arm-length basis. The management team of the Company, in the capacity of both the property developers and the property manager of the property fund and REIT, has the intention to ensure that the Company, the property fund, and REIT would grow together sustainably.

## **2.8 Risk from the Expansion to the Office Building Leasing Business**

The Company has expanded its scope of businesses to the rental of office buildings. The first project is the construction of a building on Bang-Na Trad Road according to the tenant's requirement, and the second one is the purchase of the SJ Infinite I office building (previously Equinox). The Company intends to increase the proportion of recurring income and alleviate the risk of relying on a single business. However, the purchase of the SJ Infinite I building has affected the Company's financial situation and created a short-term risk because it's a new building so the Company is receiving small amount of incomes from the tenants who have moved in while bearing the costs and expenses that have incurred since the date of the acquisition of the building, for example, the depreciation cost, which must be recognized in the accounting in full. In addition, there is a risk that the tenants would relocate to other places as there is huge supply of office buildings in Vibhavadi area.

However, the office building market in Vibhavadi area has improved continuously due to the substantial demand. Meanwhile, the supply of high quality office buildings is insufficient. Some of the prospect tenants are those looking for more spaces as there is not vacant unit in their existing buildings. The SJ Infinite I building has become an interesting option for the companies that are planning to relocate their offices to a place with similar rental rate because it's new and the rental rate is negotiable. This is resulting in an improvement of the occupancy rates of SJ Infinite I building, which were approximately 87%, 93% and 87% at the end of 2017, 2018 and 2019, respectively.

In addition, in November 2015, the Company sold the building to WHABT, which has recently been established to invest in commercial projects, whereby the Company is holding 15 percent of the WHABT's shares. Such transfer of business helps reduce the risks and increase the liquidity and the proportion of incurring income of the Company.

## **2.9 Risk from Natural Disasters and Accidents**

Natural disasters and accidents may cause damage to the Company's properties and loss of life and properties of the staff working at the Company's projects. Most of the Company's projects are leased to the companies that have to store the goods that could be damaged by floods such as drug, medical equipment, and consumer goods. Therefore, the tenants or clients of the Company could be significantly affected by natural disasters, especially floods.

The Company is aware of the possibility of such risks, which is why it puts great attention on the selection of location and the proper security system. The road in every project is approximately 30-50 cm higher than the public road in front of the projects or the highest water level during the floods in the past 30 years in the locality (whichever is higher). Moreover, the building in every project is raised approximately 0.8 - 1.5 m higher than the road and a flood barrier with the height of 2 meters from the building floor can be built at every building. None of the Company's projects suffered severe damage from the flood disaster in October 2011 including the warehouses in the Bangpa-In Industrial Estate in Ayutthaya, which was severely damaged by the flood. The damage assessment report reflects that there was no substantial damage to the properties and no loss of rental revenue as the tenants continued to pay rents and didn't express an intention to relocate the warehouses or terminate the contracts.

The projects for rent of the Company are scattered in different locations so the risks from location are diversified. Nevertheless, the Company has applied for all-risk insurance covering all kinds of damage caused by natural disaster and accidents for every project. After the 2011 flood, the insurance company has determined the limit of the compensation for damage caused by flood for each project based on the project's location. As a result, the Company would be responsible for any repair costs of the damage caused by flood if the value of the damage exceeds the compensation limit determined by the insurance company. However, the Company is confident that it has proper plans and preventive measures to deal with floods. Therefore, there is little chance that the damage from floods in any projects would exceed the compensation limit.

### 3. Risk From The Industrial Estate Development Business

#### 3.1 Risk from the Reliance on the Clients in Automotive and Petrochemical Industries

The Company bears risk from relying on the clients in automotive and petrochemical industrial groups. Among 818 clients of the Company, there are 336 companies operating in the petrochemical (68) and automotive (268) industrial groups, or 41%. If this group of clients decide to decrease or delay investment, the sale of land and other related revenue may be affected.

The Company is aware of the risks and effects resulting from such factor and has developed the marketing plan to penetrate diverse target groups apart from the automotive and petrochemical industries so that it doesn't have to rely on a single industry. Each of the 10 industrial estates and industrial zones of the Company targets different groups of clients such as electronics, energy, steel, construction materials, logistics, and food. The Company has also regularly monitored and analyzed the proportion of the investment in different industries in the country before adjusting the strategies accordingly. In addition, the Eastern Economic Corridor (EEC), which plays an important role under Thailand 4.0 roadmap by upgrading the eastern corridor to become "World-Class Economic Zone", showed significant progress in 2019. EEC is anticipated to attract investments for super cluster and the target industries that spread across different industries. As a result, the Company is expected to be a beneficiary of such development from having large availability of sellable lands in both developed and developing industrial estates, which are located in the EEC areas. Combining such benefit with the expansion to develop an industrial estate in Vietnam, the Company will be able to enhance business opportunities and also diversify customer concentration.

#### 3.2 Risk from Floods

The floods in many areas of the country, especially the one during the rainy season in 2011, have caused damage to many business sectors and undermined the confidence of the prospective investors and the existing investors planning to expand their businesses in the same areas. The investors have become more selective in choosing a project location to minimize the risks from flooding.

In selecting a new location, the Company takes into account various factors, namely the readiness of the infrastructure, size, and risks from flooding. Currently, the Company has 9 projects in the industrial estates and industrial zones in the Eastern Region of the country of the Eastern Seaboard. They are located in high-ground areas and close to public water sources. Therefore, they are prevented from being flooded and there are retention ponds for the water discharged from the projects. The WHA Saraburi Industrial Zone is located in central region's river basin and faced with the risk of flooding from the overflowing from the northern region and heavy rainfall. Aware of the risk, the Company assigned specialists to study the geological characteristics of the surrounding area and develop a simulation model based on the historical rainfall data to see whether the existing flood prevention system was

efficient or not. Moreover, the Company improved the earth dykes to prevent flooding, expanded the drainage system in the bottleneck spots, improved the pumping system in the retention ponds to drain excess water from the industrial land, including there is installation of an instrument measuring the water level in the draining trough in the area and connecting to the central control centre of the operating zone. It can help to monitor the water level and can respond promptly, and regularly inspected and performed maintenance on all systems, tools, and machines to ensure that they can function properly at all times.

Due to the constant internal and external changes, the Company carried out inspection and assessment of the areas in the industrial estates and industrial zones before and after the rainy season to ensure the functionality of all systems. In addition, the Company developed measures to prevent unexpected incidents from rain storm with the 24-hour emergency response team.

### **3.3 Risk from Drought**

In 2019 the accrued rains in the country were at the level lower than the average values, so it caused a risk of a water shortages almost across the country. It has a trend to send a clear impact in 2020, especially in the eastern region in Chon Buri, Rayong and Saraburi provinces, which have industrial estates and industrial zones situated in there. They have a chance to be impacted from it. However, the public sector and the private sector, including the company has a plan to deal with it and implement the measures remedying the drought problems continuously, so the operators in the industrial estates and the operating zones, including the investors can have confidence in the various projects implemented and under further consideration. For instance, if any nearby sources can be added by digging a holding well in the area of the company to store water, etc. it can reduce the risk from water shortages and can allocate water sufficiently for the need to fight the drought in the future years.

Moreover, the industrial estates and industrial zones located in the Eastern Seaboard are situated close to large reservoirs, namely Dokkrai Reservoir, Nong Pla Lai Reservoir, and Khlong Yai Reservoir with the maximum capacity of up to 275 million cubic meters in total. However, in order to ensure adequate water supply to support future demand, East Water Public Company Limited has already set up water plumbing network to draw water from Prasae Reservoir to Khlong Yai Reservoir and Nong Pla Lai Reservoir, resulting in the stability and security in terms of water supply in the Eastern Thailand. On the company's part and its group have considered designating additional measures to be implemented in early 2020. For instance, installation of buoys and pumps to increase the ability to draw water from the company's reservoir at the lowest level. In case of crisis, recycle more water, including consideration to invest in construction of the reclamation system additionally, is to bring the wastewater that has been treated to go through the quality improvement process and distribute it to the operators in the area. Nevertheless, it is to reduce the raw water use and recycle water, which is regarded as a valuable resource, etc.

### **3.4 Risk from Accident, Fire, and Chemical Spill**

The Company also places importance on the risks from accidents such as fire, chemical spills, and road accident in the industrial estates and industrial zones. The Company has installed the fire extinguishing system in compliance with the National Fire Protection Agency (NFPA)'s standard to cover the entire area of the projects and provided fire trucks and necessary equipment as well as trained security staff to be stationed at every project 24 hours a day. Moreover, the Company has prepared the emergency response plan to ensure prompt response in emergency situation, whereby the project staff would receive regular trainings from local entrepreneurs and state agencies, ensuring the readiness and effectiveness in emergency situation in order to minimize the damage and loss. Moreover, each industrial estate and operating zone shall also install a CCTV system at the entrance-exit, the risky points with connectivity of the signal to the central control operation room to monitor the area continuously.

## 4. Risk From Utility and Power Business

### 4.1 Risk relating to Customer Concentration

As the main group of the Company's core customers in the water business mainly consist of operators in petrochemical business, power generation business and automobile business in industrial estates and industrial lands, accounting for 37%, 26% and 11%, respectively of the Company's total revenue from the water business for 2019. In addition, the 10 largest customers of the Company mainly consist of operators in the petrochemical business and power generation business, accounting for 66.4% and 62.0% of the Company's total revenue for 2018 and 2019, respectively. A decline or slowdown in the business expansion or investment conditions of these industrial sectors and large customers may reduce their demand for water services and other public utilities which may materially affect the results of operations of the Company.

The Company realizes the risk and consequences from that Factor. In order to pull down the risk 1) the Company monitors customer's water usage closely 2) Queries and revise water usage plan for those customers consistently and 3) to sustainably reduce the possible consequences, the Company set policies and operating plans to offer more variety of products to better serve customer demand such as specific industrial water or reverse osmosis (RO) to focus on more groups of customers as well as plan for customers outside the industrial estates such as sub-district administrative organization, etc. in the important economic area.

### 4.2 Risk relating to reliance on the major suppliers for raw water procurement

The Group of Companies operates its utility service business by producing and distributing industrial water to operators in industrial estates and industrial lands in which the raw water is the key raw material for its operation. The cost of raw water represented approximately 65% of the total cost of the Company. Currently, the Company mainly procures raw water from three (3) major suppliers, i.e. 1) Eastern Water Resources Development and Management Public Company Limited (East Water) which is a large concessionaire granted by the Royal Irrigation Department (RID) having service area in Chonburi, Rayong and Chachoengsao provinces, 2) RID and 3) the WHAID Group (from WHAID Group's internal reservoir of natural water) and their supply volume accounts for 89%, 11% and 5% of the total sources of raw water. Further, the WHAID Group acted as an intermediary for East Water and RID in the Company's water procurement process. However, the Company is able to directly procure raw water from East Water and RID. If East Water, RID or the WHAID Group is unable to supply raw water to the Company in the quantity required and at the agreed time, due to raw water supply shortage or significantly increases in the selling price of raw water, this may have a material adverse effect on the Company's financial condition, results of operations and prospects.

In the past 10 year, the Company has planned to reduce risks of having few major suppliers of raw water and/or distributors of raw water by 1) the Company keeps updates on natural raw water resources and plan to build water reservoirs in some industrial estates as appropriate 2) plans to explore natural raw water resources in addition to the resources currently use 3) plans for recycled water system 4) the Company also follows up and coordinates with customers constantly to promptly plan for sufficient water usage and distribution as well as coordinates with raw water distributors and find protection and modification solutions constantly. With those mention preventive measures that have been performed, the Company is confidence that there is sufficient and quality raw water resources for water supply business.

### **4.3 Risk relating to the deterioration and damage of the water production and distribution system**

The Group of Company's industrial water production and distribution system and wastewater treatment system may deteriorate in a usage life or be damaged during the course of operations, and if the repair is not completed in a timely manner, this may directly obstruct the production and distribution process of industrial water or interrupt the wastewater treatment system. In addition to impacting the Company's profitability and cash flow, this may cause the Company fails to fulfill its obligations under the Right Lease Agreement with the WHAID Group and agreements with Company's customers and may therefore also materially affect the Company's results of operations.

To reduce the mentioned risk, the Company keeps checking on all systems constantly and arranges maintenance plans of water providing and distribution system for industrial purposes appropriately. The purpose of maintenance plan is to focus on maintenance of dilapidated or damaged parts and increase performances for effective usage of water providing and distribution system for industrial purposes. In case when it is needed to temporary halt water providing and distribution system for repair and maintenance, the Company will inform customers in industrial estates beforehand and arrange spare water resources until the main water providing & distribution system will be completely fixed. Apart from this, the Company also prepares property insurance with insurance companies to responsible any damage of any circumstance.

### **4.4 Risk from the investment in the Independent Power Producer (IPP)**

The Company has invested in Independent Power Producers (IPP), namely Gheco-One Company Limited and the companies under Glow Energy Group, in accordance with the Company's strategy to expand the revenue base to other businesses with reasonable and consistent return. There are risks that could produce substantial adverse effects and damage on the projects and the Company, which are the risk from investment, the risk from changes of rules, regulations, and government policies, the risk from the delay in construction, the financing risk, the environmental risk, the risk from insufficient raw materials, the risk from consistent and continuous operation, the risk the complete reliance on the Electricity Generating Authority of Thailand, and the risk from exchange rates and interest rates.

The Company is aware of such risks and, therefore, conducts a study on the pros and cons and the feasibility of the project and the sensitivity analysis to consider all kinds of risks. The Company also evaluates the return rate of the project and found that the Company would receive constant and continuous long-term return if the project is operated continuously. The project is developed and managed by Glow Energy Co., Ltd., of which the executive team is highly knowledgeable, experienced, and successful in the management of several power plants in Thailand. The project is supported by the major shareholder of Glow Energy, which is ENGIE company (former GDF Suez), one of the world's leading companies in the energy business. In addition, Gheco-One signed the contract to prevent the foreign exchange rate swap and the interest swap, the contract to purchase coal in advance, and other contracts in order to ensure the accordance between the revenue, expenditure, loans, and interest rates that come in different currencies.

#### **4.5 Risk from subsidiaries' and associates companies' power plants not be able to generate or distribute electricity, steam and cold water, might cause significant negative effect to business, financial status, income and cash flow**

Income from electricity related business of company's subsidiaries and associates companies depends on the ability to generate or distribute electricity, steam and cold water of those companies to customers. Possible situations that may cause company's subsidiaries and associates companies be unable to distribute electricity to customers and other circumstances includes (a) delays and inability of expected power plant operations that are under construction or planned (b) damages or crashes of electricity generation devices (c) planned and unplanned halt of operation including normal maintenance and major maintenance performing by outsources or delays of those maintenances (d) defects of device and power plant construction and design which can cause the planned ability of electricity distribution of company's subsidiaries and associates companies (e) problem related to quality or lack in resource allocation including coal, , natural gas, water and sunlight and (f) human error including error of users of any device, etc. If the mentioned risks or similar risks occur, it can possibly affect negatively to the ability of generating and distributing electricity, steam and cold water of company's subsidiaries and associates companies and can significantly affect business, financial status, profit and cash flow of company negatively.

To reduce the mentioned risks, the Company policy is to prudently choose partners by considering possible partners' knowledge, ability, experience, expertise, financial status and historical performance. For example, Glow Energy Public Company Limited, Gulf Energy Development Company Limited, B.Grimm Power Public Company Limited and Gunkul Engineering Public Company Limited, which has management team with expertise and succeed from power plant operations in Thailand. The Companies also appoints management committee for associate companies to report performances of each power plant on quarterly basis. If there is any sign that the mentioned risks may happen, the Company can stay alert and solve the problem closely and immediately.

## **5. Risk From Management**

### **5.1 Risk from Dependence on Staff with High Expertise**

The business of the Company requires knowledge and competence of personnel. These personnel have significant roles and responsibilities in different sections of the Company such as the development of marketing strategies, the preparation of contracts and pricing, the procurement of land, and the project management. The loss of these personnel would affect the capability to find clients of and the performance of the Company. However, most of the key personnel are also shareholders of the Company so it's unlikely that they would resign or work for competitors. Also, after being listed in the Stock Exchange of Thailand, the Company has become more well-known, and, as a result, the Company would be more attractive and interesting to the people with high capabilities. Moreover, the Company's human resource management policies are good. The Company is developing the knowledge base in the organization to reduce the dependence on individuals and also the competitive incentives.



# GENERAL AND OTHER MATERIAL INFORMATION

## General Information

### 1. The Company

#### Company Name

WHA Corporation Public Company Limited

#### Nature of Business

##### 1. Logistics Hub

- 1.1 Real Estate development for rental and service income
- 1.2 Real Estate development for sale
- 1.3 Real Estate investment and management
- 1.4 Real Estate investment trust management

##### 2. Industrial Development Hub

##### 3. Utilities & Power Hub

- 3.1 Utilities service
- 3.2 Power service

##### 4. Digital Platform Hub

- 4.1 Data Center service
- 4.2 Fiber Optic FTTx service
- 4.3 Managed service

#### Head Office

1121 Moo. 3 Theparak Road, Theparak Subdistrict, Muang District, Samutprakarn Province 10270

Company Registered Number : 0107555000082

Telephone : 0-2753-3750

Facsimile : 0-2753-2750

Website : <http://www.wha-group.com>

#### Share Capital as at 3 January 2020

Authorised Share Capital : THB 1,567,773,018.60

Paid-up Capital : THB 1,494,660,151.90

Type of Shares : Ordinary Shares

Par Value : THB 0.10 per share

## 2. Subsidiaries (Information as at 31 December 2019)

Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
<b>Subsidiaries</b>								
WHA Alliance Company Limited	ALL	Providing rental factories, warehouses and other properties	Thailand	WHA	THB 260.00	THB 260.00	THB 10.00	99.99
Warehouse Asia Alliance Company Limited	WAA	Providing rental factories, warehouses and other properties	Thailand	WHA	THB 310.00	THB 310.00	THB 10.00	99.99
WHA Real Estate Management Company Limited	WHARM	Trust manager for investment property	Thailand	WHA	THB 10.00	THB 10.00	THB 100.00	99.99
WHA Venture Holdings Company Limited	WHAHV	Investing in other companies and rental factories, warehouses and other properties	Thailand	WHA	THB 25,018.61	THB 25,018.61	THB 100.00	99.99
WHA Infonite Company Limited	WHA Infonite	Investing in data system	Thailand	WHA	THB 400.00	THB 400.00	THB 10.00	97.67
<b>Subsidiaries under ALL</b>								
WHA Corporation (Hong Kong) Limited	WHAHK	Holding Company	Hong Kong	ALL	USD 2.00	USD 2.00	USD 1.00	100.00
<b>Subsidiaries under WHAHK</b>								
PT WHA (International) Indonesia	WHA INDO	Providing rental factories, warehouses and other properties	Indonesia	WHAHK	USD 2.00	USD 2.00	USD 1.00	99.96
<b>Subsidiaries under WHAVH</b>								
WHA Industrial Development Public Company Limited	WHA ID	Real estate development	Thailand	WHAHV	THB 6,000.00	THB 3,882.07	THB 0.40	98.54
<b>Subsidiaries under WHA ID</b>								
WHA Eastern Industrial Estate Company Limited	WHA EIE	Industrial estate development	Thailand	WHA ID	THB 400.00	THB 400.00	THB 40.00	99.99

Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
Eastern Seaboard Industrial Estate (Rayong) Company Limited	ESIE	Industrial estate development	Thailand	WHA ID	THB 358.00	THB 358.00	THB 10.00	60.00
WHA Eastern Seaboard Industrial Estate Company Limited	WHA ESIE	Industrial estate development	Thailand	WHA ID	THB 1,000.00	THB 1,000.00	THB 100.00	99.99
WHA Saraburi Industrial Land Company Limited	WHA SIL	Industrial estate development	Thailand	WHA ID	THB 500.00	THB 500.00	THB 100.00	99.99
WHA Rayong Industrial Land Company Limited	WHA RIL	Industrial estate development	Thailand	WHA SIL	THB 1,000.00	THB 1,000.00	THB 100.00	99.99
WHA Eastern Pipeline Services Company Limited	WHA EPS	Pipe Rack Rental	Thailand	WHA ID: 74.99% WHA EIE: 25.01%	THB 100.00	THB 100.00	THB 100.00	99.99
WHA Industrial Development International (BVI) Company Limited	WHA IDIBVI	Holding Company	British Virgin Islands	WHA ID	USD 0.002	USD 0.002	USD 10.00	100.00
WHA Industrial Development International Limited (Cayman)	WHA II	Holding Company	Cayman Islands	WHA ID	USD 0.05	USD 0.001	USD 1.00	100.00
WHA Industrial Development Engineering Company Limited	WHA IDE	Design and construction supervision service	Thailand	WHA ID	THB 20.00	THB 17.15	THB 10.00	99.99
The Park Residence Company Limited	THE PARK	Real estate developer and service management	Thailand	WHA ID	THB 4.60	THB 4.60	THB 10.00	99.99
WHA Industrial Building Company Limited	WHA IB	Sale and Lease Factory	Thailand	WHA ID	THB 294.00	THB 294.00	THB 10.00	99.99
WHA Industrial Development International Company Limited	WHA IDI	Holding Company	Thailand	WHA ID	THB 723.00	THB 710.74	THB 10.00	99.99
WHA Rayong 36 Company Limited	WHA R36	Real estate development	Thailand	WHA ID: 70.01% WHA RIL: 29.99%	THB 1,165.00	THB 1,165.00	THB 10.00	99.99
Eastern Seaboard Property and Marina Services Company Limited	EPM	Real estate development for investment and marina services	Thailand	WHA ID	THB 1.00	THB 1.00	THB 10.00	99.99
WHA Eastern Seaboard Industrial Estate 4 Company Limited	WHA ESIE 4	Industrial estate development	Thailand	WHA ID	THB 792.80	THB 564.98	THB 10.00	99.99

Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
WHA Industrial REIT Management Company Limited	WHA IRM	Trust manager for investment property	Thailand	WHA ID	THB 35.00	THB 30.00	THB 10.00	99.99
WHA Industrial Estate Rayong Company Limited	WHA IER	Real estate development	Thailand	WHA ID	THB 650.00	THB 162.50	THB 10.00	59.99
WHA Utilities and Power Public Company Limited	WHAUP	Utilities and Power	Thailand	WHA ID: 68.86% WHA IDISG : 1.14%	THB 3,825.00	THB 3,825.00	THB 1.00	70.00
<b>Subsidiaries under WHA IDI</b>								
WHA Industrial Development International (SG) Pte. Ltd.	WHA IDISG	Holding Company	Singapore	WHA IDI	USD 7.39	USD 7.39	USD 1.00	100.00
<b>Subsidiaries under WHA IDISG</b>								
WHA Industrial Management Services Vietnam Company Limited	WHA IMSV	General management counseling services	Vietnam	WHA IDISG	VND 5,675	VND 5,675	VND -	100.00
WHA Industrial Development (SG) Pte. Ltd.	WHA IDSG	Holding Company	Singapore	WHA IDISG	USD 0.001	USD 0.000001	USD 1.00	100.00
WHA Industrial Development 2 (SG) Pte. Ltd.	WHA IDSG 2	Holding Company	Singapore	WHA IDISG	USD 0.000001	USD 0.000001	USD 1.00	100.00
<b>Subsidiaries under WHA IDSG</b>								
WHA Industrial Zone Nghe An Joint Stock Company	WHA IZ (Nghe An)	Real estate development	Vietnam	WHA IDSG	VND 384,500	VND 384,500	VND 10,000	99.00
<b>Subsidiaries under WHAUP</b>								
WHA Water Company Limited	WHAWT	Water resources development and management	Thailand	WHAUP	THB 100.00	THB 100.00	THB 10.00	99.99
WHA Energy Company Limited	WHAEG	Holding Company	Thailand	WHAUP	THB 9,178.00	THB 9,178.00	THB 10.00	99.99
WHAUP International Company Limited	WUPIN	Holding Company	Thailand	WHAUP	THB 45.00	THB 45.00	THB 5.00	99.99
<b>Subsidiaries under WHAEG</b>								
WHA Energy 2 Company Limited	WHAET	Holding Company	Thailand	WHAEG	THB 4,250.00	THB 4,250.00	THB 10.00	99.99
WHA Solar Company Limited	WHA SL	Electricity and Power generation	Thailand	WHAEG	THB 200.00	THB 50.00	THB 10.00	99.99

Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
<b>Subsidiaries under WUPIN</b>								
WHAUP (SG) 1 Pte. Ltd.	WUPSI	Holding Company	Singapore	WUPIN	USD 1,340.00	USD 1,340.00	USD 1.00	99.99
<b>Subsidiaries under WUPS1</b>								
WHAUP (SG) 2 Pte. Ltd.	WUPS2	Holding Company	Singapore	WUPS1	USD 1,330.00	USD 1,330.00	USD 1.00	99.99
WHAUP (SG) 2DR Pte. Ltd.	WUPSD	For investment in additional projects in foreign countries in the future	Singapore	WUPS1	USD 0.100.00	USD 0.100.00	USD 1.00	100.00
<b>Subsidiaries under WUPS2</b>								
WHAUP Nghe An Joint Stock Company	WUPNA	Produce and distribute water for industrials and wasted water management services	Vietnam	WUPS2	VND 29,958.00	VND 29,958.00	VND 10,000	99.99

### 3. Joint Ventures (Information as at 31 December 2019)

Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
<b>Joint Ventures</b>								
WHA KPN Alliance Company Limited	WHA-KPN	Providing rental factories, warehouses and other properties	Thailand	WHA	THB 768.00	THB 768.00	THB100.00	64.97
Central WHA Alliance Company Limited	CENTRAL-WHA	Providing rental factories, warehouses and other properties	Thailand	WHA	THB 650.00	THB 642.50	THB100.00	49.99
WHA Daiwa Logistics Property Company Limited	WHA-Daiwa	Providing rental factories, warehouses and other properties	Thailand	WHA	THB 820.00	THB 820.00	THB100.00	50.99
WHA-JD Alliance Company Limited	WHA-JD	Development, construction, management and operation of the logistic facilities projects	Thailand	WHA	THB 50.00	THB 50.00	THB100.00	51.00
<b>Joint Ventures under WHA Infonite</b>								
Genesis Data Center Company Limited	Genesis	Providing data center	Thailand	WHA Infonite	THB 210.00	THB 111.00	THB100.00	33.33
<b>Joint Ventures under WHAUP</b>								
Gulf WHA MT Natural Gas Distribution Company Limited	Gulf WHA MT	Natural Gas Distribution	Thailand	WHAUP	THB 436.00	THB 379.50	THB 10.00	35.00
WHA Eastern Seaboard NGD 2 Company Limited	WHA NGD2	Natural Gas Distribution	Thailand	Gulf WHA MT	THB 198.00	THB 124.50	THB 10.00	99.99
WHA Eastern Seaboard NGD 4 Company Limited	WHA NGD4	Natural Gas Distribution	Thailand	Gulf WHA MT	THB 234.00	THB 177.50	THB 10.00	99.99
<b>Joint Ventures under WHAEG</b>								
WHA Gunkul Green Solar Roof 1 Co., Ltd.	WHA Gunkul 1	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	WHAEG	THB 11.50	THB 11.50	THB 10.00	74.99
WHA Gunkul Green Solar Roof 3 Co., Ltd.	WHA Gunkul 3	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	WHAEG	THB 14.50	THB 14.50	THB 10.00	74.99



Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
WHA Gunkul Green Solar Roof 6 Co., Ltd.	WHA Gunkul 6	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	WHAEG	THB 14.50	THB 14.50	THB 10.00	74.99
WHA Gunkul Green Solar Roof 17 Co., Ltd.	WHA Gunkul 17	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	WHAEG	THB 16.00	THB 16.00	THB 10.00	74.99
B.GRIMM Power (WHA) 1 Company Limited	BPWHA-1	Electricity and Power Generation	Thailand	WHAEG	THB 1,533.56	THB 1,533.56	THB100.00	25.01
Gulf VTP Company Limited	GVTP	Electricity and Power Generation	Thailand	WHAEG	THB 1,610.00	THB 1,610.00	THB 10.00	25.01
Gulf TS1 Company Limited	GTS1	Electricity and Power Generation	Thailand	WHAEG	THB 1,685.00	THB 1,685.00	THB 10.00	25.01
Gulf TS2 Company Limited	GTS2	Electricity and Power Generation	Thailand	WHAEG	THB 1,690.00	THB 1,690.00	THB 10.00	25.01
Gulf TS3 Company Limited	GTS3	Electricity and Power Generation	Thailand	WHAEG	THB 1,520.00	THB 1,520.00	THB 10.00	25.01
Gulf TS4 Company Limited	GTS4	Electricity and Power Generation	Thailand	WHAEG	THB 1,470.00	THB 1,470.00	THB 10.00	25.01
Gulf NLL2 Company Limited	GNLL 2	Electricity and Power Generation	Thailand	WHAEG	THB 1,293,000	THB 1,293.00	THB 10.00	25.01
Gulf JP NLL Company Limited	GJP NLL	Electricity and Power Generation	Thailand	WHAEG	THB 1,384.00	THB 1,384.00	THB 10.00	25.01
Gulf Solar Company Limited	Gulf Solar	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	WHAEG	THB 14.63	THB 14.63	THB 10.00	25.01
Gulf Solar TS1 Company Limited	Gulf Solar TS 1	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	Gulf Solar	THB 3.03	THB 3.03	THB 10.00	99.99
Gulf Solar TS2 Company Limited	Gulf Solar TS 2	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	Gulf Solar	THB 2.29	THB 2.29	THB 10.00	99.99

Company Name	Abbreviation	Nature of Business	Registered in	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (Per Share)	Percentage of shares held by the Company
Gulf Solar BV Company Limited	Gulf Solar BV	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	Gulf Solar	THB 3.13	THB 3.13	THB 10.00	99.99
Gulf Solar KKS Company Limited	Gulf Solar KKS	Producing and distributing electricity by solar photovoltaic rooftop	Thailand	Gulf Solar	THB 6.00	THB 6.00	THB 10.00	99.99
Eastern Seaboard Clean Energy Company Limited	ESCE	Electricity and Power Generation	Thailand	WHAEG	THB 1,039.00	THB 1,017.81	THB 10.00	33.33
Chonburi Clean Energy Company Limited	CCE	Electricity and Power Generation	Thailand	ESCE	THB 989.00	THB 989.00	THB 10.00	99.99
Rayong Clean Energy Company Limited	RCE	Electricity and Power Generation	Thailand	ESCE	THB 50.00	THB 12.50	THB 10.00	99.99
Glow Hemaraj Wind Company Limited	GHW	Electricity and Power Generation	Thailand	ESCE	THB 50.00	THB 2.50	THB 10.00	99.99
<b>Joint Ventures under WHAET</b>								
Gheco-One Company Limited	Gheco-I	Electricity and Power Generation	Thailand	WHAET	THB 11,624.00	THB11,624.00	THB 10.00	35.00
Glow IPP Company Limited	GIPP	Electricity and Power Generation	Thailand	WHAET	THB 2,850.00	THB 2,850.00	THB 10.00	5.00
Houay Ho Thai Company Limited	HHT	Electricity and Power Generation	Thailand	WHAET	THB 422.15	THB 422.15	THB 10.00	51.00
Houay Ho Power Company Limited	HHP	Electricity and Power Generation	Lao People's Democratic Republic	HHT	USD 40.00	USD 40.00	USD 80.00	25.00

#### 4. Other Juristic Persons in which the Company holds 10% or more of the shares (Information as at 31 December 2019)

Company Name	Abbreviation	Nature of Business	Location / Tel. / Fax	Shareholder	Registered Capital (mm)	Paid-up Capital (mm)	Par Value (per share)	Type of Shares	Percentage of shares held by the Company
<b>Other Juristic Person in which the Company holds 10% or more of the shares</b>									
1. WHA Premium Growth Freehold and Leasehold Real Estate Investment Trust	WHART	Investment in real estate in the type of warehouses and distribution centers	Location: Kasikorn Bank Building, 6 <sup>th</sup> Floor, 400/22 Phaholyothin Rd., Samsen-Nai Subdistrict, Phayathai District, Bangkok 10400 Telephone: 0-2673-3999 Facsimile: 0-2673-3900	WHA	THB 23,329.13	THB 23,169.46	THB 9.0696	Trust Units	15.00
2. WHA Business Complex Freehold and Leasehold Real Estate Investment Trust	WHABT	Investment in real estate in the type of office building	Location: 1 Empire Tower, 32 <sup>nd</sup> Floor, South Sathorn Rd., Yannawa Subdistrict, Sathorn District, Bangkok Telephone: 0-2686-6100 Facsimile: 0-2670-0430	WHA	THB 1,930.85	THB 1,930.85	THB 9.5587	Trust Units	15.00
3. Hemaraj Industrial Property and Leasehold Fund	HPF	Investment in real estate in the type of ready - built factories and warehouses	Location: 199 Column Tower Ground Floor, Ratchadapisek Rd., Klongtoey District, Bangkok Telephone: 0-2649-2000 Facsimile: 0-2649-2233	WHA ID	THB 4,629.50	THB 4,629.50	THB 9.85	Ordinary Shares	22.95
4. Hemaraj Leasehold Real Estate Trust	HREIT	Investment in real estate in the type of ready - built factories and warehouses	Location: 9 UM Tower 27 <sup>th</sup> Floor Ramkhamhaeng Rd., Suan Luang Bangkok Telephone: 0-2717-3901 Facsimile: 0-2717-3902	WHA ID	THB 6,223.42	THB 6,223.37	THB 8.8572	Trust Units	15.00
5. Supernap (Thailand) Company Limited	SNIT	Providing data center co-location services	Location: 390/2 WHA Chonburi 2 Industrial Estate, Moo 2, Khaokansong, Sriracha, Chonburi Telephone: 0-3312-5100	WHA Infonite	THB 2,000.00	THB 1,410.00	THB 10.00	Ordinary Shares	15.00

## 5. References

### Share Registrar

#### Thailand Securities Depository Co., Ltd.

The Stock Exchange of Thailand Building,  
93 Ratchadaphisek Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400  
Telephone: 0-2009-9999  
Facsimile: 0-2009-9991

### Debenture Registrar

#### The Siam Commercial Bank Public Company Limited

1060 New Petchaburi Road, Makkasan Subdistrict, Ratchathevee District, Bangkok 10120  
Telephone: 0-2256-2323

#### The Bank of Ayudhya Public Company Limited

1222 Rama 3 Road, Bang Phong Phang Subdistrict, Yannawa District, Bangkok 10120  
Telephone: 0-2296-5715

### Auditor

#### PricewaterhouseCoopers ABAS Ltd.

15<sup>th</sup> Floor, Bangkok City Tower, 179/74-80 South Sathorn Road, Thung Maha Mek Subdistrict, Sathorn District, Bangkok 10120  
Telephone: 0-2344-1000  
Facsimile: 0-2286-5050

### LEGAL ADVISOR

#### RL Counsel Co., Ltd.

62/15 Thaniya, Suriyawongse Subdistrict, Bangrak District, Bangkok 10500  
Telephone: 0-2235-3339  
Facsimile: 0-2235-3076

## Other Material Information

There is no other information which may materially affect investors' decisions.

# CAPITAL STRUCTURE

## The Company's Securities

The Company's registered capital as of 3 January 2020 was THB 1,567,773,018.60 and the paid-up capital was also THB 1,494,660,151.90, divided into registered ordinary shares of 15,677,730,186 shares with par value THB 0.10 and paid-up capital of 14,946,601,519 shares. Material change of paid-up capital is as follows:

(Unit : THB)

	Item	Registered capital (Increase/ decrease)	Registered capital	Paid-up capital (Increase/ decrease)	Paid-up capital
31 Dec 2017	-	-	1,567,773,018.60	-	1,432,243,032.10
5 Jan 2018	5 <sup>th</sup> Exercise of warrant WHA-W1	-	1,567,773,018.60	386,987.00	1,432,630,019.10
9 July 2018	6 <sup>th</sup> Exercise of warrant WHA-W1	-	1,567,773,018.60	796,697.80	1,433,426,716.90
31 Dec 2018	-	-	1,567,773,018.60	-	1,433,426,716.90
7 Jan 2019	7 <sup>th</sup> Exercise of warrant WHA-W1	-	1,567,773,018.60	5,715,108.30	1,439,141,825.20
1 Jul 2019	8 <sup>th</sup> Exercise of warrant WHA-W1	-	1,567,773,018.60	31,768,020.00	1,470,909,845.20
31 Dec 2019	-	-	1,567,773,018.60	-	1,470,909,845.20
3 Jan 2020	9 <sup>th</sup> Exercise of warrant WHA-W1	-	1,567,773,018.60	23,750,306.70	1,494,660,151.90

## Shareholding Structure

The shareholders on the shareholders' register as of 31 December 2019 are as follows:

Shareholders	Shares	Percent
1. <b>Group of Mr. Somyos Anantaprayoon and Ms. Jareeporn Jarukornsakul</b>		
- WHA Holding Co., Ltd. <sup>(1)</sup>	3,716,851,546	25.27
- Ms. Jareeporn Jarukornsakul	1,473,761,769	10.02
- Mr. Somyos Anantaprayoon*	432,946,226	2.94
- Ms. Chatchamon Ananyaprayoon	322,205,135	2.19
<b>Sub-total</b>	<b>5,945,764,676</b>	<b>40.42</b>
2. STATE STREET EUROPE LIMITED	1,039,126,395	7.06
3. Thai NVDR Co., Ltd.	953,193,405	6.48
4. UBS AG SINGAPORE BRANCH	580,851,722	3.95
5. Bualuang Long-Term Equity Fund (B-LTF)	237,596,300	1.62
6. <b>Group of Jarukornsakul</b>		
- Mr. Wutt Jarukornsakul	123,000,000	0.84
- Ms. Jaruwan Jarukornsakul	18,241,150	0.12
- Mr. Anuwat Jarukornsakul	10,310,000	0.07
- Ms. Patsanan Jarukornsakul	10,000,000	0.07
- Ms. Wannakan Jarukornsakul	7,600,000	0.05
- Mrs. Malee Jarukornsakul	3,300,000	0.02
- Mr. Chaichana Jarukornsakul	200,000	0.00
- Mr. Chaitawat Jarukornsakul	12,145	0.00
- Mr. Chaitana Jarukornsakul	88	0.00
<b>Sub-total</b>	<b>172,663,383</b>	<b>1.17</b>
7. Bualuang Top-Ten Fund (BTP)	171,700,000	1.17
8. SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	169,234,885	1.15
9. Mr. Sanchai Suksomcheewin	125,565,320	0.85
10. Ms. Narinrat Saeung	99,094,578	0.67
<b>Total Top Ten Shareholders</b>	<b>9,494,790,664</b>	<b>64.55</b>
<b>Other Minority Shareholders</b>	<b>5,214,307,788</b>	<b>35.45</b>
<b>Grand total</b>	<b>14,709,098,452</b>	<b>100.00</b>

Remark \* Mr. Somyos Anantaprayoon passed away on 9 February 2018.

<sup>(1)</sup> WHA Holding Co., Ltd. is a holding company. As of 31 December 2019, it has a registered capital of THB 5,000,000 being 1,000,000 ordinary shares at a par value of THB 5 per share. The shareholders are listed as follows:

Shareholder	No. of Shares	%
Mr. Somyos Anantaprayoon	500,000	50.00
Ms. Jareeporn Jarukornsakul	499,999	50.00
Ms. Jaruwan Jarukornsakul	1	0.00
<b>Total</b>	<b>1,000,000</b>	<b>100.00</b>



## Other Securities

### 1. Debentures – WHA Corporation Public Company Limited

As of 31 December 2019, WHA Corporation Public Company Limited has THB 19,780 mm of outstanding debentures. The details are as follows:

Issue	Amount (THB mm)	Interest rate (% p.a.)	Tenure (year)	Maturity date
WHA217A	600.00	4.70	7.01	31 July 2021
WHA247A	280.00	5.00	10.01	31 July 2024
WHA204A	1,500.00	4.10	4.00	29 April 2020
WHA204B	1,000.00	4.10	4.00	29 April 2020
WHA219A	1,500.00	4.00	5.00	16 September 2021
WHA204C	2,600.00	3.50	3.00	28 April 2020
WHA208A	100.00	3.15	2.98	18 August 2020
WHA214A	1,900.00	2.39	3.00	27 April 2021
WHA234A	1,100.00	2.87	5.00	27 April 2023
WHA200A	337.80	2.77	2.00	19 October 2020
WHA224A	454.20	3.48	3.50	19 April 2022
WHA230A	328.00	3.74	5.00	19 October 2023
WHA250A	2,380.00	4.03	7.01	19 October 2025
WHA224B	2,100.00	2.95	3.00	24 April 2022
WHA244A	1,000.00	3.40	5.01	24 April 2024
WHA264A	400.00	3.69	7.01	24 April 2026
WHA226A	200.00	2.75	3.01	30 June 2022
WHA226B	2,000.00	2.75	3.00	30 June 2022
<b>Total</b>	<b>19,780.00</b>			

### 2. Debentures – WHA Industrial Development Public Company Limited

As of 31 December 2019, WHA Industrial Development Public Company Limited (Former Hemraj Land and Development Public Company Limited) has THB 4,500 mm. The details are as follows:

Issue	Amount (THB mm)	Interest rate (% p.a.)	Tenure (year)	Maturity date
HEMRAJ217A	2,000.00	5.65	9.01	12 July 2021
HEMRAJ252A	1,500.00	5.00	10.01	20 February 2025
HEMRAJ222A	1,000.00	4.70	7.01	20 February 2022
<b>Total</b>	<b>4,500.00</b>			

Note: The Company repaid callable bond (HEMRAJ231A, HEMRAJ244A) on 5 September 2018 and 8 July 2019, before its maturity.

### 3. Debentures – WHA Utilities and Power Public Company Limited

As of 31 December 2019, WHA Utilities and Power Public Company Limited has THB 9,000 mm of outstanding debentures. The details are as follows:

Issue	Amount (THB mm)	Interest rate (% p.a.)	Tenure (year)	Maturity date
WHAUP208A	3,200.00	3.33	3.00	18 August 2020
WHAUP208B	800.00	3.33	2.98	10 August 2020
WHAUP216A	2,390.00	2.65	3.00	26 June 2021
WHAUP236A	1,290.00	3.17	5.00	26 June 2023
WHAUP256A	1,320.00	3.66	7.01	26 June 2025
<b>Total</b>	<b>9,000.00</b>			

### 4. Bill of Exchange – WHA Corporation Public Company Limited

As of 31 December 2019, the Company has outstanding Bill of Exchange of THB 950 mm. The details are as follows:

Bill of Exchange	Amount (THB mm)	Tenure (days)	Maturity date
WHA20402A	650.00	184	2 April 2020
WHA20423A	200.00	182	23 April 2020
<b>Total</b>	<b>850.00</b>		

### 5. Bill of Exchange – WHA Industrial Development Public Company Limited

- No outstanding Bill of Exchange

### 6. Bill of Exchange – WHA Utilities and Power Public Company Limited

- No outstanding Bill of Exchange

### 7. Warrants

As of 31 December 2019, the Company has outstanding warrant units from WHA-W1 issuance, which its detail are as follows:

Warrants	Total units issued	Exercised units	Exercise ratio	Exercise price (THB)	Tenure (year)	Last exercise date
WHA-W1	116,834,193	60,965,293	1:10.2396	3.4181	5.0	4 March 2020

## Dividend Policy

The Company has a policy to pay out dividends at not less than 40.0% of its net profits stated on the Company financial statements after deduction of the corporate income tax and legal reserve each year. The Company considers dividend payment based on factors that deem to be the most beneficial to the shareholders such as the Company's performance and financial status, investment plans in each period as deemed reasonable or appropriate by the Board of Directors. The dividend payment shall not have significant impact on the Company's normal operation. The resolution of the Board of Directors on dividend payment has to be proposed to the shareholders for approval, except payment of the interim dividends where the Board of Directors has its authority to approve and then report the same to the next shareholders' meeting.

The Company's subsidiaries have a policy to pay out dividends at not less than 20.0% of its net profits stated on the company financial statements after deduction of the corporate income tax and legal reserve each year. Nevertheless, The Company's subsidiaries also consider dividend payment based on factors that deem to be the most beneficial to the shareholders such as the subsidiaries performance and financial status, investment plans in each period as deemed reasonable or appropriate by its Board of Directors. The dividend payment shall not have significant impact on the Company's normal operation. The resolution of the Board of Directors on dividend payment has to be proposed to the shareholders for approval.

# MANAGEMENT STRUCTURE

## The Board of directors and sub-Committees

The Company's management structure consists of the Board of Directors and five Sub-Committees namely:

- 1) Board of Directors
- 2) Executives Committee
- 3) Audit Committee
- 4) Risk Management Committee
- 5) Corporate Governance Committee
- 6) Nomination and Remuneration Committee

### 1) Board of Directors

As of 31 December 2019, the Company's Board of Directors of 11 directors as follows:

Name	Position
1. Ms. Jareeporn Jarukornsakul	Chairman of the Board of Directors
2. Mr. David Richard Nardone	Vice Chairman of the Board of Directors
3. Mr. Vivat Jiratikarnsakul	Director
4. Mr. Krailuck Asawachatroj	Director
5. Mr. Jakrit Chaisanit	Director
6. Mr. Narong Kritchanchai	Director
7. Mr. Somsak Boonchoyruengchai	Director
8. Dr. Pichit Akraithit	Independent Director and Chairman of the Audit Committee
9. Dr. Apichai Boontheerawara	Independent Director and Audit Committee Member
10. Dr. Somsak Pratomsrimek	Independent Director and Audit Committee Member
11. Dr. Kritsana Sukboonytasatit	Independent Director and Audit Committee Member

The Company Secretary is Mr. Sirisak Kijraksa.

#### Authorized Directors

"The Directors who have authority to sign for binding the Company are Ms. Jareeporn Jarukornsakul jointly sign with any one of Mr. Jakrit Chaisanit or Mr. Narong Kritchanchai or Mr. Krailuck Asawachatroj or Mr. Somsak Boonchoyruengchai, altogether 2 persons, with the Company's seal affixed."

## Scope of Authorities and Responsibilities of the Board of Directors

1. To perform their duties and Corporate Governance in compliance with laws, rules, regulations or notification of the Securities and Exchange Commission of Thailand, the Capital Market Supervisory Board, and the Stock Exchange of Thailand that relate to the Company's objectives, the Articles of Association, the resolutions of the Board of Directors and the resolutions of the shareholders' meeting with their accountabilities, carefulness, and integrity.
2. To set up the vision, strategy, direction, policies, goals, plans, budgets, management structure and authorization of the Company and subsidiaries, which are presented by the administration of the Company, and will supervise the performance of management, committees or any other persons assigned by the Company to ensure compliance with the policies for the best interests of the Company and its shareholders.
3. To monitor the Executive and operation of the Executive Committee, Chief Executive Officer, the Executive, or any persons who take responsibilities and such duties in accordance with the Company's policies determined by the Board of Directors.
4. To constantly follow up the Company's performance to be in compliance with the operating plan and budget of the Company.
5. To procure the Company and its subsidiaries to apply appropriate and efficient accounting systems, and to provide internal control and internal audit systems.
6. To arrange the preparation of balance sheet and income statements at the end of the Company's fiscal year and certify such statements in order to propose to the shareholders at the annual general shareholders' meeting for their approval.
7. To consider and approve the selection and appointment of the Company's auditor, and the appropriate audit fee proposed by the Audit Committee prior to propose to the shareholders at the annual general shareholders' meeting for approval.
8. To prepare policy in relation to good corporate governance principle in writing and efficiently apply such policy to ensure that the Company be fairly responsible to all relevant group of persons.
9. To consider and approve the appointment of person who has qualification and is not prohibited under the Public Limited Company Act, B.E. 2535 (as amended), the Securities Exchange Act, B.E. 2535 (as amended), including other relevant notifications, regulations and/or rules to substitute a vacancy in the Board of Directors for reasons other than the termination of the term of office, and to consider and approve the appointment of the director to replace the one retiring by rotation, and determine the director's remunerations as proposed by the Remuneration and Nomination Committee in order to propose the shareholders in the annual general shareholders' meeting for approval.
10. To appoint sub-committee such as the Audit Committee, the Executive Committee, the Corporate Governance Committee, the Remuneration and Nomination Committee, the Risk Management Committee, or other committee, including determining their duties and authorities in order to support the Board of Directors' management.
11. To determine and change the director's name who has authority to sign for binding the Company.
12. To consider and appoint the Executive as defined by the Securities and Exchange Commission or the Capital Market Supervisory Board, and the Company Secretary, including determining their remuneration.
13. To seek profession opinions from external organizations if necessary for making appropriate decision.
14. To support the Company's Directors and Executive to attend any seminars held by Thai Institute of Directors on the program of Duties and Responsibilities of the Directors and the Executive.
15. To approve loan to such companies that have a business relationship with the Company as shareholders, or companies relating to commercial business or other companies in the amount that exceeds the Executive Committee's authority.

16. To approve investment and divestment of common shares and/or other securities in amount that exceeds the Executive Committee's authority.
17. To propose to the Company's shareholders on the Company's capital increase or decrease, and the change in par value of shares, Memorandum of Associations, Article of Associations, and/or Objectives.
18. To approve the Company's establishment, merger or liquidation.
19. To delegate the management, executives, and employees of related companies to explain, give an opinion, attend a meeting or delivery documents as it deemed appropriate.
20. To consult experts, or Company's advisor, or hire external consultant or expert where it deemed appropriate by the Company's expenses.

The assignment of authorities and responsibilities of the Board of Directors shall not cause the Board of Directors or the sub-authorized person to be entitled to approve the transaction where itself or a person who has a conflict of interest (as defined in the Notification of the Securities and Exchange Commission or the Notification of the Capital Market Supervisory Board) may have interests or other types of benefit or conflict of interests with the Company or its subsidiaries, except the transaction was approved in compliance with the policy and principle approved by the shareholders meeting or the Board of Directors' meeting.

21. To approve the interim dividend payment to shareholders.
22. To establish and monitor efficient Anti-Corruption system, ensure the executive team awareness and attention to the Anti-Corruption scheme, embed organizational Anti-Corruption culture and the board of directors will comply with the Anti-Corruption measures and punish when non-compliance occurs.
23. To appoint the Company Secretary to support the directors to perform their duties in accordance with related laws and regulations.
24. To set the goals and evaluate the performance of the Chief Executive Officer.

#### **Roles and Responsibilities of the Chairman of the Board of Directors**

1. The Chairman is responsible as the Board's leader and as the Chairman of Board's meeting as well as in shareholders' meeting.
2. In case of equality of vote, the Chairman shall have a casting vote in the Board meeting.

The Company's Chairman of the Board is not an independent director, since the Company believes that the Chairman is qualified with knowledge, skill, and experiences in order to lead the Company to gain the most advantages and success.

## **2) Executive Committee**

As of 31 December 2019, the Executive Committee consisted of 7 members as follows:

Name	Position
1. Ms. Jareeporn Jarukornsakul	Chairman of the Executive Committee
2. Mr. David Richard Nardone	Executive Committee Member
3. Mr. Vivat Jiratikarnsakul	Executive Committee Member
4. Mr. Krailuck Asawachatroj	Executive Committee Member
5. Mr. Jakrit Chaisanit	Executive Committee Member
6. Mr. Narong Kritchanhai	Executive Committee Member
7. Mr. Somsak Boonchoyruengchai	Executive Committee Member



### Scope of Authorities and Responsibilities of the Executive Committee

1. To consider and prepare policies, strategies, goals and business plans, financial targets and annual budget of the Company which are appropriately considered and should be proposed to the board of directors. If situations have changed, the Executive committee shall consider the approved budget appropriately.
2. To give opinion, advice and consider to approve the matters relating to the Company's normal business operation under the amount or annual budget approved by the Board, and to approve the variance of not exceeding 5% of the amount or annual budget approved by the Board of Directors or to perform any activities assigned by the Board of Directors.
3. To consider and approve specific matters or operations within the following amount:
  - (a) To approve the execution, investment, termination, or divestment of the Company's project for the value not exceeding THB 1,500 mm per project.
  - (b) To approve the determination of loans, B/E, P/N and their terms and conditions, with the value of note exceeding THB 1,000 mm per time.
  - (c) To approve the asset mortgage for being collateral of borrowing for the amount not exceeding to THB 1,000 mm per time.
  - (d) To approve the determination of Bank Guarantees and their terms and conditions, with the value of note exceeding THB 1,500 mm per time.
  - (e) To approve the payment to settle a legal dispute for the amount not exceeding THB 50 mm per time.
  - (f) To approve the hiring of a consultant, or third party expert in the amount of not exceeding THB 20 mm per time.
  - (g) To approve advertising expenses. Entertainment expenses, social, sports and scholarship donations, gift expense in the amount not exceeding THB 5 mm per time.
4. To approve investment or expenses, including advertising expenses. Entertainment expenses, social, sports and scholarship donations, gift expense in excess of the annual budget or limit as approved by the Board in the amount of not exceeding THB 10 mm per time.
5. To approve open and/or close of bank accounts, enter into other financial products; e.g. IRS, derivatives, Money Market, as well as to approve changes to the terms and conditions of the debentures, such as the borrowing period, interest rate.
6. To appoint or terminate the Company's Executive or employee at the level of department manager upward, including to determine their compensation.
7. To consider, screen and monitor the Company's operation to comply with the policy, business strategy, goals, business plans, financial targets and budgets approved by the board of directors for efficiency and effectiveness.
8. To implement and conduct the Company's business as assigned by the Board of Directors.
9. To consider and monitor the succession plans, manpower plans, and evaluation of performance of the executives.

### 3) Audit Committee

As of 31 December 2019, the Audit Committee consisted of 4 members as follows:

Name	Position
1. Dr. Pichit Akrathit	Chairman of the Audit Committee
2. Dr. Apichai Boontheerawara	Audit Committee Member
3. Dr. Somsak Pratomsrimek	Audit Committee Member
4. Dr. Kritsana Sukboonytasatit	Audit Committee Member

The secretary of the Audit Committee is Mr. Kasamsi Sakunchaisiriwit.

All 4 Audit Committee members have knowledge and experience in financial statement audit, and is a certified public accountant having accounting and finance expertise.

#### **Scope of Authorities and Responsibilities of the Audit Committee**

1. To ensure that the Company's financial statements are accurate and adequately disclosed.
2. To ensure that the Company and Subsidiary Companies implement internal controls and internal audit systems that are appropriate and effective. In case of necessity, the Audit Committee shall hire specialists for suggestion assembled in consideration, the company is responsible for the costs incurred, including the overall performance evaluation and the independence of the internal audit unit, while giving consent regarding appointment, transfer, and termination of employment of the head of the internal audit or any other unit responsible for internal audit, and participate in the meeting with head of the internal audit or other unit responsible for internal audit without the Management at least 1 time per year.
3. To ensure that the Company complies with the law governing securities and exchange, regulations of the SET, and the laws applicable to the Company's business.
4. To consider selecting, nominating, and appointing an independent person to act as an auditor of the Company including to propose the remuneration and termination of such auditor, and attend meetings with the auditor without the management's presence at least once a year.
5. To consider related party transactions or transactions with likely conflicts of interest and ensure that they are conducted in accordance with the law and regulations of the SET and ensure that such transactions are reasonable and in the best interest of the Company.
6. To prepare a report relating to the performance of the Audit committee disclosed in the Company's annual report. Such report must be signed by the chairman of the Audit committee and shall contain the following information:
  - (1) The opinion on the accuracy, completeness, and reliability of the Company's financial reports.
  - (2) The opinion on the sufficiency of the internal control of the Company.
  - (3) The opinion on compliance with the Securities and Exchange laws and regulations of the Stock Market of Thailand, or other law relating to the Company's business.
  - (4) The opinion on appropriateness of the auditor.
  - (5) The opinion on the transactions that may have conflict of interest.
  - (6) The number of the Audit Committee's meeting and the meeting attending of each Audit Committee member.
  - (7) The overall opinion or remark that the Audit Committee obtained from performing its duties according to the charter.
  - (8) Other transactions as deemed that shareholders and general investors should be informed under the scope of duties and responsibilities assigned by the Board of Directors.
7. In performing the Audit committee's duties, if a transaction or action which may materially affect the Company's financial status and performance is found or suspected to occur and to get whistle blowing, the Audit committee shall report to the board of directors of the Company in order to remedy such affect within a period that the Audit committee deems appropriate. Such transaction or action is as follows:
  - (1) A transaction having a conflict of interest.
  - (2) A fraud or irregularity or major defect on the internal control system.
  - (3) Violation of the Securities and Exchange laws, regulations of the Stock Exchange of Thailand, or law relating to the Company's business.

If the Board of Directors or the Executives do not remedy within the above period, any of the Audit Committee member may report that there is such above mentioned transaction or action to the Securities and Exchange Commission and the Stock Exchange of Thailand;

8. To consider and propose to amend the scope of duty, authority and responsibility of the Audit committee as it deems appropriate.
9. To perform any other acts assigned by the board of directors, with the consent of the Audit committee.

#### 4) Risk Management Committee

As of 31 December 2019, the Risk Management Committee consisted of following 3 members as follows:

	Name	Position
1.	Ms. Jareeporn Jarukornsakul	Chairman of Risk Management Committee
2.	Dr. Somsak Pratomsrimek	Risk Management Committee Member
3.	Dr. Kritsana Sukboonytasatit	Risk Management Committee Member

##### Scope of Authorities and Responsibilities of Risk Management Committee

1. Study, review and evaluate risks as well as tendency which may affect organization as well as inside and outside risk of the Company.
2. Set policy on risk management to be submitted to the Board of Directors.
3. Review risk, follow up and evaluate sufficiency, efficiency and productivity of overall risk management.
4. Give advice and approval for the organization's risk management.

Risk Management Committee consists of 3 members. The term of office of each Risk Management Committee member is three (3) years from the date of appointment in accordance with the Board of Directors' term of office. Members of the Risk Management Committee who retire by rotation are eligible for reappointment.

#### 5) Corporate Governance Committee

As of 31 December 2019, the Corporate Governance Committee consisted of 3 members as follows.

	Name	Position
1.	Mr. Somsak Boonchoyruengchai	Chairman of the Corporate Governance Committee
2.	Mr. Jakrit Chaisanit	Corporate Governance Committee Member
3.	Mr. Narong Kritchanhai	Corporate Governance Committee Member

##### Scope of Authorities and Responsibilities of the Corporate Governance Committee

1. To consider, review and revise the policy on Corporate Governance and propose the same to the Board of Directors for consideration and approval. This policy is to be prepared in writing and adopted as guidelines for good practice.
2. To consider, review and revise the Code of Conduct and to prepare it in writing.
3. To set and plan the policy on Corporate Social Responsibility.
4. To act as representative of the Company in communicating and conducting activities regarding the corporate governance with the management, officers and outside organizations.

5. To monitor, review and improve the performance to be in accordance with the designated plan and to prepare summary reports for the board of directors.
6. To consider, review and revise the Anti-Corruption Policy. Provide suggestions on performance review and assessment related to the Anti-Corruption Policy. The Anti-Corruption Policy will be in writing and used as best practice.

The Corporate Governance Committee shall comprise at least 3 members. The term of office of each Corporate Governance Committee member is three (3) years from the date of appointment in accordance with the Board of Directors' term of office. Members of the Corporate Governance Committee who retire by rotation are eligible for reappointment.

## 6) Nomination and Remuneration Committee

As of 31 December 2019, the Nomination and Remuneration Committee consisted of 3 members as follows:

	Name	Position
1.	Dr. Apichai Boontheerawara	Chairman of the Nomination and Remuneration Committee
2.	Ms. Jareeporn Jarukornsakul	Nomination and Remuneration Committee Member
3.	Dr. Kritsana Sukboonytasatit	Nomination and Remuneration Committee Member

### Scope of Authorities and Responsibilities of the Nomination and Remuneration Committee

1. To consider structure, size and component of the board of directors of the Company to be appropriate to the organization and in line with changing circumstances.
2. To consider the rules for nomination of directors, chief executive officer as well as nominating and screening qualified persons to serve as directors or chief executive officer for approval by the board of directors.
3. To give opportunity to the minority shareholders with sufficient period of time to nominate a list of persons to be nominated as directors prior to the shareholders' meeting.
4. To have the succeeding plan for the chief executive officer and top management by constant review.
5. To consider strategy and policy on human resource to be in line with the business operation of the Company.
6. To propose rules and guideline for fixing the remuneration of directors, committee, senior management which are clear, fair and appropriate in accordance with their responsibility and propose them to the board of directors for consideration.
7. To improve the policy and structure on management of remuneration of the directors of the Company, the committee, top management to be consistent with the labor market condition at that time for further proposing it to the board of directors for consideration.

The Nomination and Remuneration Committee shall comprise at least 3 member. The term of office of each Nomination and Remuneration Committee member is three (3) years from the date of appointment in accordance with the Board of Directors' term of office. Members of the Nomination and Remuneration Committee who retire by rotation are eligible for reappointment. At least one-third of those directors and Chairman of Nomination and Remuneration Committee must be independent directors.

## Executives

As of 31 December 2019, the Company's executives consisted of 7 persons as follows:

Name	Position
1. Ms. Jareeporn Jarukornsakul	Chairman of the Executive Committee / Chief Executive Officer / Acting of Chief Technology Officer
2. Mr. David Richard Nardone	Executive Committee Member
3. Mr. Vivat Jiratikornsakul	Executive Committee Member
4. Mr. Krailuck Asawachatroj	Executive Committee Member / Chief Strategic Officer / Chief Financial Officer
5. Mr. Jakrit Chaisanit	Executive Committee Member / Chief Operating Officer
6. Mr. Narong Kritchanhai	Executive Committee Member / Chief Legal Officer
7. Mr. Somsak Boonchoyruengchai	Executive Committee Member / Chief Accounting Officer

### Scope of authorities and duties of Chief Executive Officer

1. To supervise the Company's overall operation to be in accordance with the business objectives of the Company and those assigned from the Board of Directors.
2. To provide strategies and business plans to be proposed to the Board of Directors and implement to achieve the goal specified in the strategies and business plans approved by the Board of Directors.
3. To take actions and perform duties as assigned by the Board of Directors and as per the policies of the Board of Directors.
4. To give orders, issue regulations, make announcement and record in order to perform the work to be in accordance with the policies.
5. To approve and/or grant power for doing juristic acts binding the Company for normal transactions of the Company, including transactions the Chief Executive Officer is authorized from the Board of Directors to take action as well as any transactions not directly binding the Company's assets.
6. To coordinate with the executives and employees to perform in accordance with the policies and business direction given by the Board of Directors.
7. To seek for business opportunity on banking investment, securities, investment, business consultant, financial and accounting consultant, investment consultant, and new business to increase revenue to the Company and employees.
8. To consider taking the Company's rights and properties to create obligations with persons, companies, partnerships, shops or financial institutions for proposing to the Board of Director for approval.
9. To approve payment of expenditure for normal operation in the amount approved by the Board of Directors.
10. To approve investment in equity instruments and securities for the Company's account in the amount approved by the Board of Directors.
11. To approve in principle of investment for business expansion as well as joint investment with other business operator and propose to the Board of Directors for approval in the next meeting.
12. To approve payment for significant investment set forth in the annual budget or those approved in principle by the Board of Directors.
13. To take care of working of employees to be in accordance with the policies, regulations, and the Good Corporate Governance.

14. To support development of employees' knowledge and capacity to enhance the organization's capability;
15. To appoint consultant necessary to the Company's operation.
16. To approve related transactions being on an arm-length basis such as sale and purchase goods at market price, service fees at the normal rate and giving credit terms similar to general customers, etc. under to the policies approved by the Board of Directors.
17. To appoint, transfer, or terminate employees in the level not requiring approval from the Executives Committee.
18. To perform other work as assigned by the Board of Directors on a case by case basis. The Chief Executive Officer does not have authority to approve related transactions not being on an arm-length basis, transactions of acquisition and disposition of the Company's major assets, and/or the transactions with the Company and its subsidiaries in which the Chief Executive Officer or a person possibly conflict having interest and having conflict of interest in any nature, except for transactions being on an arm-length basis where the policies and conditions are provided and approval is granted in accordance with the policies and conditions approved by the Board of Directors and endorsed by the shareholders for entering into related transactions and transactions acquisition and disposition of major assets of the Company or its subsidiaries to be in accordance with the rules and regulations of the Stock Exchange of Thailand.

The Chief Executive Officer has authority to approve spending in specific cases or actions in the amounts as follows:

- (a) Approval of investment fund in an amount of not exceeding THB 210,000,000 per project.
  - Approval on purchase of raw land in an amount of not exceeding THB 10,000,000 on each occasion.
  - Approval on hiring contractors for the objectives of constructing warehouses or factories in an amount of not exceeding THB 200,000,000 on each occasion.
- (b) Approval on purchase of construction materials and others for constructing warehouses or factories in an amount of not exceeding THB 50,000,000 on each occasion.
- (c) Approval of payment of contractors' remuneration and creditors of construction materials in an amount of not exceeding THB 200,000,000 on each occasion.
- (d) Approval of loans to be expense on normal business operation, marketing, purchase, investment in assets in an amount of not exceeding THB 200,000,000 on each occasion.

## Company Secretary

Mr. Sirisak Kijraksa as Company Secretary, effective from 13 May 2016. His qualified and experienced and he used to be a company secretary of Hemaraj Land and Development Public Company Limited. He also has good knowledge and understanding of the business which is capable to advise accurately and appropriately to the Board of Directors of duties and responsibilities.

### Scope of authorities and duties of the Company Secretary

1. To provide preliminary suggestion to directors in respect of laws, rules and regulations.
2. To provide advice on holding of shareholders' meeting in accordance with laws, regulations and guideline and prepare an invitation notice for shareholders' meeting.
3. To record minutes of shareholders' meeting and directors' meeting and follow up compliance with shareholders' meeting and board of directors' meeting.



4. To prepare and safe-keep the following documents:
  - (a) The register of director.
  - (b) The invitation of meetings of the Board of Directors, minutes of meetings of the Board of Directors and the Company's annual report.
  - (c) The invitation of meetings of shareholders and minutes of meetings of shareholders.
5. To safe-keep reports of conflicts of interest reported by the directors or the executives.
6. To procure disclosure of information and information memorandum to the public in accordance with laws and regulations.
7. To perform other acts as specified by of the Capital Market Supervisory Board.

## Director and Executive Remunerations

### Remuneration in Cash

#### 1) Director Remuneration

The 2019 Annual General Meeting, held on 29 April 2019, resolved to approve the remuneration for the directors as follows;

1. The emoluments of company director

Position	Amount
Chairman of the Board of Director	250,000 per year*
Director	200,000 per year*

\*To pay monthly

2. The meeting allowances by pay only the director attend the meeting

Position	Amount
Chairman of the Board of Directors	40,000 Baht per times
Chairman of the Audit Committee	35,000 Baht per times
Director	30,000 Baht per times

3. Sub-Committees meeting allowance by pay only the director attend the meeting.

Position	Amount
Chairman of Sub-Committees	25,000 Baht per times
Sub-Committees Member	15,000 Baht per times

4. Bonus at the rate of 0.17 percent of the total income of the Consolidated Financial Statement and Share of Profit of Associates and Joint Ventures for the year ended 31 December 2019.
5. Other Benefit
  - None –

The details of the meeting attendance and remuneration of all directors and sub-committees members are summarized as following:

Name	Meeting Attendance/Number of Meeting in year 2019					
	Board of Directors	Audit Committee	Executive Committee	Risk Management Committee	Good Governance Committee	Nomination & Remuneration Committee
Ms. Jareeporn Jarukornsakul	8/8	-	9/9	2/2	-	3/3
Mr. David Richard Nardone	8/8	-	9/9	-	-	-
Mr. Vivat Jiratikarnsakul	8/8	-	8/9	-	-	-
Mr. Krailuck Asawachatroj	8/8	-	9/9	-	-	-
Mr. Jakrit Chaisanit	7/8	-	8/9	-	3/3	-
Mr. Narong Kritchanhai	8/8	-	9/9	-	3/3	-
Mr. Somsak Boonchoyruengchai	8/8	-	9/9	-	3/3	-
Dr. Pichit Akrathit	7/8	6/7	-	-	-	3/3
Dr. Apichai Boontheerawara	7/8	7/7	-	-	-	-
Dr. Somsak Pratomsrimek	7/8	7/7	-	2/2	-	-
Dr. Kritsana Sukboonytasatit	7/8	6/7	-	2/2	-	3/3
Mr. Arttavit Chalernsaphayakorn*	5/5*	7/7*	-	-	1/2*	-

Noted \* Mr. Arttavit Chalernsaphayakorn resigned from the position of director, executive committee member and corporate governance committee member on 8 August 2019.

Unit : THB Thousand

Name	Directors' Remuneration for year 2019								
	Position Allowance	Meeting Allowance						Bonus	Total
		Board of Directors	Audit Committee	Bonus Audit Committee	Executive Committee	Good Governance Committee	Nomination & Remuneration Committee		
Ms. Jareeporn Jarukornsakul	250.0	320.0	-	225.0	50.0	-	45.0	2,275.0	3,165.0
Mr. David Richard Nardone	200.0	240.0	-	135.0	-	-	-	2,047.5	2,622.5
Mr. Vivat Jiratikarnsakul	200.0	240.0	-	120.0	-	-	-	2,047.5	2,607.5
Mr. Krailuck Asawachatroj	200.0	240.0	-	135.0	-	-	-	2,047.5	2,622.5
Mr. Jakrit Chaisanit	200.0	210.0	-	120.0	-	30.0	-	2,047.5	2,622.5
Mr. Narong Kritchanchai	200.0	240.0	-	135.0	-	45.0	-	2,047.5	2,667.5
Mr. Somsak Boonchoyruengchai	200.0	240.0	-	150.0	-	50.0	-	2,047.5	2,697.5
Dr. Pichit Akrathit	200.0	245.0	150.0	-	-	-	50.0	2,047.5	2,642.5
Dr. Apichai Boontheerawara	200.0	210.0	105.0	-	-	-	75.0	2,047.5	2,637.5
Dr. Somsak Pratomsrimek	200.0	210.0	105.0	-	30.0	-	-	2,047.5	2,592.5
Dr. Kritsana Sukboonytasatit	200.0	210.0	90.0	-	30.0	-	45.0	2,047.5	2,622.5
Mr. Arttavit Chalernsaphayakorn*	121.0	150.0	-	45	-	15.0	-	-	391.0
Total	2,371.0	2,755.0	450.0	1,110.0	110.0	180.0	165.0	22,750.0	29,891.0

Noted \* Mr. Arttavit Chalernsaphayakorn resigned from the position of director, executive committee member and corporate governance committee member on 8 August 2019.

## 2) Executive Remuneration

In 2019, the Company paid remuneration to executives as salary and bonus in total amount of THB 61.00 mm. as table below:

	2019
	Amount (THB mm.)
Salary	46.93
Bonus	14.07

## Other Remunerations

The Company has provided fund program in which the Company contributes the amount of 4 - 10% of salary. In 2019, the Company contributed into the provident fund for the Company's Executives 7 person in amount of THB 3.27 mm.

## Employees

### 1. Number of Employees

As of 31 December 2019, the Company employed 105 person.

The Company	No. of Employees
Executives	4
Business Development Department	10
Building Development Department	10
Maintenance Department	23
Operation Department	16
Accounting Department	17
Internal Audit	1
Corporate Finance and IR Department	4
Human Resources Department	7
Legal Departments	5
Land Department	3
IT Department	2
Office of CEO	4
<b>Total</b>	<b>106</b>

## 2. Material labor dispute during the past 3 years

- None -

## 3. Remuneration of Employees (excluding executive)

Officers of the Company receive remuneration in form of, among others, salary, bonus, overtime wage, provident fund allowance, social security allowance and compensation fund allowance. Officers also receive other welfares, such as annual public holidays, maternity leave, ordination leave, medical allowance and funeral assistance. The details of Personnel Remuneration which contributed in cash for 2019 were as follows;

Remuneration	Amount (THB mm.)
Salary	72.31
Bonus	25.65
Provident Fund Contribution	4.15
Social Security Contribution	0.92
Compensation Fund Allowance	0.02
Overtime	1.05
<b>Total</b>	<b>104.10</b>

## 4. Policy on development of employees

The key vision of WHA group aims to be the learning and sustainability organization by enabling the various theoretical knowledge brought to the innovative working environment. The initial vision is also the pillar of every employee to develop themselves in respect of to be the knower, fully capability, innovative ideas and keeping up the trend timely so as to be responsible for their duties efficiently as well as driving the business in a sustainable way forward.

The development roadmap is under the umbrella of the Human Resources Department in collaboration with Chulalongkorn University and Expert Training Institutions to uniquely customize the curriculum for the top through the middle executives in order to sharpen the Leadership Competency and the Readiness of Business Challenges Acumen.

The array of development models is consisted of the various theoretical frameworks, executions, on- the- job training concepts including the innovative activities to brighten the future leader. Last but not least, the mentioned above are the concept tailored for the leaders and officers are able to collaboratively design their development plans. The average of employees' training hour of the company in 2019 is 23 hours/person.

## **5. Investment Policy in Subsidiaries, Associated Companies, Property Fund and Real Estate Investment Trust**

The Group of Companies has the policy of investment in the companies that engage the same business as the core business and related business of the Group of Companies, such as industrial estate business, real estate business, utility business, power business, and renewable energy business, to increase the earnings and competitiveness for the Group of the Companies.

However, in management of the subsidiaries and associated companies, the Group of Companies will appoint the representative from the Group of Companies to be involved as the director of those companies in appropriate proportion for governing the operations of the subsidiaries and associated companies to be in line the proper direction and create maximum benefit to the Group of Companies.

In addition, the Group of Companies also has the policy of investment in real estate business through Property Fund and Real Estate Investment Trust in the proportion of not more than 20% of total investment units or unit trusts (as the case may be) to generate steady dividend income annually. Nevertheless, the investment in Property Fund and Real Estate Investment Trust will depend on the requirement for investment and fundraising amount from sales of assets to Property Fund and Real Estate Investment Trust during such period. Therefore, the investment in Property Fund and Real Estate Investment Trust may be different from the determined investment policy. Moreover, the Company has no control and no participation in determine the policy of Property Fund and Real Estate Investment Trust.

# CORPORATE GOVERNANCE



The Company is aware of undertaking its business with responsibility and fairness and recognizes the importance of good corporate governance and management to comply with the law and regulations and adapt to the moving economy. As a result, it will enhance the competitiveness in management by focusing on sustainable growth to add value in the long term to the Company, its shareholders and all stakeholders.

## 1. Good Corporate Governance Policy

The Good Corporate Governance Policy of the Company includes;

### 1.1 Rights of the Shareholders

The Company takes as a priority the right of shareholders to complete and accurate information in a timely and fair manner to support their decision-making. The Board of Directors, therefore, sets the policy as follows.

- (1) The Company shall send a notice of shareholders' meeting together with sufficient data in supporting documents on various agendas with objectives, reasons and opinion of the Board of Directors on each of the agenda so that the shareholders will have the opportunity to study the full information at least 30 days in advance. In case the shareholders cannot attend the meeting by themselves, the Company allows the shareholders to appoint an independent director or any person as a proxy to attend the meeting by using the proxy form as enclosed in the notice. The shareholders can also download the proxy form from the Company's website.
- (2) The Company has the policy to fairly facilitate all shareholders and institutional investors in exercising their rights in attending the shareholders' meeting in terms of an appropriate venue, timing, and uncomplicated voting method.
- (3) In shareholders' meeting, agenda items will be considered and voted in order as specified in the notice without change of material information. Shareholders are given equal opportunity to review the Company's business performance, make enquiries, and present their views and suggestions. Directors and relevant management will attend the shareholders' meeting to answer questions raised in the meeting.
- (4) To increase channels for shareholders to access information through the website of the Company on which the information and details are uploaded. In particular, the notice for shareholders' meeting will be disseminated at least 30 days in advance so that the shareholders can conveniently and fully download information and agenda.
- (5) The Company has the policy that directors, top management and the auditor will attend the shareholders' meeting to provide answers and acknowledge opinions from the shareholders.
- (6) Recording the minutes of shareholders' meeting will be made in full, on time and transparently. Material questions and opinion will be recorded in the minutes so that the shareholders will be able to review. In addition, the Company will upload the minutes of shareholders' meeting in the Company's website for shareholders' consideration. The Company will submit the minutes of shareholders' meeting to the Stock Exchange of Thailand within 14 days from the date of shareholders' meeting.



- (7) To facilitate shareholders to receive the dividends by transfer to the bank account (in case of dividend payment) for convenience of shareholders in receipt of dividend on time and to prevent cheque from being damaged, lost or delayed.
- (8) The Company has the policy to give an opportunity to shareholders to propose agenda and/or submit questions on the agenda in advance in order that the shareholders will gain ultimate benefits from the meeting as well as to fully preserve the rights of shareholders. This can be done via email or facsimile to the Company Secretary.
- (9) The Nomination and Remuneration Committee will consider the scope of works, responsibility, completion of work and business performance as well as other factors including remuneration of directors of other companies in the same industry for determination of the remuneration of directors. The Nomination and Remuneration Committee will firstly consider the remuneration of the Board of Directors prior to submission to the Board of Directors for further approval.

## 1.2 The Equitable Treatment of Shareholders

The Company shall treat shareholders equally. Therefore, the Board of Directors has the following policy.

- (1) The Company shall send the invitation of meeting together with supporting information to the shareholders at least 21 days in advance in order to give an opportunity to the shareholders to fully study information prior to the shareholders' meeting date.
- (2) The voting right in the shareholders' meeting shall be in accordance with a number of shares held by shareholders. One share will have one vote. In addition, the Company allows the shareholders who attend the meeting after the commencement of the meeting to vote for agenda being considered for agenda which are under consideration and has not been voted, and the vote of such shareholders will be included in the quorum.
- (3) With regard to the agenda item on the directors to replace those who resign by rotation, the Company has the policy to give an opportunity to the shareholders to vote on each individual director. This means that the shareholders will have the opportunity to truly select the directors of their choice and preference. The Company will enclose the details of the nominated directors enough for shareholders' consideration.
- (4) The Company will allow a shareholder who holds shares representing not less than 0.5% of the paid-up capital for not less than 12 months consecutively to propose via the email or facsimile to the Company Secretary agenda items the annual shareholders' meeting and nominate a qualified person to serve as a director.
- (5) The Company will set the preventive measures on insider trading of related persons which means the Board of Directors, top management and officers in the division which may be involved in the Company's information (including their spouse and minor child).
- (6) The Company will set the policy on conflict of interest on the basis that decision making of personnel at all levels will be made to the ultimate benefit of the Company and it shall be the duty of all personnel to avoid any financial involvement and/or relationships with third parties which may result in the Company's loss of benefit or cause the conflict of interest or prevent any effective performance of duty. The related persons or connected persons shall inform the Company of relationship or connected transactions and shall not participate in decision making and shall have no authority to approve such transactions. The approval on such transactions shall be in accordance with principle and have no more special terms and conditions than those of ordinary case.

- (7) To facilitate the shareholders who cannot attend the meeting by themselves by allowing the shareholders to give a proxy to any person or permit at least 1 independent director to attend the meeting and notify the name of such independent director in the notice of meeting.
- (8) To treat shareholders equally, no matter whether they are major shareholders or minority shareholders, or they are Thai or foreigners.

### 1.3 Conflict of Interest

The Company realizes the importance of transparency when considering matters taking into account the benefit of the Company. Therefore, the Company gives high priority to prevention of any transactions that could turn into conflict of interest, connected transactions, or related transactions, and imposes a policy for this purpose with material details as follows.

- (1) The management and the officers shall strictly comply with the Code of Conduct to earn trust of all stakeholders and disclose the information for understanding to all officers of the Company.
- (2) Directors and the management shall inform the Company of relationships or connected transactions which may cause the potential conflict of interest.
- (3) Connected transactions shall be submitted to the Audit Committee for consideration prior to submission to the Board of Directors for further approval in accordance with the good corporate governance. Compliance with the rules prescribed by the SET and the Office of the SEC shall be monitored.

### 1.4 Roles of Stakeholders

The Company recognizes and is aware of the rights of all stakeholders, whether they are insider stakeholders, i.e. employees, shareholders, or outsider stakeholders, i.e. customers, partners, creditors, competitors, public section or agencies as well as nearby communities as the Company earns the support from stakeholders which enhances the competitiveness and profitability and it is deemed as a long-term value to the Company. The Company set the following policy:

#### (1) Policy on treatment to Employees

The Company realizes that officers are key factors to achieve the Company's target. The Company has policy to treat all employees fairly in respect of opportunity, remuneration, appointment as well as development of potential. To this ends, the Company has the following practices:

- 1) To treat employees with politeness and respect by taking into account the individualism.
- 2) To give employees the fair remuneration, set up provident fund for employees and provide welfare.
- 3) To preserve the work environment with safety to life and assets of employees.
- 4) To appoint, promote or demote, give bonus and penalize employees at good faith and on a basis of their knowledge, capability and appropriateness of such employees.
- 5) To give extensive and constant opportunity in respect of knowledge management and competency to officers to develop the employees' capability to empower officer to their full potential with professionalism.
- 6) To acknowledge views and suggestions which are based on employees' professional knowledge.
- 7) To strictly comply with relevant laws and regulations governing employees.
- 8) To treat fairly and appropriately with employees' remuneration by considering employees' knowledge, competency, qualification, appropriateness of performance, individual performance evaluation based on Balanced Scorecard, survey result of labor market in a way that is seen as internally fair and externally competitive, as well as company's performance from each year earning profits.

## **(2) Policy and Treatment to Shareholders**

The Company recognizes that the shareholders are the owner of business and the Company has the duty to enhance a long-term shareholders' value as follows:

- 1) to perform fiduciary duty and make decision in accordance with professional principles with due care and fairness to both of major and minority shareholders to the ultimate benefit of overall shareholders.
- 2) to constantly and fully present the report on the Company's status, business performance, financial status, accounting and other reports
- 3) to prohibit the exploitation of benefit to themselves or third parties by using of the Company's information which is not disclosed to the public or do any acts and things which may cause the conflict of interest with the Company

## **(3) Policy and Treatment to Customers**

The Company recognized the importance of customers and set the policy to treat customers as follows:

- 1) to serve customers with politeness, eagerness and readiness to provide service with sincerity and willingness and care, take care of customers as closed cousin, and provide services on timely, accurate and reliable basis
- 2) to keep confidential the customers' information and not to use for its own benefits or related persons unduly
- 3) to give accurate, sufficient and timely information to customers on services of the Company to customers without exaggerate advertisement which may mislead customers regarding qualities or conditions of the Company's services
- 4) to provide suggestions on the Company's services to the best benefit of customers.

## **(4) Policy and Treatment to Partners and/or Creditors**

The Company has the policy to officers to treat customers and/or creditors fairly and at good faith without taking advantage over competitors by taking into account the Company's ultimate benefit and mutual fair treatment to avoid situation which may cause the conflict of interest. Negotiation for settlement will be conducted on the basis of business relationship under the following practice:

- 1) not to claim or receive or pay any benefits in bad faith to partners and/or creditors
- 2) in case that there is any information that the claim, receipt or payment of any benefits was not made in good faith, details must be disclosed to partners and/or creditors and the problem shall be settled fairly and timely
- 3) to strictly comply with conditions as agreed upon. In case of non-compliance with any agreements, creditors shall be informed in advance to jointly find the solution.

## **(5) Policy and Treatment to Competitors**

The Company has the policy to treat competitors without breaching the confidentiality or knowing the confidentiality of competitors with fraud and set the following policy:

- 1) to follow the rules on competition
- 2) not to seek confidentiality of competitors by bad faith or inappropriate means.
- 3) not to destroy competitors' reputation by malicious accusation.

## (6) Policy and Treatment to Societies/Communities

The Company has the policy on the undertaking business which renders benefits to the economy, environment, society and adheres to the principle of being a good citizen. The Company fully complies with laws and participates in activities that will promote or enhance the quality of life of societies, communities, and responsibility towards the environment.

Furthermore, the Company has allocated the budget from the Company's income annually to support activities that will benefit societies, communities, and the environment as appropriate. In 2019, the Company donated the money to support education, educational equipment, and other necessary things and gave lunches to students of the school located in the area that the Company invested in. In addition, the Company held activities in its organization to support and cultivate the consciousness of all level officers in sharing, such as activities to receive old calendars to support Foundation for the Blind in Thailand for bringing them to be used as the media for teaching to the blind and activity to give a donation to temple.

In this regard, the Company is in the process of preparing the sustainability report on the social responsibility of the Company in which it is separated from the annual report.

## (7) Policy on Safety, Healthcare, and Work Environment

The Company recognizes the importance on preserving good work environment to ensure safety to life and assets of the employees by strictly complying with labor law, such as maintenance of the buildings and condition of the office equipment. The provision of necessary medical care services, setting rule on wearing of safety equipment on construction site as well as creating the awareness to all level officers on value and importance of constant workout. The Company arranges the healthcare welfare to officers as appropriate, such as sport activity on every Tuesday and Thursday and annual health checkup.

The Company has conducted the occupational safety, health and work environmental policies as follows:

- 1) Complying with laws and regulations regarding the occupational safety, health and work environment.
- 2) Prevent accidents, hazards and work-related illnesses from the Company's operation.
- 3) Reduce accidents, hazards and work-related illnesses.
- 4) Continuously improve the occupational safety, health and work environment of the Company.

The statistics of accident from work (In case of absence and non-absence) for the year 2019 are as follows:

List	Number
Number of fatal injuries	0 Time
Number of absences from work	0 Day
Number of injured person or death from work	0 Person

## (8) Environment Policy

The Company has the policy to support activities to promote quality, health and environment as well as work environment with safety to life and assets of officers. In addition, the Company realizes on giving knowledge and training to officers on environment and efficient use of resources, such as recycle of paper with one page used, recycle of files and campaign on electricity turn-off during lunch, using ladder instead of elevator, maintenance of equipment for readiness to use and for good safety and work environment and for enhancement of work efficiency of employees in organization.

## **(9) Intellectual Property Policy**

The Company has the clear policy not to infringe the intellectual properties, irrespective of copyright, patent, trademark, trade secret and other intellectual properties prescribed by law, such as infringement of computer software. All computer software must be investigated and downloaded by the information technology division to prevent illegal usage of software.

## **(10) Policy on Legal Compliance and Human Rights**

The Company has policy against any infringement of human rights in all respects to be consistent with the society under the rule of laws. Citizen has the freedom right under the law. The practice of the Company is as follows:

- 1) The Company respects and treats all stakeholders with fairness, on the principle of human dignity, without discrimination on origin, citizen, sex, age, skin color, religion, body condition, status, family and promotes monitoring of treatment in accordance with terms on human rights in the Company.
- 2) To act against any human trade, use of child labor with age under those prescribed by law and not to do any transactions with manufacturer or service provider who does as such.
- 3) To support and respect human right by reviewing and controlling the business transaction of the Company with third parties not to promote or support the violation of human right and not to violate the staff's right protected by law.

## **(11) Policy on Fraud and Anti-Corruption**

The Company has conducted the policy on fraud and anti-corruption as follows:

- 1) To set the appropriate check and balance structure among procurement division, accounting division, management division and audit division to prevent misuse of authorities.
- 2) To train officers on knowledge, policy and practice on anti-corruption of the Company.
- 3) To support and cooperate with public sector organization and regulatory authorities as well as all sectors in the Thai society with the aim to reduce corruption and enhancement of country development.
- 4) To prohibit director, executive and officers from any forms of direct or indirect corruption, i.e. receipt of gift, giving gift, wining and dining, donation and any other benefits to themselves from partners of the Company.

The Company has committed to operate its business with transparency, business ethics, and good corporate governance principles. Moreover, in the year 2017, the Company has joined the signing of the announcement of the Private Sector, Collective Action Coalition Against Corruption (THAI CAC). In the year 2019, the Board of Directors Meeting No. 7/2019 passed a resolution to revise the policies and practices of anti-corruption regularly to allow all directors, executives, and staff to have a knowledge and understanding of corruption and aware of its own duties and responsibilities. As a result, such knowledge can be applied as a guideline and allows individuals to report the wrongdoing (Whistleblower).

The Board of Directors of the Company has promoted and supported the dissemination of the handbook on Anti-Corruption Policies and Guidelines through various communication channels of the Group with the aim to develop competitiveness and reduce corruption in both public and private sectors.

The Company has the channel for employees and interested persons to inform, suggest or complain in case of corruption or any acts which is not in compliance with the Company's rules or illegal actions which leads to the improvement of training, management and investigation as follows:

- a) Company's Website                      [www.wha-group.com](http://www.wha-group.com)
- b) Suggestion Box                         Human Resources Department
- c) Email to Chief Executive Officer    [ceo\\_office@wha-group.com](mailto:ceo_office@wha-group.com)
- d) Email to Audit Committee            [auditcommittee@wha-group.com](mailto:auditcommittee@wha-group.com)

#### **Measures to protect the Whistleblowers**

The Company is strongly aware to security and damage of whistleblowers by keeping complainer's personal information confidentially whereas they will be treated fairly and appropriately.

### **1.5 Disclosure of Information and Transparency**

The Board of Directors has the policy to accurately, fully, sufficiently, constantly and timely disclose financial information memorandum and others on business and the Company's performance which reflects the financial condition and performance of the Company including the future business of the Company.

The Board of Directors has strong intention to supervise to strictly and transparently comply with laws, regulations and rules in relation to information disclosure and distribute the information via the Company's website, SET's disclosure media in order that shareholders and relevant persons will receive the information of the Company and will adjust it to be in line with the applicable guideline of SET and SEC.

The Company has assigned Investor Relation to communicate with investors, shareholders as well as institutional investors and minority shareholders (Investor Relations Department Tel 02-753-3750 or [info@wha-group.com](mailto:info@wha-group.com)). The Company will regularly hold the Meeting (Opportunity Day) at Securities Building every quarter for analysis of business performance and disclose information of the organization and financial information and general information to investors, securities analysts, credit rating agencies and relevant governmental authorities via various channels, such as reporting to SET, SEC and website of the Company. Moreover, the Company recognizes the importance to regularly disclose the information in order that the shareholders continually receive information via the Company's website. The information thereof will be constantly updated, such as vision, mission, financial statements, public relation news, annual report, corporate structure, management, shareholding structure and major shareholders.

In addition, the Company realizes the importance of financial statements which truly reflect the financial status and performance of the Company on the basis that the accounting information must be correct, complete and sufficient per the generally accepted accounting principles. The Company will disclose information regarding each of directors as well as roles and duties of the Board of Directors and the committees of the Company in the Annual Report (Form 56-2) and Annual Report (Form 56-1) and will disclose remuneration of directors and top executive in Annual Report (Form 56-2) and Form on Annual Information Disclosure (Form 56-1).

## **1.6 Responsibility of Board of Directors and Committees**

### **(1) Structure of Board of Directors**

As of 31 December 2019, the Board of Directors of the Company comprises 11 persons as follows.

- 1) Directors who are executives numbering 7 persons
- 2) Directors who are not executives numbering 5 persons inclusive of 4 members of the audit committee.

Although the Chairman of the Board of Directors is the Chairman of the Executive Committee, the consideration on material issues will be screened by the Executive Committee and, if it exceeds the authority of the Executive Committee, it will be submitted to the Board of Directors. In addition, the company also provided the scope of authorities of Board of Directors, committees and Chief Executive Officer in writing to set the clear scope of works and responsibilities of Committees which reflects the transparency and due care in making decisions.

### **(2) Roles, Duties and Responsibilities of the Board of Directors**

The Board of Directors has the duty to perform in accordance with law, objectives, articles of association and resolution of shareholders' meeting by performing the fiduciary duty and duty of care to the benefit of shareholders and stakeholders in long term and short term to ensure that the Company operates the business in the direction that maximizes the benefit of shareholders and stakeholders.

In the year 2019, the Board of Directors has considered and revised the procurement of the preparation of vision, mission, target, policy, direction, approve the strategic plans, work plans and annual budget of the year 2020 of the Company. The Board of Directors will share opinions to ensure mutual understanding of the overall the business prior to giving approval and shall follow up the management to meet target by adhering to the approved budget.

### **(3) Nomination of Directors**

Nomination and Remuneration Committee is responsible for director nomination by considering qualifications based on the Public Company Limited Act B.E. 2535 and Regulations of SET regarding the experiences, appropriateness, and skill as director. The criteria of director nomination are follows:

- 1) The nominated director shall have knowledge, competency and experience of company business including professional and specific skill, education, age and gender
- 2) The nominated director shall have leadership, vision, ethic, good attitude to company as well as time to devote themselves to company
- 3) The nominated director shall not be in Black list from any organization including the securities and exchange commission or have been sentenced to any crime
- 4) In case of independent director, the nominated director shall be qualified with independent director qualification
- 5) To consider any other qualifications based on Board's structure and component and company's direction through transparent nomination process to build trust with shareholders

The directors are selected with qualifications, knowledge, ability in various skills and experience to perform the duty efficiently based on the Board Skill Matrix to bring the maximum benefit to the Company and Shareholders.



Name of Directors	Knowledge and Skills									
	Finance / Account	Legal	Corporate Governance	Operation	Information Technology	Engineering	Economics	Strategy	Risk Management	International Trade
1. Ms. Jareeporn Jarukornsakul	/				/		/	/	/	/
2. Mr. David Richard Nardone	/	/	/	/	/	/	/	/	/	/
3. Mr. Vivat Jiratikarnsakul			/	/		/		/	/	/
4. Mr. Krailuck Asawachatroj	/	/	/		/	/	/	/	/	
5. Mr. Jakrit Chaisanit						/				
6. Mr. Narong Kritchanhai		/	/							
7. Mr. Somsak Boonchoyruengchai	/	/	/	/			/	/	/	
8. Dr. Pichit Akrathit	/		/				/	/	/	
9. Dr. Apichai Boontherawara	/		/				/	/	/	/
10. Dr. Somsak Pratomsrimek	/		/						/	
11. Dr. Kritsana Sukboonyasatit	/		/	/		/	/	/	/	/
<b>Total</b>	<b>8</b>	<b>4</b>	<b>9</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>5</b>

After nomination process, the Nomination and Remuneration Committee shall propose the nominated director to Board Meeting for appointment as required by law. In case of the appointment shall be approved by shareholder meeting. The Board shall be proposed to shareholder meeting for approval.

The Company has prescribed qualification of independent director who have well knowledge in Finance, Economic, Accounting, public administration and other field of businesses suitable as standard factors to safeguard benefit of the shareholders and others. Additionally, to have qualification according to such prescribed in regulation of SET and SEC which the Company's Independent Director's Definition as follow :

- 1) holding share not exceeding 0.5% of paid up capital of the company, subsidiaries, associates or related companies or juristic persons with potential conflict of interest including also share held by related persons.
- 2) uninvolved in management, not being an employee, staff, consultant earning permanent salary in the company or the company's management, its subsidiaries, associates, related companies or other persons with potential conflict of interest except in the case that such interests finished at least 2 years prior to the appointment date.
- 3) shall have no blood relationship or relationship through legal registration in the forms of parents, spouse, siblings and children, or children's spouses with executive directors, management, controllers, or major shareholders of the company or its subsidiaries of executive directors, management, controllers, or the persons who are nominated for an executive position or executives of the company or its subsidiaries.

- 4) not holding business relationship with the company, principal company, subsidiary companies, affiliated companies, major shareowner, or person holding controlling power of the company, which may hinder the exertion of his/her independent discretion, and not being or having ever been a shareowner, with significant implication, or person holding controlling power of the person holding business relationship with the company, principal company, subsidiary companies, affiliated companies, major shareowner, or person holding controlling power of the company, unless having vacated from said tenure for not less than two years before appointment as an independent director. Business relationship as in first paragraph shall include the normal course of trading transaction for business undertaking, lease or grant of lease of immovable asset, transactions relating to asset or service, or grant or receipt of financial assistance through acceptance or grant of loans, guaranty, grant of asset as guaranty for loans, including other similar behavior, thus making the person applying for permission or a contract party liable to payment of debt to another party, from 3 percent of net tangible assets of the person applying for permission, or from Baht 20 million or over, whichever is lower. The calculation of debt burdens as referred to above shall comply with the valuation of connected transaction in compliance with the notification of the Capital Market Supervisory Board on the criteria of the connected transaction, with the respective differences having been considered (*mutatis mutandis*). However, the consideration of the said debt burdens shall include the debt burden incurred within one year before having business relationship with the same person.
- 5) shall not be or used to be auditors of the company, its subsidiaries, joint venture companies, the major shareholders or the company's executives. The Independent Directors shall not be major shareholders, executives or business partners of juristic person under the management of the auditor of the company, its subsidiaries, joint venture companies, major shareholders or the company's executives except when such activities finished at least 2 years prior to the appointment date.
- 6) shall not work or used to work in a profession that included law and financial consultant services and asset appraising, which receives service fees of over 2 million baht per year from the company, its subsidiaries and joint venture companies or major shareholders or the company's executives. In the case that the profession is registered as a person juristic, this rule covers the case of being the major shareholder, executives, or business partner of that professional service, except such services ended at least 2 years prior to the appointment date.
- 7) not being the director who is appointed to safeguard benefit of the company director, major shareholder or shareholder who is related to the major shareholder of the company.
- 8) able to perform his duties and express comment independently.
- 9) Independent directors can serve as directors of the Company for a period of no more than 9 consecutive years.
- 10) At least 1 independent director shall be a female.

#### **(4) Meeting of Board of Directors**

Regular attendance of meetings of the Board of Directors is an important duty of the directors to acknowledge and participate in decision making on business undertaking of the Company. In each year, there will be at least 4 meetings of Board of Directors. At each meeting, the agenda will be clearly prepared in advance. A special meeting of Board of Directors may be held to consider urgent matters.

For the Board of the Directors' Meeting, the document for the said Meeting shall be distributed to the Directors for acknowledgement and consideration in advance 7 days before the said Meeting occurs. However, for the confidential agenda will be revealed to discuss in the said Meeting.

In case of electronic conference, the notice must be clearly clarified that the Meeting is via electronic conference and also be clarified what source of the electronic each directors use to attend the Meeting.

Top executives of the Company may attend board meetings to present material details and directly acknowledge policies. In addition, non-executive directors should be able to meet among themselves, without the management team, in order to discuss their concerns at least once a year.

For this year, non-executive directors held total 3 meetings without management team.

Top executives of the Company may attend the Board of Directors' meetings to give information which may be useful and directly take policy from the Board of Directors. The Company also has the policy that the non-executive directors will have a meeting at least once a year. It is intended that the non-executive directors have the opportunity to meet with one another to discuss issues of their interest without attendance by the executive or management.

In determining the agenda for Board of Directors, Executive Committee will consider issues which will be the agenda in the Board of Directors' meetings. All executive directors are able to propose any agenda and independently and freely give an opinion and the Company Secretary will prepare such issue to be the agenda of the Board of Directors' meetings and prepare notice of Board of Directors' meetings. The approval in the Board of Directors' meetings will be made by majority votes and one director has one vote. Interested director will not attend the meeting or refrain from voting on such agenda.

After the end of the meetings, the Company Secretary will prepare the minutes of the Board of Directors and submit it to the Chairman to sign and will propose it to next Board of Directors' meeting for certification. The directors may give their opinions on revision of the minutes of the Board of Directors' meetings in order that the details of the minutes will be accurate as much as possible.

The certified minutes of the meetings will be systematically kept as classified in electronic form for ease of searching.

#### **(5) Orientation of New Directors**

In performing duty of director, the director must understand the nature of business of the Company. Therefore, in case of change of directorship, the Company will arrange the orientation for a new director to have him/her understand the nature and guideline on business operation as a whole and will give the material information memorandum and corporate governance guideline necessary for performance by director of the duty. The Company Secretary will coordinate for such orientation.

#### **(6) Policy on Restriction on Number of Companies and Number of Terms of Director**

The Company has the policy for its directors to serve as director in other listed companies at no more than 5 companies without exception. All directors currently serve as director of no more than 5 listed companies.

Moreover, the Company has the policy that Chief Executive Officer shall not be a director in other companies in the same or similar type of business except related companies and/or subsidiaries to ensure that the Company will have no conflict of interest.

## (7) Evaluation of Performance of Board of Directors

The Company provides for the annual self-evaluation of directors to jointly consider and conclude the performance for reviewing operation, problems and obstacles and seeking solutions. The Company set the guideline for evaluation of the Board of Directors as a whole pursuant to the evaluation guideline of the SET. The result of the evaluation will play an important role in developing the efficient performance of duty of the Board of Director. The evaluation form outlines the following topics.

- 1) Satisfaction regarding the following:
  - Result of performance of the Board of Directors as a whole,
  - Result of business operation of the Company, and
  - Proceeding with solving the problem by the management.
- 2) Understanding on
  - Role and Duty
  - Company's Business and
  - Company's Strategy
- 3) Good relationships between the Board of Directors and Management
- 4) Efficiency of subsidiary and committees
- 5) Sufficient and appropriate time allocation by the Board of Directors to consider the following issues:
  - Policy and direction of the Company
  - Business performance of the Company
  - Solution in case of non-achievement
- 6) Preparation by the Board of Directors to attend the meeting
- 7) Independence of the Board of Directors in expressing the opinion
- 8) Neutral opinion of the Board of Directors
- 9) Opportunity and support given by the Chairman to every director to independently express his opinion
- 10) Opinion of the Board of Directors on investors' confidence to the Board of Directors
- 11) Acceptability among officers on corporate governance practice of the Company. The Company Secretary will compile provide the evaluation form to directors at the end of each year and will collect and report the summary to the Board of Directors for further consideration and discussion annually.

For the overall performance of the Board of Directors for the year 2019 are as follows:

Directors Assessment	Average score	Criteria
Report on Self-Assessment of Board of Directors as a whole	94.00	Excellent
Report on Self-Assessment of Committee as a whole		
- Executives Committee	98.00	Excellent
- Audit Committee	100.00	Excellent
- Nomination and Remuneration Committee	97.00	Excellent
- Risk Management Committee	99.00	Excellent
- Corporate Governance Committee	95.00	Excellent
Report on Self-Assessment of Board of Directors and Committee Member on an individual basis	96.00	Excellent

## **(8) Evaluation of the Chief Executive Officer**

The Company assigned the Nomination and Remuneration Committee to evaluate the performance of the Chief Executives Officer annually and report to the Board of Directors for approval. Moreover, The Company has set criteria for the performance evaluation of the Chief Executive into various topics, including leadership, strategy formulation, strategy implementation, financial planning and performance relation with the personnel and succession.

The evaluation result will be taken to determine to increase the rate of salary of the Chief Executive Officer and propose to the Board of Directors for approval. The Company has the policy to determine the remuneration of Chief Executive Officer based on the current performance (short-term) and the performance according to the long-term strategy in order to lay the foundation for future growth to reach the same standard as the companies in the same industry.

## **(9) Succession Plan**

The Company recognizes the importance of succession plan. The Company, therefore, prepared the succession plan to cover significant positions by selecting qualified persons to serve in such positions and arranging the training for readiness to serve such positions in the future and ensure that the Company will have knowledgeable and capable executive to succeed such significant positions in the future.

## **(10) Risk Management**

The Company assigned the Risk Management Committee to be in charge of setting up risk management working team comprising the Company executives to jointly discuss and regularly evaluate the risk in the organization for inside and outside risks and set risk management measures. Working group will monitor the risks as identified with support from various divisions and report the result to Risk Management Committee for acknowledgement. Risk Management Committee will, subsequently, evaluate the efficiency in respect of risk management and report it to the Board of Directors at least once a year to identify the weakness and to adjust the policy with more efficiency.

The Company has established the Risk Management Policies as follows:

- 1) The Company operates the business under the concept of Acceptable Risk to achieve the Company's objective and provides the Risk Management Manual as guidelines for the interested person.
- 2) Risk Management Committee has the responsibility to construct policies, risk management framework, business continuity planning, review the result of the Company's risk assessment and report to the Board of Directors.
- 3) Risk Management Working team has the responsibility to specify the risk factors, collect the risk factors from the relevant business units, review and update the efficiency of the risk response procedure, promote the risk management culture in the Company and report to the Risk Management Committee.
- 4) Employees have the responsibility to specify the risk factors and prepare the risk assessment table of their business unit, specify the risk index, prepare the list of risk factors that comply with the Company's Risk Management process and report to the Risk Management Committee.
- 5) All Business Units, agencies, executive and employees have the duty to comply with the Risk Management Policy, Risk Management Framework, Company's Risk Management process including report and review the result of risk management.

## 1.7 Promoting of knowledge to Directors, Audit Committee Member, Executive, Company Secretary and Employees

- (1) The Company provides a policy to support Directors, Audit Committee Member, Executive, Company Secretary and employees to participate training relating to governance system, business ethics. In order to improve working continually, especially, directors and company secretary so as to promote them to participate in training courses from IOD.
- (2) The Company provides the director manual as to support new director to perform his/her duties effectively.
- (3) The Company promotes to conduct the executive development plan, which CEO shall report such plan to Board of Director annually.
- (4) In case that CEO or high level executive could not perform his duties or retiring and mitigation of risk and impact for business continuity. The Company provides training and development plan to executive so as to gain profound and experience, and readiness for working.

### Training and Development of Directors for the year 2019

No.	Name	Training program for the year 2019
1.	Mr. Krailuck Asawachatroj	Course 25-Trace financial statements CPD Tuotor Co., Ltd.

## 1.8 Code of Conducts

The Company has developed the Code of Business Ethics. As the guideline for the board, management and officers to understand the ethical measures that companies use in conducting business. The Company will follow frequently the Code of Business Conduct in compliance with the Code of Business Ethics. In addition, the Company's Code of Business Ethics has been published through the Company's website as well.

## 1.9 Director's Remuneration

The Nomination and Remuneration Committee will consider remuneration for Board and sub-committee before propose to annual shareholder meeting for approval. The remuneration is in line with the market, industry, and information from the Stock Exchange of Thailand. For the remuneration of senior management and the Managing Director is the Executive Committee's authority of. Taking into account the internal rate, employment in the market labor, work effectiveness, performance, including the necessity of hiring to the Company. The aforementioned conditions are an appropriate complement to attract and retain qualified employees for the benefit of the Company.

## 2. SUB-Committees

The Board of Directors set up the committees to perform the specific duties and to propose matters to the Board of Directors to consider or acknowledge and provided for the qualifications and scope of duties of committees as follows:

### 2.1 Executive Committee

Executive Committee consists of a group of persons of not less than 3 who are authorized by the Board of Directors to screen the business plan and budget the Company prior to submission to the Board of Directors and will coordinate with the management in undertaking the ordinary course of business in accordance with business plan and budget the Company.

## 2.2 Audit Committee

Audit Committee consists of 3 independent directors. All of them have the knowledge, understanding and experience. At least one member of the Committee must have accounting knowledge, expertise and experience. The Audit Committee will ensure that the Company has accurate and sufficient financial statements and appropriate and efficient internal control system. The Audit Committee has scheduled the meeting at least 4 times a year.

## 2.3 Risk Management Committee

Risk Management Committee consists of 3 persons with scope of authorities to study, review and evaluate associated risks and trend which may affect organization as well as inside and outsider risks of the Company and set the risk management policy and propose it to the Board of Directors.

## 2.4 Corporate Governance Committee

Corporate Governance Committee consists of 3 persons with scope of works to review, revise corporate governance policy to be proposed to the Board of Directors for consideration. The corporate government policy will be in line with the guidelines of the SET and SEC.

## 2.5 Nomination and Remuneration Committee

Nomination and Remuneration Committee consists of 3 members with scope of authorities and responsibilities to nominate qualified persons to serve as directors and top executives and propose them to the Board of Directors or shareholders' meeting (as the case maybe) as well as proposing principles and guidelines to clearly, fairly and appropriately fix remuneration for directors, committee members and top executives in line with their responsibilities, to the Board of Directors for consideration. Nomination and Remuneration Committee has scheduled a meeting at least 2 times a year.

## 2.6 Company Secretary

The Board of Directors appointed Mr. Sirisak Kijraksa as the Company Secretary with scope of works to assist in preparing agenda of meetings and preparing notice of meeting, to take care of holding the Board of Directors' meetings and shareholders' meetings and keep documents as required by law and to arrange directors and the Company to fully and transparently disclose information memorandum. The Company Secretary is a person whom the Board of Directors is of the opinion that he is qualified to serve as the Company Secretary.

# 3. Nomination of Directors and Top Executives

Nomination and Remuneration Committee consists of 3 members with the scope of authorities and responsibilities to nominate qualified persons to serve as directors and top executives and propose them to the Board of Directors or shareholders' meeting (as the case maybe) as well as proposing principles and guidelines to clearly, fairly and appropriately fix remuneration for directors, committee members and top executives in line with their responsibilities, to the Board of Directors for consideration.

The appointment of new director shall be complied with Public Company Limited Act. The criteria of director nomination are follows:

- 1) The nominated director shall have knowledge, competency and experience of company business including professional and specific skill, education, age and gender.
- 2) The nominated director shall have leadership, vision, ethic, good attitude to company as well as time to devote themselves to company.



- 3) The nominated director shall not be in Black list from any organization including the securities and exchange commission or have been sentenced to any crime.
- 4) In case of independent director, the nominated director shall be qualified with independent director qualification.
- 5) To consider any other qualifications based on Board's structure and component and company's direction through transparent nomination process to build trust with shareholders.

After nomination process, the Nomination and Remuneration Committee shall propose the nominated director to Board Meeting for appointment as required by law. In case of the appointment shall be approved by shareholder meeting. The Board shall be proposed to shareholder meeting for approval.

The Company has prescribed qualification of independent director who have well knowledge in Finance, Economic, Accounting, public administration and other field of businesses suitable as standard factors to safeguard benefit of the shareholders and others. Additionally, to have qualification according to such prescribed in regulation of SET and SEC.

#### 4. Supervision of the subsidiaries and associated companies' operations

From 2015, the Company has prescribed the rules and guidelines requiring that nomination of persons to be the director in the subsidiaries and associated companies and the exercise of voting right at their shareholders' meetings require approval of the Board of Directors except for the following cases:

- (1) Agenda items required to be adopted by the shareholders' meeting in accordance with the joint venture agreement to which the Company is a party.
- (2) Following regular agenda in the annual general meetings where the executive committee may consider on casting the vote:
  - To certify the minutes of the previous shareholders' meeting
  - To consider and approve the report of the board of directors and performance of the past year
  - To consider and approve the financial statement for the year.
  - To consider and approve the allocation of net profits for the legal reserve fund and payment of dividends
  - To elect new directors to replace the directors who are due to retire by rotation
  - To appoint the auditor for the year

In the case of the subsidiaries, the Company prescribes the rules stipulating that the persons appointed by the Company accurately and fully comply with the rules for execution of connected transactions, acquisition and disposal of assets, or execution of any other material transactions, and that they apply the rules related to disclosure of information and execution of the said transactions in the same manner as applying the Company's rules. They shall supervise the subsidiaries to ensure that they keep information and accounting records in such a way that makes it possible for the Company to verify and collect them in a timely manner for preparing financial statements.

## 5. Use of Insider Information

The Board of Directors recognizes the importance of good corporate governance and for transparency and prevention of conflict of interest arising from use of insider information of the Company which has not been disclosed to the public, the Company set following policy:

- 1) Give knowledge to directors, executive and persons with position of accounting manager or financing manager or higher position on the duty to prepare and submit the report on holding of securities, their spouse and minor children to the Office of the SEC under Section 59 and penalty under Section 275 of the Securities and Exchange Act B.E. 2535.
- 2) Arrange directors or persons with position of accounting manager or financing manager or higher position to prepare and submit every report on holding of securities through Company Secretary prior to filing with the Office of the SEC. The report shall be prepared and filed within 30 days from appointment date of directors, executive, or within 3 business days from the date on which securities is purchased, sold, transferred or received the transfer of such securities.
- 3) Arrange directors or persons with position of accounting manager or financing manager or higher position to acknowledge the material inside information which affects the change of securities price and refrain from sale and purchase of securities of the Company during the period prior to disclosure of financial statement or financial status of the Company until such information has been disclosed to the public. The Company will inform in writing directors, executive including persons with position of accounting manager or financing manager or higher position to refrain from sale and purchase of securities of the Company. Such informing shall be made at least 30 days in advance prior to disclosure of information to the public and shall wait for at least 24 hours after disclosure of information to the public. The disclosure of material information to other persons is prohibited.
- 4) Disciplinary action will apply in case of breach of duty on using of insider information for personal benefit. It may be done by issuance of warning letter, deduction of wage, temporary suspension of work without payment, or termination of employment to the extent permitted by law, taking into account the intention and seriousness of such violation.

## The Security Holding of the Company's Directors

The Corporate Secretary collects the Security Holding of the Company's Directors including spouses or cohabiting couple and non-sui juris children proposing to the Board of Directors' Meeting quarterly.

The Summary of the Security Holding of direct and indirect of directors and executives for year 2019 below:

List of Name	Type of Securities	Securities Holding		
		As of 31 Dec 2018	Increase / Decrease during the year	As of 31 Dec 2019
1. Ms. Jareeporn Jarukornsakul	Common shares	3,288,303,514	43,884,028	3,332,187,542
	Warrant	34,234,254	(4,285,717)	29,948,537
	Futures Contract	-	-	-
Spouse/ who live and cohabit together as husband and wife and/or underage children Juristic person which holding more than 30% of shares	Common shares	46,029,305	276,175,830	322,205,135
	Warrant	-	-	-
	Futures Contract	-	-	-
2. Mr. David Richard Nardone	Common shares	-	-	-
	Warrant	-	-	-
	Futures contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
3. Mr. Vivat Jiratikarnsakul	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
4. Mr. Krailuck Asawachatroj	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-

List of Name	Type of Securities	Securities Holding		
		As of 31 Dec 2018	Increase / Decrease during the year	As of 31 Dec 2019
5. Mr. Jakrit Chaisanit	Common shares	74,500,000	(4,500,000)	70,000,000
	Warrant	1,527,878	(527,878)	1,000,000
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common Shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
6. Mr. Narong Kritchanhai	Common shares	-	-	-
	Warrant	-	-	-
	Futures contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
7. Mr. Somsak Boonchoyruengchai	Common shares	2,060,310	-	2,060,310
	Warrant	23,557	-	23,557
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
8. Dr. Pichit Akrathit	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
9. Dr. Apichai Boontherawara	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-

List of Name	Type of Securities	Securities Holding		
		As of 31 Dec 2018	Increase / Decrease during the year	As of 31 Dec 2019
10. Dr. Somsak Pratomsrimek	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
11. Dr. Kritsana Sukboonyasatit	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-
Spouse/who live and cohabit together as husband and wife and/or underage children	Common shares	-	-	-
	Warrant	-	-	-
	Futures Contract	-	-	-

## 6. Auditor's Fee

In 2019, the Company and its subsidiaries appointed PricewaterhouseCoopers ABAS Ltd. to be the auditing firm and Mr. Chanchai Chaiprasit, Certified Public Accountant (CPA) Registration No. 3760, to review and give an opinion on financial statements of the Company and its subsidiaries. Mr. Chanchai Chaiprasit graduated Bachelor's degree in Accounting and Higher Graduate Diploma in Auditing from Thammasat University, and LL.B Law from Chulalongkorn University. He has experienced in auditing over 32 years for both listed and non-listed company covering various industries such as logistics, energy, hospitality and leisure, real estate and construction, and etc. Also, obtained numerous training and certificates. Including such auditors are independent and being an auditor approved by the Securities and Exchange Commission, Thailand. He has certified financial statements of the Company and its subsidiaries for 4 years (since 2016).

In 2019, the Company and its subsidiaries paid compensation to the auditors and the audit firm as per following details.

### 6.1 Audit Fee

The Company and its subsidiaries paid the auditors and the audit firm, PricewaterhouseCoopers ABAS Ltd., amounted to THB 15.63 mm.

### 6.2 Non-Audit Fees

In amount of approximately THB 1.19 mm.

## 7. The Conduct follow by Corporate Governance

According to the results of the Corporate Governance Report of Thai Listed Companies 2019: CGR 2019, the overall score of the Company are in the “excellent” level and the score has increased compared to the year 2018.

The Board of Directors is aware of the roles and duties in complying with the principles of good corporate governance (Corporate Governance Code: CG Code 2071) for listed Companies of the Securities and Exchange Commission (“SEC”). Moreover, the Board of Directors has considered and reviewed the CG Code to implement to the business of the Company. For any issues that can be improved from last year, the Corporate Governance Committee also provides suggestions to the Board of Directors for further improvement.

For any issues that the Company unable to apply the guidelines in accordance with the principles of good corporate governance for listed Companies in 2017, the reasons are as follows:

- 1) Code of Conduct 3.1. The Board of Directors shall be responsible for establishing and reviewing the appropriateness of the structure of the Board of Directors in terms of size, composition and proportion of the independent directors to achieve the Company’s objective.

However, even though the current structure of the Board of Directors, Chairman of the Board of Directors and Chief Executive Officer is held by the same person, The Company has clearly separated the scope of duties and responsibilities of the Board of Directors and Chief Executive Officer. For the proportion of 66 percent of the independent directors, the Corporate Governance Committee will propose the proportion of independent directors that should be more than 50 percent to the Board of Directors to consider the appropriateness of the independent directors.

- 2) Code of Conduct 7.4 the Board of Directors shall consider to conduct the sustainability report based on appropriateness.

However, in the year 2020, the Board of Directors has appointed the Sustainability Working Team, which consists of the Executives Level and every related departments. The role and responsibilities of the Sustainability Working Team are as follows:

- Assess the risks factors that affect the economy, society and environment
- Initiate and/or stimulate behavioral building including the activities on the development of the Sustainability of the Company
- Set goals for Sustainable development of the Company
- Monitor and review operations including the annual evaluation of the Company’s Sustainability
- Specify the important topics in the Annual Sustainability Report of the Company to propose to the Executive Committee
- Conduct the Annual Sustainability Report of the Company

As well as establishing a Sustainability Coordination Team to enable the Company’s Sustainable Development activities and set the guidelines for the activities in order to proceed efficiently with continuous sustainable development.

However, the Company in process of preparing the Sustainability Development Report to the Framework of GRI in 2020.

# CORPORATE SOCIAL RESPONSIBILITY

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## 1. Overall Policies

The Group of Companies has specified its operational policies on Corporate Social Responsibilities (CSR) towards the society, community, and environment in a sustainable manner through the process of disclosing “CSR In-Process” information that the Company is currently operating and organizing “CSR After-Process” activities, whereby the Company communicates through its annual reports, Code of Conduct, website, brochures, and newsletters, in order to let every stakeholder be informed about the Company’s vision, mission, and strategies about CSR towards the society and environment. The company has involved its CSR concepts into their business operations, both newly developed or current cooperative activities.





In 2016, WHA Group initiated the “Clean Water for Planet” project to improve water quality, while remaining focused on CSR activities that involve its primary businesses including industrial estates, utilities and energy, and property development. Since water is of utmost importance, it is necessary to raise awareness on the preservation of this natural resource. Daily life is greatly affected by the availability and quality of water. Through effective management, people living in neighboring communities can have access to clean and safe water.

After the launch of “Clean Water for Planet” as part of WHA’s Corporate CSR projects, WHA Group jointly signed in 2016 a MoU with Chulalongkorn University on wastewater management and wastewater treatment engineering project, for knowledge exchange. The MoU aims to support the development and training of future engineers by combining their classroom learning with practical experience in a real industrial environment at WHA’s industrial estates. The ultimate goal is to help enhance the efficiency of wastewater management and treatment techniques in Thailand.

In 2017, students from the Department of Environmental Engineering, Faculty of Engineering, Chulalongkorn University, underwent training for wastewater management at WHA Saraburi Industrial Land (WHA SIL). The aim of this hands-on program was to encourage future engineers to reinforce what they learn in the classroom with practical experience in a real industrial environment under the supervision of WHA Group’s experts.

#### • **Collaboration between WHA Group, Chulalongkorn University and Laem Chabang Municipality**

The MoU was jointly signed by WHA Group, Chulalongkorn University’s Faculty of Engineering and Laem Chabang Municipality to exchange knowledge for practical training courses on wastewater management and treatment to the administration and staff of the Municipality of Laem Chabang. This MoU is under the “Clean Water for Planet” project which aims to provide knowledge on wastewater management to the society.

#### • **Collaboration between WHA Group, Chulalongkorn University and Pluekdaeng Subdistrict Administration Organization (SAO)**

The Company also has signed the MOU on the cooperation of “Clean Water for Planet” with Pluek Daeng TAO, Rayong Province, to promote cooperation on management and wastewater treatment. However, this cooperation covers the project construction of community wastewater treatment prototype by using the constructed wetland system for community wastewater treatment in Pluek Daeng SAO area. The Company shall advocate on the knowledge of construction design, a budget on wastewater treatment of the constructed wetland, system management and personnel training.

Moreover, in 2019 WHA Corporation PCL announced the success of the project construction of the project prototype of community wastewater treatment system construction with delivery to the Pluak Daeng SAO, Pluak Daeng District, Rayong Province, which situated near the Eastern Seaboard Industrial Estate (Rayong), used the constructed wetland system. It could treat wastewater for 400 cu. m a day, using the natural technology by utilizing plants and microorganisms to treat the wastewater. This was inspired with the endeavor and the project came from the initiative of His Majesty the Late King Bhumibol Adulyadej (The Ninth Reign) that emphasized the biomass method.

Moreover, the WHA Group also received the knowledge support on engineering to Pluak Daeng SAO, with the Company was responsible for the expense for the operations and the engineer team for one year after the delivery. It included the follow-up on the progress of the system, a transfer the knowledge and experience derived from this project. It also provided training to the officials of Pluak Daeng SAO to stimulate bringing the derived knowledge to disseminate to other communities later.

**Education:** The company conducted several projects including donations to improve local schools, youth scholarships, Adopt-A-School program, skilled training activities via Art Camp at Hometown, Art Camp for Teachers, Drawing Contest, Art Camp Trip, English Boot Camp, Industrial Skill Training for Secondary School Students (for extended schools), Dual Vocational Training and WHA Industrial Skill Cooperation Academy. These projects aim to develop human resources and enhance labor skills to meet the growing demand of Thailand's industries.

**Social care:** such as the project the mobile doctor unit to the communities surround the industrial estate to provide the health examination service free of charges on vaccinations, eye glasses, including help to the elderly or patients in the communities. The project promoting sports and youth by the Company promoting football in the industrial estates, and it gave to FC Chon Buri Club, Rayong FC, PluakDaeng – Rayong United, Ban Khai United Football Clubs. In addition, in 2019 the Company organized the project community relations taking the community and youth leaders from the areas surrounded the industrial estate of WHA to visit the project wastewater treatment in WHA Eastern Seaboard Industrial Estate 1 and Eastern Seaboard Industrial Estate (Rayong), including the observation of the Thai sea ecosystem at Hat Toey Ngam, Sattahip Naval Base, Chon Buri Province. Our group joined the activity of planting coral reefs and releasing nurse sharks, which could conserve the balance of the sea bed ecosystem. This together with listening to the narratives from the officials on the operations to conserve the sea ecosystem, it was consistent with the target of the organization in increasing awareness on taking care of the areas in the community and nature sustainably.

**Environment:** The company is committed to manage their operations in an eco-friendly environment integrating factories, warehouses and facilities with nature and the local communities, in accordance with global standards.

The company aims to incorporate CSR into any business, including the development of distribution centers, warehouses, and industrial estates, and services for public utility systems and real estate, such as implementing the policy of changing equipment in office buildings and warehouses to preserve the environment and reduce expenses in the long-term to create optimal benefits for the community and customers of the Group of Companies. Moreover, the Group of Companies also uses Public Participation 1 (PP1) and Public Participation 2 (PP2) policies, in which the Company meets with leaders of the communities nearby its industrial estates, to let the Company learn about the real needs of each community on the specific areas of help and support that each community requires. Since the communities' needs in each time duration varies, the Group of Companies meets regularly with the communities, whereby these said policies will respond to and help the communities continuously and specifically by addressing the real needs of the communities.

After starting the development of each project, the Group of Companies will ask the stakeholders' opinions regarding the project, namely the communities and related state agencies, at least once a year. Furthermore, the Group of Companies sets up a procedure to listen to complaints from the communities or stakeholders through detailed series of steps and channels to gather various feedback or complaints precisely.

Regarding its business operations or development of industrial estates, the Group of Companies has been focusing to incorporate CSR into the said processes, whereby the Group of Companies has used the ISO 14001:2004, ISO 9001:2015, and CSR DIW systems, which are under control of Department of Industrial Works, in all business operational processes in order to let stakeholders receive products and services that are of the highest quality and are environmentally-friendly.

In 2019 WHA Industrial Estate in four groups developed by WHA Industrial Development PCL such as WHA Eastern Seaboard Industrial Estate 1 (WHA ESIE 1), WHA Chon Buri (WHA CIE 1), WHA Eastern Industrial Estate (Map Ta Phut) (WHA EIE) and Eastern Seaboard Industrial Estate (ESIE) received an eco-industrial award at the Eco-Champion level from the ECO Innovation Forum 2019 organized by Industrial Estate Authority of Thailand (IEAT), Department of Industrial Works, The Federation of Thai Industries, including the Water and Environment Institute for Sustainability. Such the awards were the confirmation of the determination of the organization in the business development for sustainability, consistency with the concept of the industrial city with ingenuity and friendly to the environment of Ministry of Industry.

Furthermore, in 2019 WHA Industrial Development PCL in the WHA group, received an award "People's Choice" for 2019 and the AMCHAM CSR Excellence Recognition 2019 – ACE Recognition "Platinum Level" in the of the Thai-American Chamber of Commerce (AMCHAM) annual award.

The award of the "Organization with Outstanding Work on Social Responsibility" show the vision of the Company that gives priority to the responsibility via organizing the project to develop life and livelihood of the communities surrounding the industrial estates by more than 20 years on the environment, education and public health. In this year it received the award at the "Platinum" level due to the special occasion of receiving such the award continuously for 10 years. It put emphasis on the determination to do business in tandem with the Thai community development with sustainability.

In addition, it is considered to be the first year that the American Chamber of Commerce in Thailand gave the People's Choice Award, which is the honorable award came from the votes of the chamber members to confer to the awarded organization of ACE Recognition at the platinum level. The WHA Group won the award for the public popularity out of the project success for the project society and environment of its "Clean Water for Planet" initiated in 2016 with the long experience on water and wastewater treatment of the Company with the budget of more than THB 3 mm.

Throughout the course of its business operations, the Group of Companies has always been fully aware of the importance in the development of society and environment alongside with business development. The Group of Companies has specified policies that will initiate various projects that will be beneficial to the society continuously. Hence, the Group of Companies has defined 8 policies about "Corporate Social Responsibilities" as follows;

### **(1) Fair Business Operation**

Transparency in business undertaking is always the Group of Companies' priority, emphasizing prevention of transaction that could lead to conflict of interest. The company also imposes policies on employees to treat business partners, creditors, shareholders and customers fairly and without taking advantage in accordance with the Group of Companies' corporate governance policy.

## **(2) Anti-corruption**

The Group of Companies implements policies to deal with corruption in all circumstances. These policies are incorporated in the anti-corruption policies and guidelines section of the corporate governance principles. In order to follow the policies, on 30 January 2014 the Company declared its intent to join the Thai private sector to participate in campaigns organized by the Thai Institute of Directors in collaboration with the Thai Chamber of Commerce, International Chamber of Commerce, Thai Listed Companies Association, and The Thai Bankers' Association to counter corruption. And is currently certified by CAC.

## **(3) Human Right**

The Group of Companies has in place human right policies and policies to counter violation of human rights in all circumstances. These policies are included in legal compliance and human right policies and guidelines section of the Group of Companies corporate governance principles.

## **(4) Fair Labor Treatment**

The Group of Companies gives equal opportunity to employees of all races, languages and genders. Every step in providing services is undertaken with honesty and transparency. The Group of Companies also strictly complies with the labor laws. This policy is provided in the section of employment treatment and guidelines and the employee safety and hygiene policies of the corporate governance principles.

## **(5) Consumer Responsibility**

The Group of Companies establishes the policy that focuses on doing business and treating customers (also considered consumers) with honesty, adhering to the terms under contracts made with the customers and in compliance with the standards set by law. It has a policy to provide accurate and complete information on use of warehouse building to customers as well as emphasizing keeping of customer data and information. The Group of Companies implements the policy on customer treatment and includes it in the customer policies and treatment section of its corporate governance principles.

## **(6) Environment**

The Group of Companies establishes the policy that supports activities that will promote quality of life, occupational hygiene and environment as well as maintaining work environment in such a way to ensure safety of employee health and property. Such policy is provided in the environmental policy section of the Group of Companies' corporate governance principles.

## **(7) Community and Social Development**

The Group of Companies has the policy to support social activities on various occasions aiming at maximizing social and community benefit so as to help and promote sustainable quality of life of the youth and Thai society.

## **(8) Innovation and Innovation Dissemination**

The Group of Companies has the policy that always focuses on design innovation of environmental friendly warehouses, ranging from energy saving, production of solar energy to environment care. It also implements the policy to educate customers and related agencies about and exchange knowledge of the use of building.

## 2. Operations and Report Preparation

### 2.1 Operations

In the operations process, the Group of Companies has planned and implemented the works, whereby the Group of Companies has created the Code of Conduct to become a tool for the committees, directors, and employees to fully aware of the business ethics that the Group of Companies has used to operate the business for thorough implementation.

#### Risk Assessment

The committee places great importance about risk management by specifying the Group of Companies to assess risk factors in its business operations regularly, including analyzing the impact that may occur from the risks, creating defensive measures or risk reduction, and report to the risk management committee and the Company committee consistently.

Moreover, the Group of Companies has incorporated its risk assessment policy into business operations, especially in the Company's product development. The Group of Companies continuously studies and assesses its products and services that could have a potential impact on customers, such as the project to improve rainwater drainage system in the WHA Saraburi Industrial Land. The objective of this project is to improve the rainwater drainage and the flood protection system inside the estate to prevent and minimize the impact to clients in WHA Saraburi Industrial Land. WHA has engaged a consulting engineer to survey, analyze, and assess the risks, and propose recommendations to improve the rainwater drainage and the flood protection system. After the study result, WHA has adopted the measures suggested and set up a team to ensure constant follow-up, examination and maintenance of the systems, and to record data that could help reduce risks of flooding and other disasters at the industrial land efficiently.

#### Procedures Definition

The Group of Companies also emphasizes on operation and procedure, defining the procedure guidelines, controlling the inspection, operating according to international standards, and preserving the environment for stakeholders. The Group of Companies focuses on innovation in designing warehouses that are environmentally-friendly to increase product efficiency and reduce energy consumption, such as designing warehouses that can utilize more natural lighting to reduce electricity usage inside the buildings and designing warehouses by considering the air circulation from outdoor to indoor, which will help lower the temperature inside the building. In addition, the Group of Companies also manages the sewerage system inside the warehouses before releasing into wastewater pipe that will always work with maximum efficiency.

In the development of industrial estates, the company set up the Environmental Monitoring and Control Center (E:mc<sup>2</sup>) at Eastern Seaboard Industrial Estate (Rayong) - which is the first center – followed by WHA Eastern Seaboard Industrial Estate and WHA Chonburi Industrial Estate through a collaboration with the Industrial Estate Authority of Thailand. The center offers real-time processing of environmental reports, with highly reliable and accountable methodology and transparency policy. They are also equipped with an automated water quality monitoring system and serve as center to gather complaints through its website, whereby various communities can inspect all the time.

The Group of Companies initiated and has sold the solar PV rooftop energy to Metropolitan Electricity Authority and Provincial Electricity Authority since 2014. This project not only supports the energy conservation under the green energy concept but also provides utmost benefit to the customers as the solar cell will function as the heat insulator for roof of warehouses. Accordingly, the customers are able to preserve the goods quality and save the energy.

In addition, the Group of Companies also plans to prevent pollution in the long-term, since it foresees the importance in preventing pollution that may occur from the Company's business operations. The Group of Companies has specified long-term preventive measures against pollution, in which the preventive measures were generated from the Environment Impact Assessment (EIA) in various areas since prior to the start of operations, in order to expand perspectives and connect all impacts that occurred from business operations. These are then used to develop measures to prevent and reduce impact to the environment, and measures to monitor quality of the environment, whereby these various measures will cover all activities and effects that may happen from the project. However, consent from stakeholders and the Office of Natural Resources and Environmental Policy and Planning shall be received first, in order to start the operations. Moreover, WHA has applied the ISO 14001 Environmental Management System to manage its industrial estates, including a process for analyzing environmental issues. This system also helps outline objectives and appropriate procedures to significantly prevent environmental issues. Furthermore, the system also includes monitoring of various processes and using the results to evaluate in environmental management.

The Group of Companies used measures in accordance to EIA as tools to control pollution that are created in the project, by which both the project and plants must conform to the EIA of each project. Examples of preventive measures against pollution include wastewater quality standards, criteria to release pollutants from plant chimneys, and measures for industrial waste management. In the case of emergency that can create pollution, the project has emergency plan and personnel to react to particular emergency situations, as well as restoration measures to bring the environment back to its normal conditions at the earliest.

### **Communication with Personnel and Employees**

The Group of Companies supports the work performance development of employees continuously and provides confidence in the quality of working life for employees, in order to build relationship with the organization. Apart from this, the Group of Companies also places importance to every employees regardless of which unit or department they are working in by creating good and safe working environment, paying remuneration that are suitable with the work, allow generous benefits, and source innovation and new technologies to support working alongside with environment preservation, such as;

- The Group of Companies has replaced the conventional HID bulbs with T5 and/or LED lights. They save 2-3 time energy despite higher cost and they last longer. The Group of Companies has implemented the royal project of the constructed wetland wastewater treatment system to use in its operations, then train the employees who are responsible for the environmental conservation of the Group of Companies and apply and transfer knowledge to people in the communities to create further value inside their communities.

- The Group of Companies encourages employees to save energy and resources, for instance, turning off lights, air conditioners and electrical equipment during lunch time, reuse of the other side of paper, replacing 80-gram office paper with 70-gram office paper, printing only necessary documents, etc.

- The Group of Companies also encourages its employees to take part in community projects by participating in CSR activities, such as annual school contributions around the company's industrial estates, involving 69 schools and more than 18,700 students. Furthermore, the Group of Companies also helped communities during drought situations, in which the Group of Companies' Safety department is the key unit in providing water to various communities that face the drought crisis, or aiding communities during emergency periods.

- Moreover, the Group of Companies supports every employee to participate in tree-planting activities to preserve the environment inside the industrial estates and surrounding communities.



In addition, the Group of Companies has specified guidelines in communicating with employees in both formats of employee handbook and Code of Conduct while encouraged employees to anti-corruption, respect other people's rights, value intellectual properties and human rights.

### Monitoring

The Group of Companies promotes corporate transparency in every aspects of company operation, including all the CSR activities. All the projects have been closely investigated by the Group of Companies' executives and the Company's directors, from the budget proposal, the operation, to the end of the project, showcased the transparency of the company without any fraud.

## 2.2 Report Preparation Process

The Group of Companies is committed to publishing Corporate Social Responsibility report on its CSR activities that the Company is currently operating, considering all stakeholders, both internal and external, including shareholders, employees, customers, creditors, suppliers and competitors, environment and society, and government agencies.

Regarding the procedure or process of developing the industrial estates, the Group of Companies is required to issue regular reports according to the Environmental Impact Assessment (EIA) rules and submit these reports every 6 months to the Office of Natural Resources and Environmental Policy Planning, Ministry of Natural Resources and Environment.

## 3. Business Effect on CSR

In 2019, the Group of Companies emphasizes undertaking of business that supports and does not adversely affect society and environment. It has never been subject to investigation or challenged by any related government authorities into environmental matters or any acts that could affect the environment.

However, the Group of Companies has defined measures to deal with environmental complaints, as follows:

- 1) In case of compliant request, the company will assemble related information and conduct a primary investigation.
- 2) Once the investigation is completed, if the case is groundless, a detailed explanation will be provided through appropriate communication channels.
- 3) If the case is accurate and factual, but not related to the company, the complainant will be notified and a further investigation into the real cause will be launched.
- 4) If the case is not related to the company, a meeting of the stakeholders shall be called in order to determine the causes and effects, and look for preventive measures and solutions. Results will be communicated to the complainant through appropriate communication channels.





#### 4. CSR After-Process activities

- a) The Group of Companies believes that children are key social foundation. Good education in parallel with cultivation of ethics and morality will help communities and society exist in a sustainable way. For this reason, the Group of Companies decided to initiate the campaign, “WHA Campaign to Motivate Children and Youth Morality” aimed to support education to the community and underprivileged youth. To do so, the Company has allocate a part of its income as a budget to give scholarship to schools in the community, build libraries and donate teaching and learning equipment to needy schools, etc. The Group of Companies is determined to pursue the said campaign. Among the notable CSR activities is “Adopt a School”, a collaboration between The Group of Companies and The American Chamber of Commerce in Thailand (AMCHAM), initiated in 2005. The “Teacher Fellowship Program” is one of the projects created to support the shortage of teachers in Rayong and Chonburi areas. “Teacher English Camp 2018” and “English Boot Camp” were organized to improve English language skills for school teachers and primary students.



Moreover, the Group of Companies, in cooperation with private companies in WHA industrial estates and other partners, has been holding its annual outreach project to support education for the youth for 22 consecutive years.



In 2019, the Group of Companies organized CSR activities as follows:

- The Group of Companies distributed care packs and donated medical supplies in the form of 90 sets per year to senior residents in the Tasith sub-district, Rayong Province. Other activities for senior citizens include free health check-ups, influenza vaccines and eye glasses.
- WHA Corporation PCL organized the project community relations for two days to promote relations among the official group of WHA, the representatives from Subdistrict Administrative Organization (SAO) and the community leaders in Rayong and Chon Buri Provinces. The observation study of the sea bed ecological system at Hat Toey Ngam Beach, Sattahip Naval Base, Chon Buri Province, we joined the activity planting coral reefs and released nurse sharks, which conserve the ecosystem of the sea.



- The Company has organized an annual CSR project for students through Art Camp. The objective is to develop the students' interest in arts, so they can use their creativity and imagination in a positive way. Since the first workshop, the Art Camp has continuously provided basic principles and knowledge to help enhance students' skills in arts. To date, 6,800 students have participated in the WHA Art Camp. The Group of Companies also initiated the "Art Camp for Teachers" program, with the aim to equip primary teachers with basic knowledge of art, so they can apply what they learned in their teaching. To date, the program has benefited 293 teachers who are able to impart knowledge of art to students.
- b) The company is always aware that the preservation of religion and inheritance of moral traditions have importance that is no less than activities in other areas. In order to build sustainable development for the organization, society, and surrounding communities, the Group of Companies thus created a policy to promote various activities that are supportive of Buddhism religion and cultural arts, such as merit-making during important religious days, ceremony of presenting robes to Buddhist monks at the end of Buddhist Lent, as well as supporting in terms of budget for restoration of religious places.
- c) The Group of Companies has placed importance with every group of stakeholders and consider it as a policy to aid others when emergency situations occur to various organizations, being the public or private sectors, as well as providing support in terms of manpower and finance to operate various charitable activities as appropriate.

## 5. Prevention from Corruption

The Company and its subsidiaries in the WHA group are determined to do business with integrity and transparency to comply with the code of conduct and the principles of good governance. Meanwhile, the Company has joined the signing in the declaration of practical alliance of the Thai private sector in anti-corruption and was certified in 2017. While in 2019 in the board meeting No. 7/2019 on 8 November 2019 resolved to approve the the policy to improve the policy and guidelines on anti-corruption by aiming for the directors, the management and all the employees in the WHA group to have knowledge and understanding on the meaning of anti-corruption in the diverse forms to be realized on the duty and responsibility. So they can apply the guidance involved with the anti-corruption. It includes accepting a complaint and whistleblower as well as designating to have a follow-up and review of the policy and guidance on anti-corruption

The Board of Directors has advocated and supported to disseminate the manual on the policy and guidelines through the various media of WHA Group. It provided training and giving knowledge, including declaring the intention to the outsiders and the stakeholders. The aim is to develop the capabilities on competition and elevate the country development by reducing corruption on both the public and private sectors.

# INTERNAL CONTROL AND RISK MANAGEMENT

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The Company has realized the importance of the arrangements to have the internal audit continuously by focusing on having the internal audit sufficiently and suitably with the business operations. It is to increase the efficiency on the operations, taking care of the property, as well as to have the accounting system and a financial report with the precision and reliability. It has complied with the law, rules and regulations involved with its business operations. However, the board of directors has assigned the audit committee to audit and assess the sufficiency of the internal control annually. This includes the compliance with the principles on good governance for transparency and prevention of a conflict of interest.

## 1. Opinion of The Audit Committee on The Internal Control within The Company

With reference to the scope of power of the audit committee that is assigned by the board of directors in the audit of the Company to have the internal control and internal audit that was suitable and effective. The audit committee has assessed the sufficiency of the internal control of the Company for 2019 by using the assessment of sufficiency of the internal control in accordance with the guidance of the SEC, which covers the various components in five parts. They are the control environment, risk assessment, control activities, information & communication and the monitoring activities. Meanwhile, the audit committee deems that the Company has abided by the guidelines on the internal control that the SEC has designated. The measures are designated the internal control on the importance that involved with the operations, risk management, supervision and monitoring of the management and the board of directors sufficiently.

## 2. Opinion of of the Board of Directors on the Internal Control of the Copany.

No difference from the opinion of the audit committee and the auditor, and no remark on the internal control whatsoever.

## 3. Head of the Internal Audit

As for the internal audit the Company has provided an office of internal audit (Thamniti Internal Audit Ltd.) has performed the duty for 2019 under the supervision of the audit committee. It assigned Ms. Somchalie Kaemkomdee, board director, as the head of the internal audit of the Company. Moreover, the audit committee has considered the qualifications of Dhamniti Internal Audit Ltd. and Ms. Somchalie Kaemkomdee, and deemed to be suitable for the performance of duty. It was due to the independence and experience on the performance of the internal audit for the business and industrial groups that have the same characteristics with the Company.

Moreover, the consideration and approval, appointment, removal and transfer of the tenure of the head of the internal audit of the Company may be approved (or agreed) by the internal audit committee. Nonetheless, in the internal audit committee meeting No. 7/2019 on 8 November 2019 approved to set up an internal audit unit with its charter.

Furthermore, the Company appointed Pricewaterhouse Coopers ABAS Co., Ltd. as the auditor of the Company and its subsidiaries. Moreover, the Company and its subsidiaries for 2019 in the audit of the accounting of the Company and its subsidiaries, evaluated the internal control on the accounting according to the generally accepted accounting principles. The auditor reported to the audit committee that no comment from the accounting audit for 2019.

# REPORT OF THE AUDIT COMMITTEE

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## DEAR SHAREHOLDERS

### WHA CORPORATION PCL

The Audit Committee comprises the 4 honorable and independent members, namely Mr. Pichit Akarathit, the Chairman of the Audit Committee, Mr. Apichai Boontharawara, Mrs. Kritsana Sukboontasatit and Mr. Somsak Pratomsrimek, the Audit Committee's members. The Audit Committee has sufficient knowledge and experience in reviewing the reliability of financial statements.

In 2019, there were 7 Audit Committee meetings. The Audit Committee consulted with the Chairman, the Directors, the Management, the auditor, and the Internal Auditor in many occasions as appropriate, and gave independent opinion and suggestion. The Audit Committee had reported its resolution of those meetings as concluded on the following matters:

#### **Accuracy, Completeness and Reliability of Financial Report**

The Audit Committee reviewed both quarterly and annual financial reports, significant accounting policy, and sufficiency of information disclosure, including jointly considered with the Management and the auditor the auditing plan, method and identified issues. The Audit Committee also meeting with the auditor without participation of the management to discuss about the independence of performing the audit task. The Audit Committee viewed that the Company's financial reports were prepared in compliance with the generally accepted accounting principles, accurate, relevance with the decision, and faithful representation, as well as the accounting policies were properly selected to reflect the Company's operating performance and the financial position.

#### **The adequacy of internal controls and internal audit**

The Audit Committee reviewed the reports of the internal auditor and discuss with the internal audit and auditor on the evaluation of the internal controls, including giving opinions on the improvement of significant audit issues and follow-up for proper management. The Audit Committee had the opinion that the company's internal control sufficient and effective.

The Audit Committee reviewed the annual internal auditing program which was prepared in accordance with the Risk-Based Audit Plan that focused on auditing to identify the high impact risk in the business operations, as well as gave helpful suggestions to manage the risk at the acceptable level. The Audit Committee always consulted with the internal auditor without the management, and viewed that the internal audit was independent and appropriate. The Audit Committee had the opinion that the internal control system and internal audit of the Company has appropriate, effective, and performance of internal audits achieving the target.

#### **Oversight of Anti-Corruption**

The Company has been certified its membership by the Thailand's Private Sector Collective Action Coalition Against Corruption (Thai CAC). The Audit Committee is responsible for supervising the Company's operation to be in line with the Anti-Corruption Policy. The Internal Audit Department is assigned to assess the risks associated with corruption, establishing criteria and measures to reduce the risk of corruption. The Audit Committee had the opinion that current management and anti-corruption measures are appropriate, effective and consistent with the compliance policy of the Company.



## **Compliance with the Securities and Exchange laws, regulations of the Stock Exchange of Thailand, and laws related to the Company's business**

The Audit Committee reviewed the compliance with the Securities and Exchange laws, regulations of SET, and laws related to real estate business and industrial estate business which is the Company's core business, as well as evaluated the Management's compliance with legal requirements on a regular basis. The Audit Committee viewed that the Company conducted in compliance with the Securities and Exchange laws, regulations of SET, and laws related to the Company's business correctly, completely and properly.

### **Reviewed connected transactions and conflict of interest**

The Audit Committee reviewed connected transactions and conflict of interest in order to comply with the regulations of SET and SEC, and reviewed disclosure from accounting standard in every quarter. The Audit Committee had the opinion that the connected transactions and conflict of interest that were reasonable, fair and of optimized benefit to the Company.

### **Appropriateness, selection, and appointment of the auditor**

The Audit Committee evaluated the independence and performance of the auditor for the year 2019 and it concluded that the performance in overall was at the satisfied level with sufficient independence.

According the company has compared the audit fee last year, on selection and appointment of the audit for 2020, The Audit Committee considered the qualifications of the auditor, quality of the audit, skills, knowledge, ability and experience in the audit, independence of auditor in accordance with the professional code of ethics and the regulations of SEC in the last year and reviewed the appropriate of the audit fees, and agreed to propose to the Board of Directors' meeting and the annual general shareholders' meeting to appoint Mr. Chanchai Chaiprasit, Certified Public Accountant No. 3760, or Mr. Paiboon Tunkoon, Certified Public Accountant No. 4298, or Mr. Boonrueng Lerdwisewit, Certified Public Accountant No. 6552, on behalf of PricewaterhouseCoopers ABAS Ltd. to be the auditor of the Company and its subsidiaries for 2020.

### **Overall opinion and remark of the Audit Committee**

The Audit Committee evaluated self-performance by evaluating the committee as a whole in 2019 according to the guidelines of SET. In which the evaluation results show that the Audit Committee has performed their duties and the responsibilities specified in the charter of the Audit Committee by adhering to the principles of accuracy and give opinion, recommend, creative for the benefit of stakeholders.

On behalf of Audit Committee



**Mr. Pichit Akarathit**

Chairman of the Audit Committee

# CONNECTED TRANSACTION

## 1. Connected transactions of the Company and its subsidiaries with persons who may have conflict of interests in 2019

Person/Entity who may have conflict of interests	Relationship	Type of Connected Transaction	Transaction Amount		Necessity and Appropriateness of Transaction	Audit Committee's opinion
			(THB Thousand)	For the fiscal year ended of 31 Dec 2019		
S&J Holding Co., Ltd.	<ul style="list-style-type: none"> <li>Having common major shareholders with the Ms. Jareeporn Jarukornsakul holds 42.50% of shares in S&amp;J Holding Co., Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>Office-service-fee charged to the Company and its subsidiaries.</li> </ul>	11,903.86		<ul style="list-style-type: none"> <li>The Company acquired the service for use of building space owned by S&amp;J Holding Co., Ltd. as an office under the 3-year service agreement commencing from 1 January 2018 to 31 December 2020 at the rate of THB 845,868.65 per month (excluding VAT). This amount was charged for the service area of 2,796.26 square meters at the service charged rate of THB 302.50 per square meter. Such rate was comparable to the rental rate for the area nearby.</li> </ul>	<ul style="list-style-type: none"> <li>It was deemed appropriate to enter into the transaction in order to support the Company business. The service fee in 2019 was comparable to the market rate.</li> </ul>
	<ul style="list-style-type: none"> <li>Having common director with the Company, namely Ms. Jareeporn Jarukornsakul</li> </ul>	<ul style="list-style-type: none"> <li>Accrued expense</li> </ul>	957.19		<ul style="list-style-type: none"> <li>WHA Real Estate Management Co., Ltd. acquired the service for use of building space from S&amp;J Holding Co., Ltd. as office under the service agreement for 3 years from 1 January 2018 to 31 December 2020 at a rate of THB 34,799.60 per month (excluding VAT). This amount was charged for the service area of 115.04 square meters at the service charged rate of THB 302.50 per square meter. This rate is comparable to the rate charged to area nearby.</li> </ul>	



Person/Entity who may have conflict of interests	Relationship	Type of Connected Transaction	Transaction Amount (THB Thousand) For the fiscal year ended of 31 Dec 2019	Necessity and Appropriateness of Transaction	Audit Committee's opinion
				<ul style="list-style-type: none"> <li>WHA Infonite Co., Ltd. acquired the service for use of building space from S&amp;J Holding Co., Ltd. as office under the service agreement from 1 January 2018 to 31 December 2020 at a rate of THB 111,320 per month (excluding VAT). This amount was charged for the service area of approximately 368 square meters, translating into the service fee rate of THB 302.50 per square meter, which is comparable to the rate charged to area nearby.</li> <li>Due to substantial amount of complicated legal transactions of the Company and its subsidiaries which require specialized lawyers; however, with just a few legal officers in the Company along with the limited experience and expertise, the Company and its subsidiaries have engaged to external legal consultant in providing legal advice on various matters to the Company and its subsidiaries, as well as to review documents and agreements relating to their business operation. The legal counselor fee charged was in the range of not exceed THB 5,000 per hour (in 2019) which was not higher than the market rate.</li> </ul>	
RL Counsel Co., Ltd.	<ul style="list-style-type: none"> <li>Mr. Narong Kritchanchai is a director and an executive of the Company (has been appointed as an executive since 24 February 2016)</li> <li>Mr. Narong Kritchanchai holds 33.3% of the shares in RL Counsel Co., Ltd. (as of 31 December 2019), and is the director of RL Counsel Co., Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>Legal counselor fee for the Company and its subsidiaries</li> <li>Accrued expenses</li> </ul>	<p>7,571.38</p> <p>1,851.79</p>	<ul style="list-style-type: none"> <li>It was deemed appropriate to enter into the transaction in order to support the Company and its subsidiaries' business and the transaction complied with the normal business practice.</li> <li>The fee as well as its commercial terms and conditions were reasonable.</li> <li>The fee was comparable to and did not exceed the market rate.</li> </ul>	

## 2. Necessity and Rationality of the Connected Transactions

The Audit Committee's meeting No. 2/2019 held on 22 February 2019 has considered the connected transactions for the fiscal year ended 31 December 2019, together with the information interviewed from the management of the Company and its subsidiaries, persons and entities who may have conflict of interests for the fiscal year ended 31 December 2019 as well as the review of the auditor's notes to financial statements. It has viewed that the connected transactions of the Company and its subsidiaries with persons or entities who may have conflict of interests for the fiscal year ended on 31 December 2019 were reasonable and was for the ultimate benefit of the Company. In addition, such connected transactions were in accordance with the normal business terms and practices and were conducted as normal business operation of the Company where there was no transfer of benefit between the Company and persons or entities who may have conflict of interests. They were also conducted in same manner as the normal person would have done with its counterparty in the same circumstance at an arm's length basis without influence from a party who might be a person having conflict of interests (Arm's Length Basis).

## 3. Policy and Procedure for Approval of the Connected Transactions

The Meeting of the Board of Directors No. 1/2012 held on 25 May 2012 set the policy and procedures for entering into connected transactions to ensure transparency of the transactions between persons or juristic persons who may have the conflict of interests and to protect the benefits of the Company. The policy and procedure can be summarized as follows.

The connected transactions or related transactions of the Company and its subsidiaries were to be in compliance with the principle of the SEC Act and the notifications of the Capital Market Supervisory Board No. TorJor. 21/2551 Re: Rules for Entering into Related Party Transactions and the Notification of the Securities and Exchange Commission Re: Disclosure of information and Other Acts of Listed Companies Concerning to the Connected Transactions including other relevant regulations of the SEC and the SET as well as to be in compliance with the disclosure of the connected transactions in the auditor's notes in the financial statement audited by the Company's auditor and in the annual registration statement (56-1).

For the case of the connected transactions of the Company and its subsidiaries with persons or entities who have conflict of interests or may have a conflict of interest in the future, the Audit Committee shall opine on the necessity for entering into the transaction and the appropriateness of transaction price by taking into account the conditions to be in compliance with the normal business operation in the industry and to compare with the third party's or the market price. If the Audit Committee does not have expertise to determine the potential connected transactions, the Company will arrange for an independent advisor or the Company's auditor to opine on such connected transactions for consideration of the Board of Directors, the Audit Committee, or the shareholders, as the case may be. To such extent, the director who has a conflict of interest shall not have a right to vote on such transaction. The connected transactions shall be disclosed in the notes to the financial statements audited or reviewed by the Company's auditor.

#### **4. Policy or Tendency for Connected Transaction in the Future**

The Company may enter into connected transactions in the future as deemed appropriate by complying with the Securities and Exchange Commission Acts, rules, notification, order or requirements of the Securities and Exchange Commission and the Stock Exchange of Thailand, as well as accounting standards Re: disclosure of information in relation to related persons or activities as prescribed by the Federation of Accounting Professions.

In the case where the transaction normally occurs and will continually occur in the future, the Company sets the criteria and guidelines to be in accordance with the normal business by referring to the appropriate, fair, reasonable and transparent prices and conditions, and then proposes to the Audit Committee to consider and approve such criteria and guidelines.

However, to enter into connected transactions, the Company will assign the Audit Committee to opine for the appropriateness of such transactions. If the Audit Committee has no expertise on considering such connected transactions, the Company will arrange for an expertise who have specialized knowledge and proficiency on the transaction such as independent auditor or asset appraiser to opine on the connected transactions. Those comments of the Audit Committee or the experts will be considered by the Board of Directors or the shareholders, as the case may be, to ensure that such transactions will not be migrated or transferred of benefit between the Company and its shareholders, but will be for the ultimate benefit of all shareholders.

# MANAGEMENT DISCUSSION AND ANALYSIS (MD&A)

## OVERALL 2019 FINANCIAL PERFORMANCE

Consolidated Financial Statements	2018 THB mm	2019 THB mm	Increase/ (Decrease) %
Total Revenue <sup>/1</sup>	11,622.2	13,385.8	15.2%
Total Cost	4,631.8	6,400.8	38.2%
Gross Profit <sup>/2</sup>	6,232.8	6,007.9	(3.6%)
Net Profit	2,906.8	3,229.3	11.1%
Normalized Total Revenue <sup>/3</sup>	10,882.7*	13,058.7	20.0%
Normalized Net Income <sup>/4</sup>	2,422.8*	2,932.9	21.1%

<sup>/1</sup> Including other income and share of profit from investments in associates and JVs

<sup>/2</sup> Gross profit including share of profit from investments in associates and JVs

<sup>/3</sup> Normalized Total Revenue = Total Revenue excluding FX impact

<sup>/4</sup> Normalized Net Profit = Net Profit excluding FX impact

\* Adjusted with Revenue Levelization (TFRS15) for comparison purposes. Normalized Profit for 2019 has effects from TFRS15

During 2019, the Company had the net profit of THB 3,229.3, which increased by 11.1% compared to the same period of 2018. Which the normalized net profit increased by 21.1%, compared to the same period of 2018

## KEY HIGHLIGHTS

- Total revenue was THB 13,385.8 mm which increased by 15.2%, compared to the same period of last year, whereas normalized total revenue increased by 20.0%.
- Rental and service income from warehouses, distribution centers and factories was THB 1,001.3 mm, which decreased by 9.2% mm from the same period of previous year. However, if excluding the impact from WHABT, the normalized rental revenue and services increased by 5.8%, mainly from continuously increase in occupied area of ready-built factories and warehouses.
- Revenue and share of profit from sale of investment properties was THB 3,891.2 mm which increased by 12.2%, compared to the same period of previous year. This increase during the period was mainly due to reversal of deferred revenue from sale of investment properties to WHABT.
- Revenue from industrial land sale was THB 3,505.0 mm which increased by 64.9%, compared to the same period of last year, mainly from higher number of land transfer.
- Utilities income was THB 2,258.7 mm, which increased by 7.8%, compared to the same period of last year, mainly from 4% increasing in sale volume of industrial water.
- Share of Profit from Investments in Associates from Power Business was THB 1,778.7 mm, which decreased by 13.1%, compared to the same period of last year. However, if only considering, normalized share of profit from investments in associates decreased by 4.6%, mainly due to lower contribution from GHECO-One.

- Financial costs decreased by 16.4% or THB 193.0 mm, compared to the same period of last year, due to accounting impact of early redemption of bond and lower weighted average cost of fund.
- All in all, the reported net profit and normalized net profit for 2019 were THB 3,229.3 mm and THB 2,932.9 mm which increased by 11.1% and 21.1%, respectively.

## PERFORMANCE BY BUSINESS

### Rental Properties Business

	2018 THB mm	2019 THB mm	Increase/ (Decrease) %
Rental Revenue	1,102.2	1,001.3	(9.2%)
Normalized Rental Revenue <sup>1</sup>	898.6	950.7	5.8%
Gross Profit	562.7	589.7	4.8%
Gross Profit Margin	51.1%	58.9%	
GPM before adjustment with PPA <sup>2</sup>	51.6%	59.1%	
Revenue and Share of Profit Sale of Investment Properties	3,469.4	3,891.2	12.2%
Revenue from Sale of Investment Properties	3,005.6	3,651.3	21.5%
Share of Profit from JV's Asset Monetization	463.9	239.8	(48.3%)
Gross Profit	1,225.3	724.6	(40.9%)
Gross Profit Margin	40.8%	19.8%	
GPM before adjustment with PPA <sup>2</sup>	51.4%	19.8%	

<sup>1</sup>Excluding rental and service income from WHABT

<sup>2</sup>Excluding accounting impact of Purchase Price Allocation (PPA)

#### 1. Rental and Service Income

- Rental and service income from warehouses, distribution centers and factories** during 2019 was THB 1,001.3 mm, which decreased by 9.2% from the same period of previous year, due to having no office rental revenue of WHABT assets in 2019. However, if excluding the impact from WHABT, the normalized rental revenue and services increased by 5.8%, mainly from continuously increase in occupied area of ready-built factories and warehouses.
- Gross profit from rental and service of warehouses, distribution centers and factories** during 2019 was THB 589.7 mm, which increased by 4.8% from the same period of previous year, mainly from the increase in rental and services revenue as mentioned above. The gross profit margin during 2019 was 58.9%. The improvement of gross profit margin mainly came from higher occupancy rate.

#### 2. Sale of Investment Properties

- Revenue and share of profit from sale of investment properties** was THB 3,891.2 mm which increased by 12.2%, compared to the same period of previous year. This increase during the period was mainly due to reversal of deferred revenue from sale of investment properties to WHABT in the first quarter of 2019. Furthermore, the gross profit margin stood at 19.8%, however if considering the gross profit margin from asset monetization to WHART was 39.0%.

## Industrial Development Business

	2018 THB mm	2019 THB mm	Increase/ (Decrease) %
Revenue	2,124.9	3,505.0	64.9%
Gross Profit	1,066.4	1,777.2	66.7%
Gross Profit Margin	50.2%	50.7%	
GPM before adjustment with PPA <sup>1</sup>	60.2%	55.3%	

<sup>1</sup> Excluding accounting impact of Purchase Price Allocation (PPA)

**Income from sales of real estate** during 2019 stood at THB 3,505.0 mm, which increased by 64.9%, compared to the same period of last year. Furthermore, the gross profit from sale of real estate during 2019 stood at THB 1,777.2 mm, which increased by 66.7%, compared to the same period of last year, mainly due to higher number of land transfer. Moreover, the gross profit margin for 2019 was 50.7%. These gross margins had accounted for the fair value adjustment of the acquired business according to the accounting standards under WHA level. However, the genuine gross margin was 55.3%.

## Utilities & Power Business

	2018 THB mm	2019 THB mm	Increase/ (Decrease) %
Revenue	2,095.1	2,258.7	7.8%
Gross Profit	895.2	954.8	6.7%
Gross Profit Margin	42.7%	42.3%	
GPM before adjustment with PPA <sup>1</sup>	46.0%	45.3%	
Share of Profit from Investments in Utilities Associates	n.a.	(13.5)	n.a.
<b>Share of Profit from Investments in Power Associates</b>	<b>2,046.4</b>	<b>1,778.7</b>	<b>(13.1%)</b>
- Normalized Share of Profit from Investments in Power Associates <sup>2</sup>	1,510.6	1,441.2	(4.6%)
- FX Gain (Loss)	55.4	337.5	509.3%
- Write Off Tax	(71.2)	0.0	(100.0%)
- Adjustment of revenue levelization (TFRS15)	2,046.4	1,778.7	(13.1%)

<sup>1</sup> Excluding accounting impact of Purchase Price Allocation (PPA)

<sup>2</sup> Excluding Gain (Loss) from FX, Write-Off Tax and adjusted with Revenue Levelization (TFRS15)

<sup>3</sup> Adjusted with Revenue Levelization (TFRS15) for comparison purposes. Normalized Profit for 2019 has effects from TFRS15

**Utilities income** during 2019 was THB 2,258.7 mm, which increased by 7.8%, compared to the same period of last year, mainly from 4% increasing in sale volume of industrial water as a result of higher usage from existing and new customers, especially COD of GNLL2 in the first quarter of 2019.

**Gross profit from utilities services** during 2019 was THB 954.8 mm which increased by 6.7%, compared to the same period of last year. Moreover, the gross profit margin in 2019 was 42.3%. This gross margin had accounted for the fair value adjustment of the acquired business according to the accounting standards under WHA level. However, the genuine gross margin was 45.3%.

**Share of Profit from Investments in Associates from Utility Business** was THB (13.5) mm, due to the recognition from Share of Loss from SDWTP which started in November 2019 amounted of THB (14.3) million. SDWTP started commercial services at the beginning of 2019 with installed capacity of 150,000 cubic meters per day (Phase 1A) and additional installed capacity of 150,000 cubic meters per day (Phase 1B) was ready to start commercial operation from November 2019. Although, SDWTP had average sales volume more than 80% of Phase 1A's installed capacity during November to December but depreciation expense of Phase 1B was already booked in this period, resulting into a loss during November to December as abovementioned.

**Share of Profit from Investments in Associates from Power Business** during 2019 was THB 1,778.7 mm, which decreased by 13.1%, compared to the same period of last year. However, if only considering normalized share of profit from investments in associates decreased by 4.6%, mainly due to lower contribution from GHECO-One.

#### Other Income

	2018 THB mm	2019 THB mm	Increase/ (Decrease) %
Dividend and Management income	399.6	540.7	35.3%
Others	270.2	436.4	61.5%
<b>Total other income</b>	<b>669.8</b>	<b>977.1</b>	<b>45.9%</b>

**Other income** during 2019 was THB 977.1 mm, which increased by 45.9%, compared to the same period of last year. The breakdowns are the details below:

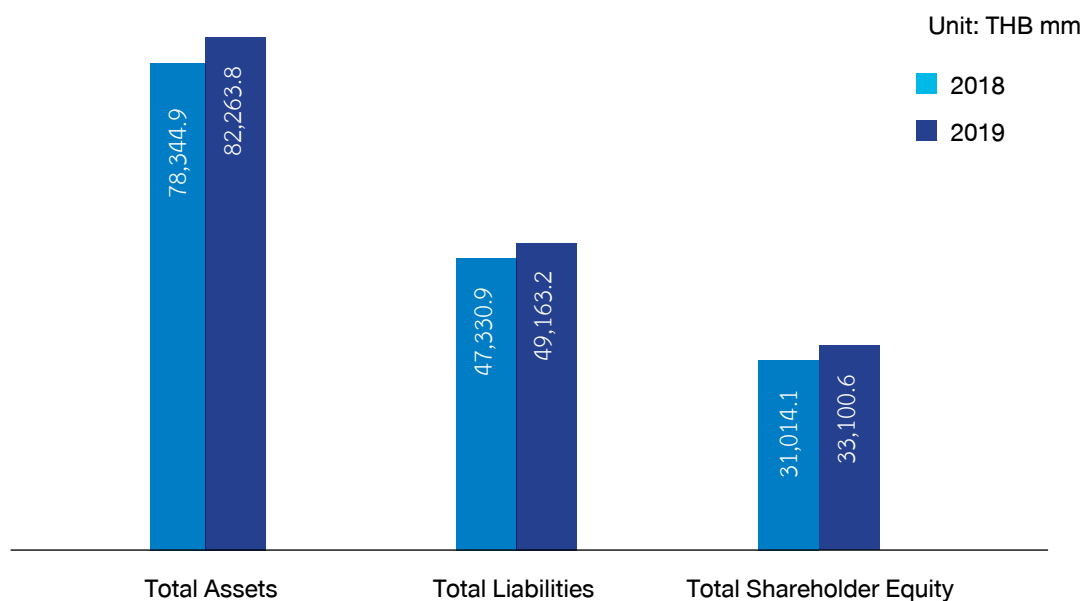
- **Dividend and management income** during 2019 was THB 540.7 mm, which increased by 35.3%, compared to the same period of last year, mainly due to higher dividend income from HREIT together with increase in management income in tandem with higher asset size of REITs.
- **Other income** was THB 436.4 for 2019, which increased by 61.5%, compared to the same period of the previous year. This came from the revenue recognition from restructuring in a client lease contract.

#### Expenses analysis

- **Selling expense** during 2019 was THB 325.6 mm, which varies according to income from sales of real estate. The 2019 selling expense accounted for 9.3% of income from sales of real estate, which decreased from 10.9% in 2018.
- **Administrative expense** during 2019 was THB 1,398.2 mm, which increased by 1.5%, compared to the same period of last year, mainly due to higher employee benefits together with the increase in the number of staff to serve the business expansion.
- **The finance costs** during 2019 was THB 986.4 mm, which decreased by 16.4%, compared to the same period of last year, mainly due to accounting impact of early redemption of bond and lower weighted average cost of fund.



## FINANCIAL POSITION



The changes in Consolidated Balance Sheet as of 31 December 2019 are summarized as follow

### Assets

As of 31 December 2019, the Company had total assets of THB 82,263.8 mm, which increased by THB 3,918.9 mm from THB 78,344.9 mm as of 31 December 2018. The main reasons were as follows:

1. Increase in investments in available-for-sale of THB 3,105.7 mm, due to having mark to market investment in REITs during this period.
2. Increase in investments in associates of THB 1,159.4 mm mainly due to business expansion in associated companies.
3. Increase in property, plant and equipment of THB 723.6 mm mainly due to the expansion in solar business.
4. Decrease in cash, cash equivalent and short-term investments of THB 1,050.7 mm, which was mainly from higher capital expenditure, align with the Company expansion.
5. Decrease in cost of real estate development (net) of THB 575.9 mm, mainly resulting from higher land transfer in 2019 as mentioned above. However, the Company has developed more on the industrial estate during this period as well.
6. Decrease in short-term loan to related parties of THB 571.1 mm, mainly from loan repayment from an associated company.

## Liabilities

As of 31 December 2019, the Company had total liabilities of THB 49,163.2 mm, which increased by THB 1,832.4 mm from THB 47,330.9 mm as of 31 December 2018. The Company had interest bearing debt of THB 39,224.3 mm, which increased by THB 2,843.8 mm from THB 36,380.5 mm in 2018. However, the weighted average cost of fund of the Company in 2019 decreased by 0.47% (decreasing from 3.88% in 2018 to 3.41% in 2019).

During 2019, the Company had utilized additional short-term and long-term facilities, accounting for THB 4,293.0 mm and had bond repayment in the amount of THB 1,450.1 mm. As a result, the 2019 interest bearing debt of the Company increased by THB 2,843.8 mm, which was mainly from investment in new project having instant recognized operating results.

Furthermore, the decrease in deferred revenue of THB 2,033.4 mm was mainly caused from reversal of deferred revenue due to recognition of revenue from sale of investment properties to WHABT as mentioned above.

## Shareholder's equity

As of 31 December 2019, the Company had total shareholder's equity of THB 33,100.6 mm, which increased by THB 2,086.5 mm from THB 31,014.1 mm as of 31 December 2018, mainly from WHA-W1 exercise and increase in market price of REITs.

## KEY FINANCIAL RATIOS

	31 December 2018	31 December 2019
Gross Profit Margin (%)	44.3%	38.8%
Net Profit Margin (%)	25.0%	24.4%
D/E Ratio (times)	1.53	1.49
Net IBD to Equity (times)	1.17	1.19

## KEY INFLUENTIAL FACTORS EFFECTIVE BUSINESS OPERATION OR FUTURE FINANCIAL POSITION

In 2020, the Company has set up its strategic direction and performance relating to 4 hubs as follows:

### 1. Logistics Hub

Due to the growing of domestic economy, there are more investment to expand the businesses from domestic and international private sector driving the demand in logistic activities. The mega infrastructure development projects from the Government also upgrade the nationwide logistics into next level. To capture the opportunities, the Company determine to improve the logistics properties business in the aspect of quality and innovate the business meeting the various demands from customers. In addition, the E-commerce in Thailand continually grow as the world leading E-Commerce operators designed to invest in Thailand, resulting in, the higher demand in the Company's logistic properties business. Moreover, the Company has foreseen an opportunity of logistics properties development and management in overseas, particular in ASEAN such as Vietnam which has the significant economic growth.

In 2020 the Company has a goal in the project development in response to the demand of the customers in the built-to-suit type and focus on development on a smart warehouse. With respect to the Company's strategic direction as aforementioned, the Company intends to achieve a total new contract and/or new project with approximate leasable areas of 250,000 square meters. Regarding the asset monetization into the REITs, the Company set a target in the year 2020 for total leasable areas of 150,000 square meters altogether and expects that the sale process will be completed within the Q4/2020.

## **2. Industrial Development Hub**

As Thailand remains an important target in the investment map, especially in the area of the EEC Special Economic Development Zone, which has the potential to be developed with readiness in transportation, logistics, infrastructure, resources providing and the connections with other economic centers in the country drives the growth of the company's business. Moreover, the trade tension among US and China was the catalyst for production relocation to ASEAN, especially Thailand as a result of the readiness as mentioned above. In addition, strong potential of the Company's industrial estate covering the various demands of customers lead the significant growth of the Company's business. Even though, the trade war is resolved, it will be considered to be another important opportunity to drive the company's performance in the future as the global trade and investment opportunities growing even more. In addition, the relocation of the base of production from China will be continue due to increasing in wage and production cost in China. The Company, therefore, has prepared to capture these opportunities by planning to launch a new industrial estate, WHA Rayong 36 Industrial Estate in Rayong with total project areas of 1,280 rais. Moreover, to emphasize the number one of the industrial estate business in Thailand, the Company studies to bring various technologies to develop the industrial estate supporting the industry of the future as well as covering various needs from customers. In addition, the Company intends to continuously develop industrial estates in Vietnam in order to become the regional leader. The first phase of the industrial estate development plan will cover an area of approximately 3,100 rais under the project name "WHA Industrial Zone Nghe An", which is located in Nghe An Province, from a total area of more than 20,000 rais. Hence, the Company expects the targeted sale of industrial land of approximately 1,400 rais consisting of 1,200 rais in Thailand and 200 rais in Vietnam.

## **3. Utilities & Power Hub**

### **3.1 Utilities**

The Company continues to set a growth target for utility services in industrial estates by increasing the sale volume of water to customers in the Company's existing industrial estate as well as newly-launched industrial estates in accordance with the Company's business expansion plan of domestic industrial estate and the supporting factors from the EEC as aforementioned. The Company has also enhanced water production processes and created valued added to the products via Wastewater Reclamation Technology with the production capacity of 3.65 million cubic meters per year, such as using reverse osmosis technology (R.O.) integrated into the water production process, including the extension to use Demineralized Water production technology with production capacity of 2.19 million cubic meters per year. In 2020, the Company set forth the goal of selling raw water, tap water, industrial water including the waste water management system of 147 million cubic meters which increased from 110 million cubic meter in previous year.

Moreover, the Company plans to provide water in industrial estates in Vietnam as the development project of WHA Industrial Zone Nghe An. In addition, in 2019 the Company expanded the service area to outside of industrial estate By investing in 34 percent of Duong River Surface Water plant JSC (“SDWTP”), a manufacturer and distributor of municipal water in Hanoi Vietnam. By 2020, the Company expects to increase water production capacity to distribute water in Hanoi to 110 million cubic meters per year and reach to 330 million cubic meters per year according to future development plan.

### **3.2 Power**

In terms of the power business, the Company has set a goal to increase its power generation in equity megawatts to 590 megawatts within the year 2020, which increased from 560 megawatts as compared to the previous year. This result from the increasing in solar rooftop in the industrial estates and logistics centers as well as the use of customers’ factory roof in the Company’s industrial estates which were completed and commenced for the commercial operations (COD) since 2019.

In addition, the Company also set a plan to develop and adopt the technology to enhance the Company’s power businesses such as using Smart Microgrid and Peer to Peer Energy trading scheme.

## **4. Digital Platform Hub**

The Company remains committed to develop the services and present new digital innovations to cover the needs of customers. By 2020, the Company plans to expand the service related to fiber optic cable network connection (FTTx) covering 10 in the group’s industrial estates from 7 industrial estates in the previous year. As well as shifting the level of service in the Data Center, including having plans to utilize investments technology to support the growth amid digital transformation of the Company so as to each business hub achieve the target as planned.

Hence, the Company has set up annual strategic direction and targets in consistence with the Company’s strategic plan which has been regularly reviewed every year, including the project feasibility study and consideration by the Board of Directors and management team who possess knowledge, expertise and experience in relation to the operation, however, theses, various external factors such as economic and political factors, government policies, overview of money market and capital markets, might inevitably affect the business operation and future performance of the Company.

## REPORT OF THE BOARD OF DIRECTORS' RESPONSIBILITY TO THE FINANCIAL STATEMENTS

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The Board of Directors of the Company has responsibility in preparing the financial statements of the Company in order to represent the Company's financial status and performance for the year 2019 in accordance with the Public Company Act B.E. 2535.

The Board of Directors emphasized on its duties and responsibilities as the directors of a listed company on the Stock Exchange of Thailand to control the business in accordance with the good corporate governance. The Board of Directors was responsible for the financial statements to be accurate, complete, transparent and appropriate to maintain the Company's assets, prevent from fraud and abnormalities, as well as in accordance with generally accepted accounting principles for the interests of shareholders and investors in acknowledging correct and reasonable information of the Company's financial status and performance.

The Board of Directors views that the consolidated financial statements of WHA Corporation Public Company Limited and its subsidiaries for the year 2019 jointly reviewed by the Audit Committee in collaboration with the Management and the auditor, PricewaterhouseCoopers ABAS Limited, were presented in a complete and reliable in compliance with the generally accepted accounting principles and all governing rules and regulations, with appropriate and consistent accounting policies and adequate information disclosure.



**Ms. Jareeporn Jarukornsakul**

Chairman of the Board of Directors



# **AUDITOR'S REPORT AND FINANCIAL STATEMENTS**

**WHA CORPORATION PUBLIC COMPANY LIMITED**

As at 31 December 2019



# Independent Auditor's Report

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To the Shareholders of WHA Corporation Public Company Limited

## My opinion

In my opinion, the consolidated financial statements of WHA Corporation Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial statements of the Company present fairly, in all material respects, the consolidated and separate financial position of the Group and of the Company as at 31 December 2019, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

## What I have audited

The consolidated financial statements and the separate financial statements comprise:

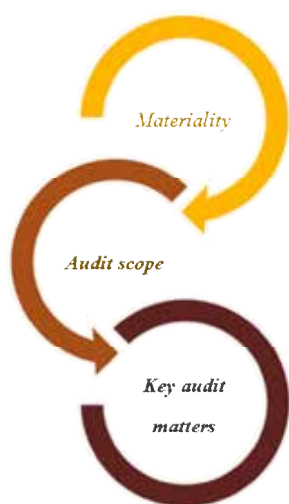
- the consolidated and separate statements of financial position as at 31 December 2019;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include a summary of significant accounting policies.

## Basis for opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Federation of Accounting Professions under the Royal Patronage of his Majesty the King's Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.



## My audit approach - overview



### Materiality

Overall group materiality: Baht 217 million which represents 5% of Group's profit before tax.

### Audit scope

I conduct with audit work of the consolidated financial statements by focusing on the significant components which account for 96% of the Group's profit before tax and 98% of the Group's total assets.

### Key audit matters

I identified goodwill impairment assessment as key audit matters:

### Materiality

The scope of my audit was influenced by my application of materiality. An audit is designed to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the consolidated financial statements.

Based on my professional judgement, I determined certain quantitative thresholds for materiality, including the overall group materiality for the consolidated financial statements as a whole as set out in the table below. These, together with qualitative considerations, helped me to determine the scope of my audit and the nature, timing and extent of my audit procedures and to evaluate the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

<b>Overall group materiality</b>	Baht 217 million
<b>How I determined it</b>	5% of Group's profit before tax
<b>Rationale for the materiality benchmark applied</b>	I chose profit before tax as the critical measure because, in my view, it is the measure against which the performance of the Group is most commonly assessed. The 5% benchmark is a generally accepted auditing practice and there were no significant unusual elements that merited adjustments to this benchmark.

I agreed with the audit committee that I would report to them misstatements identified during my audit above Baht 21.7 million, in my view, warranted reporting for qualitative reasons.

## How I tailored my group audit scope

I tailored the scope of my audit in order to perform sufficient work to enable me to provide an opinion on the Group's consolidated financial statements as a whole, taking into account the structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

## Key audit matters

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current period. I determine one key audit matter: Goodwill impairment assessment. The matter was addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on the matter.

Key audit matter	How my audit addressed the key audit matter
<b>Goodwill impairment assessment</b>  As presented in Note 17, Baht 17,575 million in goodwill came from acquiring real estate, power and water businesses.  As described in the accounting policy of goodwill in Note 2.15, the Group shall test goodwill for impairment annually according to TAS 36 Impairment of Assets.  I focussed on this matter because the recoverable amounts of cash-generating units, including goodwill, need management's judgement about future estimations. The fair value less costs of disposal was determined using a present value technique. The key assumptions used were the revenue growth rate, gross margin, and discount rate.  The management concluded that there is no impairment of goodwill because the recoverable amount is higher than the carrying amount.	<p>I inquired the Group's management in order to gain an understanding of the procedure for forecasting the future cash flow.</p> <p>I challenged the reasonableness of the procedures that underpinned the management's forecast of:</p> <ul style="list-style-type: none"><li>the revenue growth rate and the gross margin based on actual information from effective long-term contracts relating to the current and future periods, historical trend analysis and the future business plan</li><li>the discount rate, here determined using the weighted average cost of capital method comparing them to recent performance and industry data.</li></ul> <p>I also tested the mathematical accuracy of key figures estimated based on the above assumptions and used them to calculate the recoverable amount and compare it to the carrying amount.</p> <p>Based on these procedures, I found that the key assumptions were consistent with market and industry data.</p>

## Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate 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 consolidated and separate 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 consolidated and separate 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 consolidated and separate 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 the audit committee.

## Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRSs, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group and the Company's financial reporting process.

## Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated 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 TSAs 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 and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated 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 and the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' 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 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 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 and separate financial statements, including the disclosures, and whether the consolidated 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 the audit committee 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 the audit committee with a statement that I 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 the audit committee, I determine those matters that were of most significance in the audit of the consolidated 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.

PricewaterhouseCoopers ABAS Ltd.

**Chanchai Chaiprasit**

Certified Public Accountant (Thailand) No. 3760

Bangkok

28 February 2020

## STATEMENTS OF FINANCIAL POSITION

WHA Corporation Public Company Limited

As at 31 December 2019

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Assets</b>					
<b>Current assets</b>					
Cash and cash equivalents	7	2,680,759,857	3,172,220,811	867,539,934	286,177,141
Short-term investments	8	247,139,641	806,395,471	212,057,400	758,644,409
Trade and other receivables, net	9	920,844,308	408,665,593	237,335,130	57,051,441
Short-term loans to related parties	33	283,490,552	854,550,500	8,001,150,000	3,821,900,000
Real estate development costs	10	12,788,565,570	13,364,418,778	-	-
Other current assets		440,650,247	409,665,242	77,136,975	56,188,022
<b>Total current assets</b>		17,361,450,175	19,015,916,395	9,395,219,439	4,979,961,013
<b>Non-current assets</b>					
Available-for-sale investments	11	7,888,354,491	4,782,610,770	6,960,460,043	4,076,036,281
Investments in associates	12	15,475,998,867	14,316,618,243	-	-
Investments in subsidiaries		-	-	26,317,590,807	26,317,590,807
Interests in joint ventures	12	2,405,534,065	2,136,761,665	1,014,808,998	1,238,450,000
Other long-term investments, net	14	555,340,519	480,713,206	-	-
Investment properties, net	15	10,322,948,323	10,076,104,615	2,768,250,543	4,952,349,349
Property, plant and equipment, net	16	5,358,743,048	4,635,158,285	173,685,931	109,986,529
Intangible assets, net		4,118,659,963	4,118,659,963	-	-
Goodwill	17	17,575,045,652	17,575,045,652	-	-
Deferred income tax assets	18	116,590,082	141,716,914	-	24,779,232
Other non-current assets		1,085,165,671	1,065,642,114	59,834,934	91,076,568
<b>Total non-current assets</b>		64,902,380,681	59,329,031,427	37,294,631,256	36,810,268,766
<b>Total assets</b>		82,263,830,856	78,344,947,822	46,689,850,695	41,790,229,779

The accompanying notes are an integral part of this financial statements.

## STATEMENTS OF FINANCIAL POSITION

WHA Corporation Public Company Limited

As at 31 December 2019

		Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
	Notes	Baht	Baht	Baht	Baht
<b>Liabilities and equity</b>					
<b>Current liabilities</b>					
Short-term loans	19	4,410,819,143	1,615,980,331	2,645,819,143	1,315,980,331
Trade and other payables	20	3,361,704,447	2,776,959,451	1,200,598,412	500,556,584
Current portion of long-term loans	19	124,729,533	-	-	-
Current portion of debentures	21	9,534,908,490	4,505,013,365	5,536,530,961	3,854,033,372
Current portion of deferred revenue	22	90,721,022	135,382,829	36,971,363	10,809,594
Short-term loans from related parties	33	-	-	698,400,000	672,900,000
Income tax payable		129,897,848	96,390,869	-	-
Other current liabilities		184,340,732	115,473,406	87,701,205	25,696,449
<b>Total current liabilities</b>		<b>17,837,121,215</b>	<b>9,245,200,251</b>	<b>10,206,021,084</b>	<b>6,379,976,330</b>
<b>Non-current liabilities</b>					
Long-term loans	19	1,374,343,972	-	-	-
Debentures	21	23,779,475,392	30,259,458,270	14,229,603,659	14,066,066,534
Deferred revenue	22	2,447,391,667	4,436,159,316	583,567,270	2,518,892,476
Deferred income tax liabilities	18	3,083,725,993	2,622,177,318	475,722,925	-
Deposits from long-term lease agreement		216,068,275	191,813,404	17,282,134	26,080,862
Employee benefit obligations	23	150,638,378	140,353,043	44,322,897	41,612,279
Other non-current liabilities		274,484,783	435,693,370	923,721	97,498,348
<b>Total non-current liabilities</b>		<b>31,326,128,460</b>	<b>38,085,654,721</b>	<b>15,351,422,606</b>	<b>16,750,150,499</b>
<b>Total liabilities</b>		<b>49,163,249,675</b>	<b>47,330,854,972</b>	<b>25,557,443,690</b>	<b>23,130,126,829</b>

The accompanying notes are an integral part of this financial statements.

## STATEMENTS OF FINANCIAL POSITION

WHA Corporation Public Company Limited

As at 31 December 2019

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
Liabilities and equity (Continued)					
Equity					
Share capital	24				
Authorised share capital					
Ordinary shares, 15,677,730,186 shares of par Baht 0.10 each		1,567,773,019	1,567,773,019	1,567,773,019	1,567,773,019
Issued and paid-up share capital					
Ordinary shares, 14,709,098,452 shares of paid-up Baht 0.10 each		1,470,909,845		1,470,909,845	
Ordinary shares, 14,334,267,169 shares of paid-up Baht 0.10 each			1,433,426,717		1,433,426,717
Share premium on ordinary shares	24	13,933,982,782	12,438,534,575	13,933,982,782	12,438,534,575
Warrants	25	543,677,824	795,398,351	543,677,824	795,398,351
Capital surplus from share swap		172,861,100	172,861,100	202,175,962	202,175,962
Retained earnings					
Appropriated - legal reserve		156,777,302	156,777,302	156,777,302	156,777,302
Unappropriated		7,594,468,019	8,471,392,437	2,646,038,084	3,186,942,678
Other components of equity	27	5,604,954,365	3,757,338,297	2,178,845,206	446,847,365
Equity attributable to owners of					
the parent		29,477,631,237	27,225,728,779	21,132,407,005	18,660,102,950
Non-controlling interests		3,622,949,944	3,788,364,071	-	-
Total equity		33,100,581,181	31,014,092,850	21,132,407,005	18,660,102,950
Total liabilities and equity		82,263,830,856	78,344,947,822	46,689,850,695	41,790,229,779

The accompanying notes are an integral part of this financial statements.



# STATEMENTS OF COMPREHENSIVE INCOME

WHA Corporation Public Company Limited

For the year ended 31 December 2019

	Notes	Consolidated financial statements		Separate financial statements	
		2019 Baht	2018 Baht	2019 Baht	2018 Baht
Revenues from leases and services		1,658,270,133	1,709,348,787	249,041,643	427,099,819
Revenues from sales of real estate		7,156,371,696	5,130,456,377	2,950,175,774	829,934,016
Revenues from sales		1,648,363,009	1,569,946,252	-	-
Costs of leases and services		(802,293,832)	(891,609,721)	(119,496,714)	(266,109,587)
Costs of sales of real estate		(4,654,519,116)	(2,838,688,694)	(2,446,151,548)	(495,875,089)
Costs of sales		(943,992,125)	(901,482,313)	-	-
<b>Gross profit</b>		<b>4,062,199,765</b>	<b>3,777,970,688</b>	<b>633,569,155</b>	<b>495,049,159</b>
Other income		977,110,343	669,832,511	2,443,282,128	2,657,872,292
Selling expenses		(325,609,346)	(231,124,199)	-	-
Administrative expenses		(1,405,234,821)	(1,376,636,436)	(401,236,310)	(368,302,597)
Finance costs	28	(986,383,371)	(1,179,334,097)	(751,435,340)	(676,209,386)
Share of profit from associates and joint ventures		1,945,693,061	2,542,619,585	-	-
<b>Profit before income tax</b>		<b>4,267,775,631</b>	<b>4,203,328,052</b>	<b>1,924,179,633</b>	<b>2,108,409,468</b>
Income tax	30	(305,062,398)	(325,240,934)	(67,502,696)	37,379,204
<b>Profit for the year</b>		<b>3,962,713,233</b>	<b>3,878,087,118</b>	<b>1,856,676,937</b>	<b>2,145,788,672</b>
<b>Other comprehensive income</b>					
Items that will not be reclassified subsequently to profit or loss					
Remeasurements of employee benefit obligations	23	38,579,881	-	12,922,189	-
Income tax relating to items that will not be reclassified subsequently to profit or loss	18	(7,715,976)	-	(2,584,438)	-
Total items that will not be reclassified subsequently to profit or loss		30,863,905	-	10,337,751	-
Items that will be reclassified subsequently to profit or loss					
Change in value of investments	8, 11	2,376,142,864	448,844,816	2,152,075,113	543,238,557
Currency translation differences		(79,398,255)	(21,896,300)	-	-
Share of other comprehensive income of associates and joint ventures accounted for using the equity method		(12,418,877)	(1,177,960)	-	-
Income tax relating to items that will be reclassified subsequently to profit or loss		(475,228,573)	(89,768,963)	(430,415,023)	(108,647,711)
Total items that will be reclassified subsequently to profit or loss		1,809,097,159	336,001,593	1,721,660,090	434,590,846
<b>Other comprehensive income for the year, net of tax</b>		<b>1,839,961,064</b>	<b>336,001,593</b>	<b>1,731,997,841</b>	<b>434,590,846</b>
<b>Total comprehensive income for the year</b>		<b>5,802,674,297</b>	<b>4,214,088,711</b>	<b>3,588,674,778</b>	<b>2,580,379,518</b>

The accompanying notes are an integral part of this financial statements.

## STATEMENTS OF COMPREHENSIVE INCOME

WHA Corporation Public Company Limited

For the year ended 31 December 2019

	Note	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Profit attributable to:</b>					
Owners of the parent		3,229,253,657	2,906,809,574	1,856,676,937	2,145,788,672
Non-controlling interests		733,459,576	971,277,544	-	-
		<u>3,962,713,233</u>	<u>3,878,087,118</u>	<u>1,856,676,937</u>	<u>2,145,788,672</u>
<b>Total comprehensive income</b>					
<b>attributable to:</b>					
Owners of the parent		5,076,869,725	3,243,291,459	3,588,674,778	2,580,379,518
Non-controlling interests		725,804,572	970,797,252	-	-
		<u>5,802,674,297</u>	<u>4,214,088,711</u>	<u>3,588,674,778</u>	<u>2,580,379,518</u>
<b>Earnings per share</b>	31				
Basic earnings per share		<u>0.2220</u>	<u>0.2029</u>	<u>0.1276</u>	<u>0.1497</u>
Diluted earnings per share		<u>0.2192</u>	<u>0.2001</u>	<u>0.1260</u>	<u>0.1477</u>

The accompanying notes are an integral part of this financial statements.

# STATEMENTS OF CHANGES IN EQUITY

WHA Corporation Public Company Limited  
For the year ended 31 December 2019

Consolidated financial statements														
Attributable to owners of the parent														
Notes	Other components of equity													
	Other comprehensive income													
	Share premium on ordinary shares	Capital surplus from share swap	Retained earnings		Re-measurements of employee benefit obligations	Currency translation	Investments	Share of other comprehensive income	Change in parent's ownership interests in subsidiaries	Total owners of the parent	Non-controlling interests	Total equity		
	Issued and paid-up share capital	Share premium on ordinary shares	Warrants	Capital surplus from share swap	Appropriated - legal reserve	Unappropriated	Investments	Currency translation	Re-measurements of employee benefit obligations	Share of other comprehensive income	Change in parent's ownership interests in subsidiaries	Total owners of the parent	Non-controlling interests	Total equity
	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht
	1,432,243,032	12,391,309,606	803,347,472	172,861,100	156,433,000	6,864,317,324	(67,879,283)	(69,204,986)	6,298,087	(16,755,384)	3,570,762,562	25,243,732,530	3,289,674,723	28,533,407,253
24, 25	1,183,685	47,224,969	(7,949,121)	-	-	-	-	-	-	-	-	40,459,533	-	40,459,533
26	-	-	-	-	-	(344,302)	-	-	-	-	-	-	45	45
26	-	-	-	-	-	(1,299,390,159)	-	-	-	-	-	(1,299,390,159)	-	(1,299,390,159)
Change in parent's ownership interests in subsidiaries	-	-	-	-	-	-	-	-	-	(2,364,584)	(2,364,584)	(2,364,584)	2,364,584	-
Dividend paid from subsidiaries to non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	(474,472,533)	(474,472,533)
Total comprehensive income (expense) for the year	-	-	-	-	-	2,906,809,574	359,075,853	(21,769,396)	-	(824,572)	-	3,243,281,459	970,797,252	4,214,088,711
	1,433,426,717	12,438,534,575	795,398,351	172,861,100	156,777,302	8,471,392,437	291,196,570	(90,974,382)	6,298,087	(17,579,956)	3,568,397,978	27,225,728,779	3,788,364,071	31,014,092,850
2	-	-	-	-	-	(1,708,596,544)	-	-	-	-	-	(1,708,596,544)	(338,107,168)	(2,046,703,712)
	1,433,426,717	12,438,534,575	795,398,351	172,861,100	156,777,302	6,762,795,893	291,196,570	(90,974,382)	6,298,087	(17,579,956)	3,568,397,978	25,517,132,235	3,450,266,903	28,967,389,138
24, 25	37,483,128	1,495,448,207	(251,720,827)	-	-	-	-	-	-	-	-	1,281,210,808	-	1,281,210,808
26	-	-	-	-	-	(2,397,581,531)	-	-	-	-	-	(2,397,581,531)	-	(2,397,581,531)
Subsidiary's capital increase	-	-	-	-	-	-	-	-	-	-	-	-	15	15
Subsidiary's capital decrease	-	-	-	-	-	-	-	-	-	-	-	-	(80,000,000)	(80,000,000)
Dividend paid from subsidiaries to non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	(473,111,546)	(473,111,546)
Total comprehensive income (expense) for the year	-	-	-	-	-	3,229,253,657	1,898,307,872	(71,820,299)	29,695,101	(6,566,606)	-	5,076,869,725	725,804,572	5,802,674,297
	1,470,909,845	13,933,982,782	543,677,824	172,861,100	156,777,302	7,594,468,019	2,189,504,442	(162,794,681)	35,993,188	(26,146,562)	3,568,397,978	29,477,631,237	3,622,949,944	33,100,581,181
Closing balance 2019														

หมายเหตุประกอบการเงินเป็นส่วนหนึ่งของงบการเงินนี้

## STATEMENTS OF CHANGES IN EQUITY

WHA Corporation Public Company Limited

For the year ended 31 December 2019

		Separate financial statements									
		Issued and paid-up share capital				Share premium on ordinary shares		Warrants		Capital surplus from share swap	
		Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht
Notes											
<b>Opening balance 2018</b>		1,432,243,032	12,391,309,606	803,347,472	202,175,962	156,433,000	2,340,888,467	18,838,552	(6,582,033)	17,338,654,058	
Capital increase from warrant conversion	24, 25	1,183,685	47,224,969	(7,949,121)	-	-	-	-	-	40,459,533	
Legal reserve		-	-	-	-	344,302	(344,302)	-	-	-	
Dividend paid	26	-	-	-	-	-	(1,299,390,159)	-	-	(1,299,390,159)	
Total comprehensive income for the year		-	-	-	-	-	2,145,788,672	434,590,846	-	2,580,379,518	
<b>Closing balance 2018</b>		1,433,426,717	12,438,534,575	795,398,351	202,175,962	156,777,302	3,186,942,678	453,429,398	(6,582,033)	18,660,102,950	
Capital increase from warrant conversion	24, 25	37,483,128	1,495,448,207	(251,720,527)	-	-	-	-	-	1,281,210,808	
Dividend paid	26	-	-	-	-	-	(2,397,581,531)	-	-	(2,397,581,531)	
Total comprehensive income for the year		-	-	-	-	-	1,856,676,937	1,721,660,090	10,337,751	3,588,674,778	
<b>Closing balance 2019</b>		1,470,909,845	13,933,982,782	543,677,824	202,175,962	156,777,302	2,646,038,084	2,175,089,488	3,755,718	21,132,407,005	

หมายเหตุประกอบงบการเงินเป็นส่วนหนึ่งของงบการเงิน

# STATEMENTS OF CASH FLOWS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Cash flows from operating activities</b>					
Profit before income tax		4,267,775,631	4,203,328,052	1,924,179,633	2,108,409,468
Adjustments for :					
(Reversal of) allowance for doubtful debt		3,891,611	(9,569,495)	-	-
Depreciation	15, 16	444,321,454	484,254,855	44,462,434	130,070,987
Amortisation		15,386,568	12,729,056	1,642,198	4,568,139
Write-off investment in subsidiary		-	-	-	331,132
Gain from short-term investments disposal		(13,612,091)	(13,000,628)	(12,454,000)	(11,987,553)
Gain from available-for-sale investments disposal		(7,625)	-	-	-
Gain from adjust available-for-sale investments value from merge	11	-	(142,980)	-	-
Gain from investment properties disposal		(787,226,223)	(1,227,419,668)	(504,024,226)	(334,058,927)
Gain from property, plant and equipment disposal		(3,627,948)	(6,711,062)	-	(2,799,065)
Amortisation of other long-term investments		13,872,688	13,872,688	-	-
Employee benefit obligations	23	49,097,425	22,708,854	15,632,807	7,301,467
Interest income		(76,206,653)	(82,556,663)	(230,693,648)	(92,538,382)
Dividend income		(402,306,099)	(288,971,841)	(1,952,002,636)	(2,484,660,724)
Finance costs	28	986,383,371	1,179,334,097	751,435,340	676,209,386
Share of profit from associates and joint ventures		(1,945,693,061)	(2,542,619,585)	-	-
Changes in operating assets and liabilities :					
Trade and other receivables		17,077,177	(31,244,338)	1,321,021	(9,535,383)
Real estate development costs		202,183,660	572,394,181	-	-
Other current assets		(72,604,222)	23,474,115	(1,962,160)	4,232,035
Other non-current assets		86,747,608	(565,462,639)	(1,187,021)	(24,818,990)
Trade and other payables		(76,378,889)	(295,855,132)	44,195,379	(82,991,903)
Deferred revenue		(142,958,976)	(265,265,268)	(18,692,957)	(147,283,552)
Other current liabilities		68,867,323	(45,668,800)	62,004,756	(29,743,010)
Deposits from long-term lease agreement		25,020,487	5,916,976	(8,798,728)	(12,830,075)
Paid employee benefit		(232,209)	-	-	-
Other non-current liabilities		(161,208,587)	(97,767,750)	(96,574,627)	(13,264,409)
Cash generated from operation		2,498,562,420	1,045,757,025	18,483,565	(315,389,359)
Interest received		71,271,831	78,818,466	49,088,938	61,074,906
Interest paid		(1,372,044,979)	(1,536,117,295)	(709,862,206)	(613,782,505)
Dividend received from operating activities		1,084,007,951	704,780,320	238,347,532	209,004,913
Income tax refund received		66,742,322	500,210,558	55,125,610	89,162,794
Income tax paid		(301,370,625)	(370,785,869)	(36,417,403)	(30,350,611)
Net cash receipts (payments) from operating activities		2,047,168,920	422,663,205	(385,233,964)	(600,279,862)

The accompanying notes are an integral part of this financial statements.

# STATEMENTS OF CASH FLOWS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

	Notes	Consolidated		Separate	
		financial statements		financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Cash flows from investing activities</b>					
Payments of short-term investments acquisition	8	(6,540,010,232)	(6,000,647,175)	(5,890,000,000)	(5,305,000,000)
Proceeds from short-term investments disposal		7,112,809,529	5,776,273,296	6,448,607,809	5,105,369,639
Payments of short-term loans to related parties		(230,490,552)	(176,000,000)	(4,788,500,000)	(13,049,900,000)
Proceeds from short-term loans to related parties		801,550,500	353,214,500	609,250,000	12,310,000,000
Payments of available-for-sale investments acquisition		(767,166,036)	(439,676,100)	(767,166,036)	(439,676,100)
Proceeds from capital reduction of available-for-sale investments	11	37,632,528	105,938,370	35,250,587	37,757,950
Proceeds from available-for-sale investments disposal		8,900	-	-	-
Payments of investments in associates		(2,525,362,094)	(432,422,900)	-	-
Payments of investments in subsidiaries		-	-	-	(2,815,000,000)
Payments of interests in joint ventures		(324,949,991)	(418,077,495)	(6,374,998)	-
Proceeds from capital reduction of interests in joint venture		230,016,000	-	230,016,000	-
Payments of other long-term investments acquisition	14	(88,500,000)	(211,500,000)	-	-
Payments of investment properties acquisition		(2,706,381,007)	(1,431,653,622)	(246,953,928)	(119,652,731)
Interest paid to capitalise for investment properties	15	(35,476,269)	(2,302,046)	(3,559,412)	(558,355)
Proceeds from investment properties disposal		1,707,084,490	3,455,340,691	1,059,533,149	920,225,007
Payments of land deposit		(126,841,350)	(25,464,000)	-	-
Payments of property, plant and equipment acquisition		(1,040,613,192)	(514,397,714)	(53,395,554)	(23,795,940)
Interest paid to capitalise for property, plant and equipment		(965,065)	(151,387)	(965,064)	(151,387)
Proceeds from property, plant and equipment disposal		7,655,686	6,902,345	-	2,799,065
Payments of sold properties' income tax		(42,261,000)	(123,406,459)	(37,695,000)	(24,775,000)
Dividend received from investing activities		130,814,551	432,466,585	1,713,655,104	2,275,655,811
Net cash receipts (payments) from investing activities		(4,401,444,604)	354,436,889	(1,698,297,343)	(1,126,702,041)
<b>Cash flows from financing activities</b>					
Proceeds from short-term loans	19	12,022,343,179	5,428,293,033	8,331,343,179	2,628,293,033
Repayments of short-term loans	19	(9,256,000,000)	(5,620,000,000)	(7,030,000,000)	(2,720,000,000)
Proceeds from short-term loans from related parties	19	-	-	25,500,000	15,400,000
Repayments of short-term loans from related parties	19	-	-	-	(644,500,000)
Proceeds from long-term loans	19	1,500,000,000	-	-	-
Payments of long-term loans fee	19	(1,000,000)	-	-	-
Repayments of long-term loans	19	-	(3,999,000,000)	-	-
Proceeds from debentures	21	5,700,000,000	11,800,000,000	5,700,000,000	6,800,000,000
Payments of issuance debentures	21	(7,039,480)	(17,361,147)	(7,039,480)	(8,391,658)
Repayments of debentures	21	(6,993,000,000)	(5,560,000,000)	(3,855,000,000)	(3,060,000,000)
Proceeds from warrant conversion		1,897,671,932	222,580,047	1,897,671,932	222,580,047
Dividend paid	26	(2,867,517,810)	(1,776,976,985)	(2,397,581,531)	(1,299,390,159)
Proceeds from non-controlling interests		15	45	-	-
Payments to non-controlling interests		(80,000,000)	-	-	-
Net cash receipts from financing activities		1,915,457,836	477,534,993	2,664,894,100	1,933,991,263

The accompanying notes are an integral part of this financial statements.

# STATEMENTS OF CASH FLOWS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

	Consolidated		Separate	
	financial statements		financial statements	
	2019	2018	2019	2018
	Baht	Baht	Baht	Baht
<b>Net increase (decrease) in cash and cash equivalents</b>	(438,817,848)	1,254,635,087	581,362,793	207,009,360
Cash and cash equivalents at the beginning of the year	3,172,220,811	1,919,710,972	286,177,141	79,167,781
Exchange effect on cash and cash equivalents	(52,643,106)	(2,125,248)	-	-
<b>Cash and cash equivalents at the end of the year</b>	<b>2,680,759,857</b>	<b>3,172,220,811</b>	<b>867,539,934</b>	<b>286,177,141</b>
<b>Non-cash transactions</b>				
Unpaid investments in associates	242,915,209	-	-	-
Unpaid liabilities from investment properties acquisition	434,547,025	606,400,067	92,805,240	76,334,538
Unpaid liabilities from property, plant and equipment acquisition	50,299,854	47,342,453	17,911,319	-
Dividend payable	14,259,004	11,083,736	-	-

The accompanying notes are an integral part of this financial statements.



# NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

## 1 General information

WHA Corporation Public Company Limited (“the Company”) is a public limited company which is listed on the Stock Exchange of Thailand and is incorporated and resident in Thailand. The address of the Company’s registered office is as follows:

1121 Moo.3 Theparak Road, Theparak, A.Mueang Samut Prakarn, Samut Prakarn 10270.

The principal business operations of the Company and subsidiaries (together “the Group”) are engaging in providing rent and sale of lands, buildings, factories, warehouses, and other properties, developing and managing properties in industrial estates and industrial zones, providing public utilities, facilities and other related services, providing digital services, data center, Internet connection and other IT services.

These consolidated and separate financial statements were authorised for issue by the Board of Directors on 28 February 2020.

## 2 Accounting policies

The principal accounting policies applied in the preparation of these consolidated and separate financial statements are set out below:

### 2.1 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (“TFRS”) and the financial reporting requirements issued under the Securities and Exchange Act.

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the accounting policies below.

The preparation of financial statements in conformity with TFRS requires management to use certain critical accounting estimates and to exercise its judgement in applying the Group’s accounting policies. The areas involving a higher degree of judgement or complexity, or areas that are more likely to be materially adjusted due to changes in estimates and assumptions are disclosed in Note 4.

An English version of the consolidated and separate financial statements have been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### 2.2 New and amended financial reporting standards that are relevant and have significant impacts to the Group

#### *Thai Financial Reporting Standard no.15 (TFRS 15), Revenue from contracts with customers*

The standard provides principle and approach of revenue recognition under five-step process. The underlying principle is that the Group will recognise revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. It replaces the principles of transferring the significant risks and rewards of ownership of the goods or services to the buyer in accordance with TAS 11, Construction contracts, TAS 18, Revenue and related interpretations.

The Group has adopted the new Thai Financial Reporting Standards (TFRS) no. 15, Revenue from contracts with customers from 1 January 2019 under the modified retrospective approach and the comparative figures have not been restated. The Group did apply practical expedient relates to completed contracts and contract modifications allowed by TFRS 15.

The adoption of TFRS 15 mainly affects the Group's accounting treatment on revenue recognition of availability payments of an associate. Revenue will be recognised when rendering services to customers according to the agreements.

The following tables show the adjustments made to the amounts recognised in each financial statement line item upon adoption of TFRS 15.

<b>Consolidated financial statements</b>			
	<b>As at 31 December 2018 Previously reported</b>	<b>Adjustments</b>	<b>As at 1 January 2019 Restated</b>
Investment in associates	14,316,618,243	(2,046,703,712)	12,269,914,531
Retained earnings	8,471,392,437	(1,708,596,544)	6,762,795,893
Non-controlling interests	3,788,364,071	(338,107,168)	3,450,256,903

The following tables show the amounts by each financial information line item in the current year from the adoption of the new revenue standard compared to the previous revenue standards.

<b>Consolidated financial statements</b>			
	<b>Balance as reported</b>	<b>Impacts from TFRS 15</b>	<b>Balance under the previous revenue standards</b>
<b>Statements of financial position as at 31 December 2019</b>			
Investment in associates	15,475,998,867	369,324,088	15,845,322,955
Retained earnings	7,594,468,019	308,313,244	7,902,781,263
Non-controlling interests	3,622,949,944	61,010,844	3,683,960,788
<b>Statements of comprehensive income for the year ended 31 December 2019</b>			
Share of profit from associates and joint ventures	1,945,693,061	369,324,088	2,315,017,149

The Group has not early adopted the new and amended Thai Financial Reporting Standards which are effective on 1 January 2020. The Group's management is currently assessing the impact of adoption of these standards.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### 2.3 Principles of consolidated and equity accounting

#### *Subsidiaries*

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method.

#### *Associates*

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method.

#### *Joint arrangements*

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method.

In the separate financial statements, investments in joint ventures are accounted for using cost method.

#### *Equity method*

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

#### *Intercompany transactions on consolidation*

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

### 2.4 Foreign currency translation

#### *Functional and presentation currency*

The financial statements are presented in Thai Baht, which is the Company's and the Group's functional and presentation currency.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### *Transactions and balances*

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or the date of revaluation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

Any exchange component of gains and losses on a non-monetary item that recognised in profit or loss, or other comprehensive income is recognised following the recognition of a gain or loss on the non-monetary item.

### *Group companies*

The operational results and financial position of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a different functional currency from the Group's presentation currency are translated into the presentation currency as follows.

- Assets and liabilities are translated at the closing rate at the date of respective statement of financial position;
- Income and expenses for statement of comprehensive income are translated at average exchange rates; and
- All resulting exchange differences are recognised in other comprehensive income.

## **2.5 Cash and cash equivalents**

In the statements of cash flows, cash and cash equivalents includes cash on hand, deposits held at call, short-term highly liquid investments with maturities of three months or less from acquisition date and bank overdrafts.

In the statements of financial position, bank overdrafts are shown in current liabilities.

## **2.6 Short-term investments**

Short-term investments comprise fixed deposits that have maturity between 3 and 12 months from the date of acquisition which are carried at amortised cost and investments in debt mutual fund which are initially recognised at cost, which are equal to the fair value of consideration paid plus transaction cost and are subsequently measured at fair value. The fair value of investment is based on Net Asset Value (NAV) announced by the Asset Management Company. The unrealised gains and losses of investments are recognised in other comprehensive income.

## **2.7 Trade accounts receivable**

Trade receivables are amounts due from customers for goods sold or service performed in the ordinary course of business.

Trade receivables are recognised initially at the amount of consideration that is unconditionally unless they contain significant financing components, when they are recognised at its present value. The Group presented trade receivables at cost less allowance for doubtful accounts.

## **2.8 Real estate development costs**

Real estate development costs are stated at the lower of cost and net realisable value. Real estate development costs comprise land costs, development costs, pre-fabricated factory costs, condominium construction costs, and finance costs on borrowings for projects development, pre-fabricated factory, condominium construction, land deposits and advances for construction costs. These costs are transferred to cost of sales when revenue from sales is recognised.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### 2.9 Non-current assets held-for-sale

Non-current assets (or disposal groups) are classified as assets held-for-sale when their carrying amount will be recovered principally through a sale transaction and a sale is considered highly probable. They are measured at the lower of the carrying amount and fair value less costs to sell.

In addition, the Group will also classify other assets and liabilities related to assets held for sale which comprise leasehold rights, deferred income from operating lease agreement and other non-current assets as non-current assets held for sale, and long-term loans, interest payable, deposits from long-term lease agreement and deferred expenses from operating lease agreement as liabilities directly associated with assets classified as held for sale since they will be disposed when the assets are sold.

### 2.10 Investments

Investments other than investments in subsidiaries, associates and joint ventures are initially recognised at fair value of consideration paid plus direct transaction cost.

#### *Available-for-sale investments*

Available-for-sale investments are subsequently measured at fair value. The unrealised gains and losses of available for sale investments are recognised in other comprehensive income and are subsequently reclassified to profit or loss when the investment is disposed.

#### *General investments*

General investments are carried at cost less impairment.

#### *Disposal of investments*

On a disposal of an investment, the difference between the net disposal proceeds and the carrying amount (including cumulative changes in fair value recognised in equity) is recognised to the profit or loss. When the Group disposes an investment partially, the carrying amount of the disposed part is determined by the weighted average method.

### 2.11 Investment properties

Group's investment properties are properties held for long-term rental yields or for capital appreciation and are not occupied by the Group, also include properties that are being constructed or developed for future use as investment properties.

Investment property is measured initially at cost, including directly attributable costs and borrowing costs. Subsequently, they are carried at cost less accumulated depreciation and impairment.

Subsequent costs are included in the asset's carrying amount, only when it is probable that future economic benefits associated with the item will flow to the Group. capitalised where there is future economic benefits. The carrying amount of the replaced part is derecognised.

Land is not depreciated. Depreciation on other investment properties is calculated using the straight-line method to allocate their costs to their residual values over their estimated useful lives, as follows:

Buildings and warehouses	30 and 40 years
Building improvements	20, 25 and 40 years
Utilities systems	10 and 20 years

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### 2.12 Property, plant and equipment

All other property, plant and equipment are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount, only when it is probable that future economic benefits associated with the item will flow to the Group, capitalised where there is future economic benefits. The carrying amount of the replaced part is derecognised.

All other repairs and maintenance are charged to profit or loss when incurred.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

Building improvements	20 and 25 years
Utilities systems	10 and 20 years
Office equipment	5 years
Warehouse equipment	5 years
Vehicles	5 years
Assets for rent	5 and 15 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Gains or losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised in profit or loss.

### 2.13 Leasehold rights

Expenditure on acquired leasehold right is capitalised and amortised using the straight line method over the lease period, generally over 10 - 30 years.

### 2.14 Intangible assets

Exclusive right, which has an indefinite useful life will be no reassessment on the asset value. Amortisation is reassessment on an annual basis, adjusted for impairment, if any.

### 2.15 Goodwill

Goodwill is tested for impairment annually, or more frequently if events or changes in circumstances indicate that it might be impaired, and is carried at cost less accumulated impairment losses.

For the purpose of impairment testing, goodwill is allocated to cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose. The units or groups of units are identified at the lowest level at which goodwill is monitored for internal management purposes.

### 2.16 Impairment of assets

Assets are reviewed for impairment whenever there is an indication of impairment. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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### 2.17 Lease

#### *Leases - where the Group is the lessee*

Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

At the inception of finance lease, the lower of the fair value of the leased property and the present value of the minimum lease payments is capitalised. Each lease payment is allocated between the liability and finance charges to achieve a constant rate on the liabilities balance outstanding. The corresponding rental obligations is presented net of finance charges. Finance cost is charged to profit or loss over the lease period.

#### *Leases - where the Group is the lessor*

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease which reflects a constant periodic rate of return. Initial direct costs are included in initial measurement of the finance lease receivable and reduce the amount of income recognised over the lease term.

Rental income under operating leases (net of any incentives given to lessees) is recognised on a straight-line basis over the lease term.

### 2.18 Borrowings

Borrowings are recognised initially at the fair value, net of directly attributable transaction costs incurred. Borrowings are subsequently stated at amortised cost.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it will be drawn down. The fee is deferred until the drawn down occurs and included in effective interest calculation. However, if it is probable that facility will not be drawn down, that portion of the fee paid is recognised as a prepayment and amortised over the period of related facility.

Borrowings are removed from the statement of financial position when the obligation specified in the contract is discharged, cancelled, or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as finance costs.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

### 2.19 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets less investment income earned from those specific borrowings. The capitalisation of borrowing costs is ceased when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

Other borrowing costs are expensed in the period in which they are incurred.



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### 2.20 Deferred revenue

Cash received from sales of real estate to Real Estate Investment Trust but was not recognised since the Group entered into agreements to guarantee the minimum rental and service income from sale of real estate with no lessees for a period of 1 to 25 years and guarantee the minimum EBITDA of the relevant projects for a period of 6 to 9 years. Revenue will be recognised based on the present value of the discounted cash flows which pay to the trust.

Cash received from land leasehold right to Real Estate Investment Trust for a lease term of 30 years and renew 30 years, totally 60 years. Revenue will be recognised based on the present value of the monthly revenue installments.

### 2.21 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

#### *Current tax*

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

#### *Deferred income tax*

Deferred income tax is recognised on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss is not recognized
- investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax is measured using tax rates of the period in which temporary difference is expected to be reversed, based on tax rates and laws that have been enacted or substantially enacted by the end of the reporting period.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

### 2.22 Employee benefits

#### *Short-term employee benefits*

Liabilities for short-term employee benefits are expected to be settled wholly within 12 months after the end of the period are recognised in respect of employees' service up to the end of the reporting period. They are measured at the amount expected to be paid.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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### *Defined contribution plan*

The Group pays contributions to a separate fund. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expense when they are due.

### *Defined benefit plans*

Amount of retirement benefits is defined by the agreed benefits the employees will receive after the completion of employment. It usually depends on factors such as age, years of service and an employee's latest compensation at retirement.

The defined benefit obligation is calculated by an independent actuary using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market yield of government bonds that matches the terms and currency of the expected cash outflows.

Remeasurement gains and losses are recognised directly to other comprehensive income in the period in which they arise. They are presented as a separate item in statements of changes in equity.

Past-service costs are recognised immediately in profit or loss.

## **2.23 Provisions**

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation. The increase in the provision due to passage of time is recognised as interest expense.

## **2.24 Share capital**

Ordinary shares are classified as equity.

Incremental costs directly attributable to the issue of new shares (net of tax) are shown as a deduction in equity.

## **2.25 Revenue recognition**

Revenue include all revenues from ordinary business activities. All ancillary income in connection with the delivery of goods and rendering of services in the course of the Group's ordinary activities is also presented as revenue.

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectibility of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfillment of the obligation to the customer.

### *Leases and services*

The Group recognized revenues from leases and services contracts with a continuous service provision as revenue on a straight line basis over the contract term, regardless of the payment pattern.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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### *Sales of real estate*

The Group recognises revenues from sales of real estate when control over the property has been transferred to the customer. The properties have generally no alternative use for the Group due to contractual restrictions. However, an enforceable right to payment does not arise until legal title has passed to the customer. Therefore, revenue is recognised at a point in time when the legal title has passed to the customer.

The revenue is measured at the transaction price agreed under the contract. In most cases, the consideration is due when legal title has been transferred. While deferred payment terms may be agreed in rare circumstances, the deferral never exceeds 12 months. The transaction price is therefore not adjusted for the effects of a significant financing component.

### *Sales of goods*

The Group recognises revenues from sales of goods when the Group sells a product to the customer.

### *Contract assets and contract liabilities*

A contract asset is recognised where the Group recorded revenue for fulfillment of a contractual performance obligation before the customer paid consideration or before the requirements for billing.

A contract liability is recognised when the customer paid consideration or a receivable from the customer that is due before the Group fulfilled a contractual performance obligation.

For each customer contract, contract liabilities is set off against contract assets.

### *Payments to customers*

Payments to customers or on behalf of customers to other parties, including credited or subsequent discounts, are recognised as a reduction in revenue unless the payment constitutes consideration of a distinct goods or service from the customer.

### *Financing components*

The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group does not adjust any of the transaction prices for the time value of money.

## **2.26 Dividend distribution**

Dividend distributed to the Company's shareholders is recognised as a liability when interim dividends are approved by the Board of Directors, and when the annual dividends are approved by the shareholders.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

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### 3 Financial risk management

#### 3.1 Financial risk factors

The Group exposes to a variety of financial risks: market risk (currency risk, fair value risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The board of directors provides written principles for overall risk management which is carried out by a central treasury department (the Group treasury), including identification, evaluation and hedge of financial risks in close co-operation with operating units.

##### *Foreign exchange risk*

The Group has no significant exposure to foreign currency risk relates due to its accounts receivable and accounts payable are mainly made in Thai Baht. The Company does not use any derivative financial instruments to hedge foreign currency exposure.

##### *Interest rate risk*

The Group has interest rate risk from borrowings and debentures at fixed and floating interest rates. The Group has no significant interest-bearing assets.

All interest rate derivative transactions are subject to approval by the finance director before execution. The Group uses interest rate swaps as cash flow hedges of future variable borrowings' interest payments. The Group agrees with the other parties to exchange, quarterly, the difference between fixed contract rates and floating rate interest amounts calculated by reference to the agreed notional principal amounts.

##### *Credit risk*

The Group has no significant concentrations of credit risk. The Group has policies in place to ensure that contracts are made with customers who have an appropriate credit history, limiting customers' credit limit as well as obtaining appropriate guarantees from customers. Derivative counterparties and deposits are limited to high credit quality financial institutions. The Group has policies that limit the amount of credit exposure to any one financial institution.

##### *Liquidity risk*

The Group manages sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities, and the ability to close out market positions.

#### 3.2 Accounting for derivative financial instruments and hedging activities

The Group is a party to derivative financial instruments, which comprise interest rate swap agreements. Such instruments are not recognised in the financial statements on inception.

Any differential to be paid or received on an interest rate swap agreement is recognised as a component of interest revenue or expense when due. Gains and losses on early termination of interest rate swaps or on repayment of the borrowing are recognised in profit or loss.

The Group and Company's derivative financial instruments are disclosed in note 32.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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### 3.3 Fair value

The fair values of the financial assets and liabilities are disclosed in relevant notes.

Fair values are categorised into hierarchy based on inputs used as follows:

- Level 1: The fair value of financial instruments is based on the current bid price / closing price by active markets such as the Stock Exchange of Thailand / the Thai Bond Dealing Centre.
- Level 2: The fair value of financial instruments is determined using significant observable inputs and, as little as possible, entity-specific estimates.
- Level 3: The fair value of financial instruments is not based on observable market data.

## 4 Critical estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

### *Goodwill impairment*

The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. The calculations use cash flow projections based on financial budget approved by management covering a five-year period.

Cash flows beyond the five-year period are extrapolated using the estimated growth rates stated in note 17. These growth rates are consistent with forecasts included in industry reports specific to the industry in which each CGU operates.

### *Defined retirement benefit obligations*

The present value of the retirement benefit obligations depends on a number of assumptions. Key assumptions used and impacts from possible changes in key assumptions are disclosed in note 23.

## 5 Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so that they can continue to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amounts of dividends paid to shareholders, return capital to shareholders, issue new shares, or sell assets to reduce debt.

## 6 Segment information

The Group's strategic steering committee, consisting of Board of Directors, examines the Group's performance both from a product and geographic perspective and has identified 7 reportable segments.

The steering committee primarily uses a measure of segments' revenue and gross margin to assess the performance of the operating segments. However, some assets and liabilities are not allocated to segment because the Group manages centrally.

Revenues from 2 customers (2018: 2 customers) of the domestic real estate business segment are amounting to Baht 2,102.61 million and Baht 1,617.45 million, respectively (2018: Baht 1,688.62 million and Baht 1,175.30 million, respectively).

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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Incomes and profits information by business segment are as follows:

	2019							
	Domestic				Overseas			
	Real estate business Baht	Power business Baht	Water business Baht	Other business Baht	Real estate business Baht	Water business Baht	Other business Baht	Total Baht
Revenues from leases and services	1,089,545,534	7,137,207	203,055,182	317,261,300	41,270,910	-	-	1,658,270,133
Revenues from sales of real estate	7,156,371,696	-	-	-	-	-	-	7,156,371,696
Revenues from sales	1,348,738	-	1,639,534,981	7,423,808	-	55,482	-	1,648,363,009
Total revenues from sales and services	8,247,265,968	7,137,207	1,842,590,163	324,685,108	41,270,910	55,482	-	10,463,004,838
Profit (loss) from operations	1,565,906,999	1,475,142	665,997,692	124,508,975	9,946,890	(1,362,545)	(35,117,555)	2,331,355,598
Other income	829,293,352	142,511,722	3,105,795	1,523,394	523,614	731	151,735	977,110,343
Finance costs	(666,977,319)	(268,676,968)	(40,316,911)	(9,905,708)	-	(506,465)	-	(986,383,371)
Share of profit (loss) from associates and joint ventures	182,856,145	1,785,087,281	-	(8,779,686)	-	(13,470,679)	-	1,945,693,061
Income tax	(218,192,528)	(9,243,363)	(32,593,773)	(41,280,005)	(3,752,729)	-	-	(305,062,398)
Profit (loss) for the year	1,692,886,649	1,651,153,814	596,192,803	66,066,970	6,717,775	(15,338,958)	(34,965,820)	3,962,713,233
Profit attributable to non-controlling interests								(733,459,576)
Profit attributable to owners of the parent								3,229,253,657
Segment depreciation and amortisation	238,551,504	6,147,747	145,977,274	56,972,143	11,865,723	-	193,631	459,708,022

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited  
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	2018						
	Domestic			Overseas			
	Real estate business Baht	Power business Baht	Water business Baht	Other business Baht	Real estate business Baht	Water business Baht	Other business Baht
Revenues from leases and services	1,175,108,187	324,000	177,829,693	318,795,116	37,291,791	-	-
Revenues from sales of real estate	5,130,456,377	-	-	-	-	-	-
Revenues from sales	1,385,687	-	1,522,902,495	45,658,070	-	-	-
Total revenues from sales and services	6,306,950,251	324,000	1,700,732,188	364,453,186	37,291,791	-	-
Profit (loss) from operations	1,430,157,983	(16,560,150)	650,504,704	111,490,777	7,118,047	-	(12,501,308)
Other income	497,496,271	155,123,600	7,544,114	1,608,800	7,995,514	-	64,212
Finance costs	(837,308,471)	(287,125,136)	(43,898,157)	(11,002,333)	-	-	-
Share of profit (loss) from associates and joint ventures	508,321,390	2,050,313,991	-	(16,015,796)	-	-	-
Income tax	(232,748,320)	(19,587,102)	(32,116,499)	(37,638,972)	(3,150,041)	-	-
Profit (loss) for the year	1,365,918,853	1,882,165,203	582,034,162	48,442,476	11,963,520	-	(12,437,096)
Profit attributable to non-controlling interests							(971,277,544)
Profit attributable to owners of the parent							2,906,809,574
Segment depreciation and amortisation	300,011,176	1,239,789	135,342,775	48,789,083	11,550,522	-	50,566
							496,983,911



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	2019					
	Domestic			Overseas		
	Real estate business Baht	Power business Baht	Water business Baht	Other business Baht	Real estate business Baht	Water business Baht
Non-current assets						
Segment non-current assets	24,004,904,260	15,507,764,354	8,859,916,232	910,336,316	605,513,900	2,760,461,450
Unallocated non-current assets						
Other assets						
Segment other assets	14,337,424,418	1,020,081,200	992,769,922	61,810,163	504,122,968	38,265,047
Unallocated other assets						
Total assets						
Segment liabilities	11,058,077,845	234,850,253	1,363,286,002	308,507,809	114,180,722	17,052,050
Unallocated liabilities						
Total liabilities						

Non-current assets presented above are non-current assets other than financial instruments and deferred tax assets.

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### 7 Cash and cash equivalents

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Cash on hand	7,761,469	2,882,645	534,490	456,735
Short-term bank deposits	2,672,998,388	3,169,338,166	867,005,444	285,720,406
<b>Total</b>	<b>2,680,759,857</b>	<b>3,172,220,811</b>	<b>867,539,934</b>	<b>286,177,141</b>

The interest rates on deposits are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Percentage	2018 Percentage	2019 Percentage	2018 Percentage
Short-term bank deposits	0.10 - 1.25	0.10 - 0.63	0.10 - 0.60	0.10 - 0.40

### 8 Short-term investments

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Opening balance	806,395,471	568,747,679	758,644,409	546,774,454
Purchase of securities	6,540,010,232	6,000,647,175	5,890,000,000	5,305,000,000
Disposal of securities	(7,099,197,438)	(5,763,272,668)	(6,436,153,809)	(5,093,382,086)
Change in revaluation	(68,624)	273,285	(433,200)	252,041
Closing balance	247,139,641	806,395,471	212,057,400	758,644,409

The fair values of the short-term investments are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Cost	245,491,025	804,678,231	211,482,885	757,636,694
Unrealised gain	1,648,616	1,717,240	574,515	1,007,715
<b>Total</b>	<b>247,139,641</b>	<b>806,395,471</b>	<b>212,057,400</b>	<b>758,644,409</b>

The fair values of short-term investments are based on Net Asset Value (NAV) announced by the Asset Management Company. The fair values are within level 1 of the fair value hierarchy.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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### 9 Trade and other receivables

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Trade receivables	232,129,204	271,328,207	14,518,850	17,807,283
<u>Less</u> Allowance for doubtful debt	(27,197,442)	(23,305,831)	-	-
Trade receivables, net	204,931,762	248,022,376	14,518,850	17,807,283
Amounts due from related parties				
)Note 33(	595,546,386	67,352,503	214,845,301	34,057,676
Prepaid expenses	31,262,376	12,984,431	6,607,580	2,867,898
Accrued income	67,066,231	62,031,772	852,662	43,777
Others	22,037,553	18,274,511	510,737	2,274,807
<b>Total</b>	<b>920,844,308</b>	<b>408,665,593</b>	<b>237,335,130</b>	<b>57,051,441</b>

Outstanding trade receivables can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Within due	163,593,316	185,691,637	2,382,939	11,533,981
Overdue				
Up to 3 months	20,340,289	46,096,931	1,213,333	5,099,976
3 - 6 months	8,899,797	19,283,723	7,026,409	25,661
6 - 12 months	5,646,927	6,068,485	1,771,546	9,539
Over 12 months	33,648,875	14,187,431	2,124,623	1,138,126
	232,129,204	271,328,207	14,518,850	17,807,283
<u>Less</u> Allowance for doubtful debt	(27,197,442)	(23,305,831)	-	-
<b>Total</b>	<b>204,931,762</b>	<b>248,022,376</b>	<b>14,518,850</b>	<b>17,807,283</b>

Outstanding amounts due from related parties can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Within due	592,558,933	65,775,950	214,651,203	33,508,249
Overdue				
Up to 3 months	2,987,453	1,576,553	194,098	549,427
<b>Total</b>	<b>595,546,386</b>	<b>67,352,503</b>	<b>214,845,301</b>	<b>34,057,676</b>

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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### 10 Real estate development costs

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Opening balance	13,364,418,778	13,740,364,439	-	-
Additions	1,855,481,256	748,959,120	-	-
Transfer to investment properties (Note 15)	(586,066,749)	(24,585,756)	-	-
Currency translation differences	(19,234,512)	-	-	-
Recognise as expense	(1,826,033,203)	(1,100,319,025)	-	-
Closing balance	12,788,565,570	13,364,418,778	-	-

The Group transferred real estate development costs to investment property due to change in use.

Real estate development costs of Baht 1,628.51 million (2018: Baht 1,348.32 million) have been pledged as securities for credit facilities.

Borrowing costs were capitalised during the year and are included in 'additions' as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Borrowing costs	231,631,712	221,034,276	-	-
Capitalisation rate	5.37%	5.46%	-	-

### 11 Available-for-sale investments

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Opening balance	4,782,610,770	3,836,231,359	4,076,036,281	3,131,131,613
Purchase of securities	767,166,036	603,603,268	767,166,036	439,676,100
Disposal of securities	(1,275)	-	-	-
Capital reduction of securities	(37,632,528)	(105,938,370)	(35,250,587)	(37,757,950)
Adjust securities value from merge	-	142,980	-	-
Change in revaluation	2,376,211,488	448,571,533	2,152,508,313	542,986,518
Closing balance	7,888,354,491	4,782,610,770	6,960,460,043	4,076,036,281

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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The fair values of the available-for-sale investments are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Cost	5,147,516,967	4,417,984,732	4,240,086,215	3,508,170,765
Unrealised gain	2,740,837,524	364,626,038	2,720,373,828	567,865,516
<b>Total</b>	<b>7,888,354,491</b>	<b>4,782,610,770</b>	<b>6,960,460,043</b>	<b>4,076,036,281</b>

The fair values of available-for-sale investments are based on last quoted bid price by reference to the Stock Exchange of Thailand or Net Asset Value (NAV) announced by the Asset Management Company. The fair values are within level 1 of the fair value hierarchy.

## 12 Interests in associates and joint ventures

The material investments in associates and joint ventures are as follows:

Entity name	Country of incorporation	Nature of business	% of ownership interest		Consolidated financial statements Investment at equity method		Separate financial statements Investment at cost method	
			2019	2018	2019	2018	2019	2018
			%	%	Million Baht	Million Baht	Million Baht	Million Baht
Associates:								
GHECO – One Company Limited	Thailand	Power plant operation and sale of electricity	25	25	7,168	8,913	-	-
Immaterial associates					8,308	5,404	-	-
<b>Total</b>					<b>15,476</b>	<b>14,317</b>	<b>-</b>	<b>-</b>
Joint ventures:								
Immaterial joint ventures					2,406	2,137	1,015	1,238
<b>Total</b>					<b>2,406</b>	<b>2,137</b>	<b>1,015</b>	<b>1,238</b>

The Group has contingent liabilities relating to guarantee of associates' loans by ordinary shares of such associates and guarantee of associates' and joint ventures' bank guarantees facilities by subsidiaries which are shareholders of such associates and joint ventures.

On 25 October 2019, the Group acquired 33,986,774 ordinary shares of Duong River Surface Water Plant Joint Stock Company, a company registers in the Socialist Republic of Vietnam and engages in production and distribution of water supply in the Socialist Republic of Vietnam at a par value of Vietnamese Dong 10,000 per share, equivalent to 34% ownership interests. The Group partially paid for share capital in the amount of Vietnamese Dong 1,886,265,957,000, equivalent to Baht 2,451,235,290.

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Details of the purchase consideration and net assets acquired at acquisition date are as follows:

	<b>Baht</b>
<i>Purchase consideration</i>	
Cash paid	2,451,235,290
Contingent consideration	242,915,209
Total purchase consideration	2,694,150,499
<i>Net assets acquired</i>	
Cash and cash equivalents	127,885,277
Trade and other receivables	180,344,317
Inventory	1,031,470
Other current assets	248,569,800
Property, plant and equipment	5,274,688,004
Other non-current assets	4,673,832
Trade and other payables	(177,320,681)
Other current liabilities	(49,424,133)
Long-term loans	(4,509,272,444)
Net identifiable assets acquired	1,101,175,442
Group's share in associates (34%)	374,399,650
Goodwill	2,319,750,849
Net assets acquired	2,694,150,499

The Group has an obligation of contingent consideration in cash which the payment will depend on the counterparty fulfills the condition under the agreement.

As at 31 December 2019, the Group is in the process of completing appraising the net assets acquired. The Group will adjust the fair value of net assets and price considerations upon the completion of the process.

### *Summarised financial information for associates*

The table below is summarised of financial information for associates that are material to the Group. The financial information is included in associates own financial statements which has been adjusted with the adjustments necessary for the equity method including, adjusting fair value and differences in accounting policy.

	<b>2019 Baht</b>	<b>2018 Baht</b>
<i>Summarised of performance</i>		
Revenue	10,951,256,418	12,293,643,285
Profit before income tax	1,572,527,921	3,847,182,578
Income tax expense	339,890,028	39,461,607
Profit for the year	1,912,417,949	3,886,644,185
Total comprehensive income	1,912,417,949	3,886,644,185
Dividends received from associate	564,287,076	92,352,679
<i>Summarised of statement of financial position</i>		
Current assets	8,297,964,797	7,408,308,582
Non-current assets	33,335,176,015	32,712,798,673
Current liabilities	(3,615,946,073)	(4,317,401,153)
Non-current liabilities	(17,536,365,886)	10,336,051,766
Net assets	20,480,828,853	25,467,654,336
Group's share in associates (%)	35%	35%
Associates carrying amount	7,167,985,111	8,913,374,023

### *Individually immaterial associates and joint ventures*

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The table below is the carrying amount of its interests, in aggregate, all individually immaterial associates and joint ventures that are accounted for using equity method.

	2019 Baht	2018 Baht
<b>Aggregate carrying amount of individually immaterial associates</b>	8,308,013,756	5,403,244,220
<b>The Group's share of:</b>		
Profit for the year	1,031,219,648	662,288,136
Other comprehensive income	2,591,001	-
Total comprehensive income	1,031,219,648	662,288,136
<b>Aggregate carrying amount of individually immaterial joint ventures</b>	2,405,534,065	2,136,761,665
<b>The Group's share of:</b>		
Profit for the year	245,127,138	520,005,992
Other comprehensive income	(15,009,878)	(1,177,960)
Total comprehensive income	230,117,260	518,828,032

### 13 Investments in subsidiaries

The subsidiaries included in consolidated financial statement. The subsidiaries have only ordinary shares. The proportion of ownership interests held by the Group is equal to voting rights in subsidiaries held by the Group.

The material investments in subsidiaries are as follows:

Entity name	Country of incorporation	Nature of business	Ownership interest held by Company		Ownership interest held by the Group		Ownership interests held by non-controlling interests		Investment at cost method	
			2019 %	2018 %	2019 %	2018 %	2019 %	2018 %	2019 Million Baht	2018 Million Baht
WHA Industrial Development Public Company Limited	Thailand	Industrial estate management	-	-	99	99	1	1	42,982	42,982
WHA Utilities and Power Public Company Limited	Thailand	Sale and service of utilities	-	-	69	69	31	31	2,677	2,677



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### *Summarised of financial information of the subsidiaries that have material non-controlling interests*

The summary financial information of WHA Utilities and Power Public Company Limited and subsidiaries that has non-controlling interests are significant to the Group are summarised below. The amounts are disclosed for each subsidiary is shown by the amount before the inter-company elimination.

	2019 Baht	2018 Baht
<i>Summarised statement of financial position</i>		
Current assets	2,074,267,324	2,073,598,034
Non-current assets	24,344,450,106	21,699,667,814
Current liabilities	(6,481,672,521)	(234,153,372)
Non-current liabilities	(6,377,777,622)	(9,489,842,612)
Net assets	13,559,267,287	14,049,269,864
Non controlling interests	3,096,584,724	3,248,580,994
<i>Summarised statement of comprehensive income</i>		
Revenue	1,857,247,846	1,708,285,007
Profit for year	2,137,209,051	2,251,897,863
Other comprehensive income	(33,151,551)	(1,600,972)
Total comprehensive income	2,104,057,500	2,250,296,891
Profit for the year allocated to non-controlling interests	662,951,215	698,527,092
Total comprehensive income allocated to non-controlling interests	652,667,775	698,030,479
Dividends paid to non-controlling interests	(360,694,557)	(241,333,145)
<i>Summarised statement of cash flow</i>		
Net cash flow from operating activities	1,093,597,389	730,877,864
Net cash flow from investing activities	(2,771,592,224)	(682,592,035)
Net cash flow from financing activities	1,601,272,280	214,032,894
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(76,722,555)</b>	<b>262,318,723</b>

## 14 Other long-term investments

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Cost	467,557,519	269,930,206	-	-
Additions	88,500,000	211,500,000	-	-
Allowance for impairment	(717,000)	(717,000)	-	-
<b>Total</b>	<b>555,340,519</b>	<b>480,713,206</b>	<b>-</b>	<b>-</b>

During the year 2019, the Group fully paid-up ordinary shares of SUPERNAP (Thailand) Company Limited to maintain its ownership interests.

The Group has contingent liabilities relating to guarantee of Glow IPP Co., Ltd.'s loans by ordinary shares of such company.

The Group does not disclose information regarding the fair value of other long-term investments, as the fair value cannot be measured reliably since investments are in non-marketable equity securities and cannot find sufficient and appropriate reference information.

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### 15 Investment properties

	Consolidated financial statements				Total Baht
	Land Baht	Buildings and utilities systems Baht	Building improvement Baht	Construction in progress Baht	
<b>As at 1 January 2018</b>					
Cost	4,475,021,138	4,936,529,892	246,934,387	518,186,830	10,176,672,247
<u>Less</u> Accumulated depreciation	-	(712,886,854)	(41,777,926)	-	(754,664,780)
Net book amount	4,475,021,138	4,223,643,038	205,156,461	518,186,830	9,422,007,467
<b>For the year ended 31 December 2018</b>					
Opening net book amount	4,475,021,138	4,223,643,038	205,156,461	518,186,830	9,422,007,467
Additions	1,157,078,471	800,617	485,356	670,933,553	1,829,297,997
Transfers	52,106,530	452,871,563	20,226,336	(525,204,429)	-
Depreciation charge	-	(180,808,553)	(11,169,712)	-	(191,978,265)
Currency translation differences	(7,392,666)	(7,418,596)	(4,950,450)	-	(19,761,712)
Transfer from real estate development costs (Note 10)	24,585,756	-	-	-	24,585,756
Transfer to property, plant and equipment (Note 16)	(78,432,999)	-	-	(3,252,214)	(81,685,213)
Classify to assets held for sale	(54,182,882)	(818,779,014)	(33,399,519)	-	(906,361,415)
Closing net book amount	5,568,783,348	3,670,309,055	176,348,472	660,663,740	10,076,104,615
<b>As at 31 December 2018</b>					
Cost	5,568,783,348	4,505,879,229	223,649,130	660,663,740	10,958,975,447
<u>Less</u> Accumulated depreciation	-	(835,570,174)	(47,300,658)	-	(882,870,832)
Net book amount	5,568,783,348	3,670,309,055	176,348,472	660,663,740	10,076,104,615
<b>For the year ended 31 December 2019</b>					
Opening net book amount	5,568,783,348	3,670,309,055	176,348,472	660,663,740	10,076,104,615
Additions	416,315,571	81,500	1,219,719	2,163,908,204	2,581,524,994
Transfers	-	1,557,358,061	172,760,666	(1,730,118,727)	-
Recognise as expense (Note 22)	(550,000,000)	(1,374,580,331)	(13,269,987)	-	(1,937,850,318)
Depreciation charge	-	(120,950,230)	(9,563,670)	-	(130,513,900)
Currency translation differences	(3,214,664)	(2,928,793)	(1,979,832)	-	(8,123,289)
Transfer from real estate development costs (Note 10)	115,291,756	466,151,374	4,623,619	-	586,066,749
Classify to assets held for sale	(25,385,756)	(744,608,562)	(74,266,210)	-	(844,260,528)
Closing net book amount	5,521,790,255	3,450,832,074	255,872,777	1,094,453,217	10,322,948,323
<b>As at 31 December 2019</b>					
Cost	5,521,790,255	3,957,044,212	298,080,976	1,094,453,217	10,871,368,660
<u>Less</u> Accumulated depreciation	-	(506,212,138)	(42,208,199)	-	(548,420,337)
Net book amount	5,521,790,255	3,450,832,074	255,872,777	1,094,453,217	10,322,948,323

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	Separate financial statements				Total Baht
	Land Baht	Buildings and utilities systems Baht	Building improvement Baht	Construction in progress Baht	
<b>As at 1 January 2018</b>					
Cost	2,756,121,282	2,913,367,173	148,092,977	15,720,857	5,833,302,289
Less Accumulated depreciation	-	(375,983,553)	(15,241,073)	-	(391,224,626)
Net book amount	2,756,121,282	2,537,383,620	132,851,904	15,720,857	5,442,077,663
<b>For the year ended 31 December 2018</b>					
Opening net book amount	2,756,121,282	2,537,383,620	132,851,904	15,720,857	5,442,077,663
Additions	-	800,618	324,852	47,594,830	48,720,300
Depreciation charge	-	(115,789,382)	(5,647,964)	-	(121,437,346)
Transfer to property, plant and equipment (Note 16)	(67,591,975)	-	-	(3,252,214)	(70,844,189)
Classify to assets held for sale	-	(313,534,065)	(32,633,014)	-	(346,167,079)
Closing net book amount	2,688,529,307	2,108,860,791	94,895,778	60,063,473	4,952,349,349
<b>As at 31 December 2018</b>					
Cost	2,688,529,307	2,546,894,121	110,744,471	60,063,473	5,406,231,372
Less Accumulated depreciation	-	(438,033,330)	(15,848,693)	-	(453,882,023)
Net book amount	2,688,529,307	2,108,860,791	94,895,778	60,063,473	4,952,349,349
<b>For the year ended 31 December 2019</b>					
Opening net book amount	2,688,529,307	2,108,860,791	94,895,778	60,063,473	4,952,349,349
Additions	-	81,500	385,790	252,263,642	252,730,932
Recognise as expense (Note 22)	(550,000,000)	(1,374,580,331)	(13,269,987)	-	(1,937,850,318)
Depreciation charge	-	(36,314,001)	(2,527,092)	-	(38,841,093)
Classify to assets held for sale	-	(413,831,696)	(46,306,631)	-	(460,138,327)
Closing net book amount	2,138,529,307	284,216,263	33,177,858	312,327,115	2,768,250,543
<b>As at 31 December 2019</b>					
Cost	2,138,529,307	311,456,398	37,603,044	312,327,115	2,799,915,864
Less Accumulated depreciation	-	(27,240,135)	(4,425,186)	-	(31,665,321)
Net book amount	2,138,529,307	284,216,263	33,177,858	312,327,115	2,768,250,543

The Group transferred investment properties to property, plant and equipment due to change in use.

Borrowing costs were capitalised during the year and are included in 'additions' as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Borrowing costs	35,476,269	2,302,046	3,559,412	558,355
Capitalisation rate	3.38% - 3.60%	3.66% - 3.83%	3.38%	3.66%

The fair values of investment properties are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Investment properties ready to use and used	13,116,222,167	12,281,886,016	3,192,299,025	6,457,543,995
Investment properties under construction	1,449,350,324	2,151,480,725	621,005,693	368,957,876
<b>Total</b>	<b>14,565,572,491</b>	<b>14,433,366,741</b>	<b>3,813,304,718</b>	<b>6,826,501,871</b>

The fair values of investment properties are within level 3 of the fair value hierarchy which uses significant unobservable inputs.

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The fair values of investment properties ready to use and used were valued using the income method with discounted cash flows expected to be generated in the future to their present value and sales comparison approach by independent professionally qualified valuers who hold a recognised relevant professional qualification and have recent experience in the locations and segments of the investment properties valued. For all investment properties, their current use equates to the highest and best use.

The Company's finance department includes a team that review the valuations performed by the independent valuers for financial reporting purposes. This team reports directly to the chief financial officer (CFO) and the audit committee (AC). Discussions of valuation processes and results are held between the CFO, AC, the valuation team and the independent valuers at least once every year, in line with the Company's yearly reporting dates.

Investment properties under construction were not assessed fair value by independent professionally qualified valuers. Management considered that the fair values of those assets approximated their net book value.

Investment properties which have been pledged as securities for performance bond on lease agreement are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Investment properties	1,418,413,740	1,170,980,785	633,692,116	386,259,161

Amounts recognised in profit and loss that are related to investment properties are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Rental and service income	381,596,972	583,120,841	70,157,466	336,721,895
Direct operating expense that generated rental income	259,199,951	358,362,332	116,824,184	260,383,901
Direct operating expense that did not generated rental income	26,546,435	16,256,370	-	-

The future aggregate minimum lease income under non-cancellable operating leases are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Not later than 1 year	217,335,109	527,575,274	16,223,280	290,819,708
Later than 1 year but not later than 5 years	1,231,017,638	1,386,805,728	-	986,764,964
Later than 5 years	2,975,315,184	853,482,521	-	491,342,355
<b>Total</b>	<b>4,423,667,931</b>	<b>2,767,863,523</b>	<b>16,223,280</b>	<b>1,768,927,027</b>

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## 16 Property, plant and equipment

	Consolidated financial statements						
	Land Baht	Building improvement Baht	Utilities system Baht	Office equipment and warehouse equipment Baht	Vehicles Baht	Assets for rent Baht	Construction in progress Baht
<b>As at 1 January 2018</b>							
Cost	10,177,866	651,139,573	4,643,291,894	434,366,389	158,187,436	340,101,148	324,273,008
Less Accumulated depreciation	-	(479,492,778)	(1,069,400,194)	(255,193,541)	(127,787,345)	(244,294,719)	-
Net book amount	10,177,866	171,646,795	3,573,891,700	179,172,848	30,400,091	95,806,429	4,385,368,737
<b>For the year ended 31 December 2018</b>							
Opening net book amount	10,177,866	171,646,795	3,573,891,700	179,172,848	30,400,091	95,806,429	4,385,368,737
Additions	-	14,055,356	10,268,294	18,250,923	12,903,766	3,070,150	406,978,082
Transfers	-	14,043,790	427,339,077	12,076,743	-	73,937,000	(527,396,610)
Disposals	-	-	-	(2,904)	(188,379)	-	-
Depreciation charge	-	(19,218,028)	(193,793,250)	(45,967,782)	(15,404,186)	(17,893,344)	-
Currency translation differences	-	-	-	(7,194)	-	-	-
Transfers from investment properties (Note 15)	78,432,999	-	-	-	-	-	3,252,214
Classify to other non-current assets	-	-	-	-	-	-	(4,947,169)
Closing net book amount	88,610,865	180,527,913	3,817,705,821	163,522,634	27,711,292	154,920,235	202,159,525
<b>As at 31 December 2018</b>							
Cost	88,610,865	679,238,719	5,080,899,265	464,683,068	148,363,718	417,108,298	202,159,525
Less Accumulated depreciation	-	(498,710,806)	(1,263,193,444)	(301,160,434)	(120,652,426)	(262,188,063)	-
Net book amount	88,610,865	180,527,913	3,817,705,821	163,522,634	27,711,292	154,920,235	202,159,525
<b>For the year ended 31 December 2019</b>							
Opening net book amount	88,610,865	180,527,913	3,817,705,821	163,522,634	27,711,292	154,920,235	202,159,525
Additions	-	10,327,127	10,967,907	19,888,069	14,014,469	3,179,633	983,611,563
Transfers	-	29,320,044	349,271,547	23,592,019	616,350	53,435,786	(456,235,746)
Disposals	-	(2)	-	(425,867)	(146,064)	(220,806)	(3,582,704)
Depreciation charge	-	(27,784,064)	(204,223,139)	(47,802,446)	(10,307,302)	(23,690,603)	-
Currency translation differences	-	(15,055)	24	(58,690)	(77,442)	-	(13,248)
Classify to assets held for sale	-	-	-	(56,597)	-	-	-
Closing net book amount	88,610,865	192,375,963	3,973,722,160	158,659,122	31,811,303	187,624,245	725,939,390
<b>As at 31 December 2019</b>							
Cost	88,610,865	717,868,876	5,441,138,719	497,450,733	151,813,616	473,171,717	725,939,390
Less Accumulated depreciation	-	(525,492,913)	(1,467,416,559)	(338,791,611)	(120,002,313)	(285,547,472)	-
Net book amount	88,610,865	192,375,963	3,973,722,160	158,659,122	31,811,303	187,624,245	725,939,390
							5,358,743,048

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	Separate financial statements					Total Baht
	Land Baht	Building improvement Baht	Office equipment and warehouse equipment Baht	Vehicles Baht	Construction in progress Baht	
<b>As at 1 January 2018</b>						
Cost	-	13,443,746	18,385,050	42,109,719	-	73,938,515
Less Accumulated depreciation	-	(3,728,004)	(12,732,490)	(33,649,367)	-	(50,109,861)
Net book amount	-	9,715,742	5,652,560	8,460,352	-	23,828,654
<b>For the year ended 31 December 2018</b>						
Opening net book amount	-	9,715,742	5,652,560	8,460,352	-	23,828,654
Additions	-	-	729,697	10,313,230	12,904,400	23,947,327
Depreciation charge	-	(672,187)	(2,158,256)	(5,803,198)	-	(8,633,641)
Transfers from investment properties (Note 15)	67,591,975	-	-	-	3,252,214	70,844,189
Closing net book amount	67,591,975	9,043,555	4,224,001	12,970,384	16,156,614	109,986,529
<b>As at 31 December 2018</b>						
Cost	67,591,975	13,443,746	19,114,747	43,114,968	16,156,614	159,422,050
Less Accumulated depreciation	-	(4,400,191)	(14,890,746)	(30,144,584)	-	(49,435,521)
Net book amount	67,591,975	9,043,555	4,224,001	12,970,384	16,156,614	109,986,529
<b>For the year ended 31 December 2019</b>						
Opening net book amount	67,591,975	9,043,555	4,224,001	12,970,384	16,156,614	109,986,529
Additions	-	-	1,387,247	-	68,337,799	69,725,046
Disposals	-	-	(347,706)	-	-	(347,706)
Depreciation charge	-	(672,188)	(1,679,771)	(3,269,382)	-	(5,621,341)
Classify to assets held for sale	-	-	(56,597)	-	-	(56,597)
Closing net book amount	67,591,975	8,371,367	3,527,174	9,701,002	84,494,413	173,685,931
<b>As at 31 December 2019</b>						
Cost	67,591,975	13,443,746	18,950,606	43,114,968	84,494,413	227,595,708
Less Accumulated depreciation	-	(5,072,379)	(15,423,432)	(33,413,966)	-	(53,909,777)
Net book amount	67,591,975	8,371,367	3,527,174	9,701,002	84,494,413	173,685,931

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Leased assets included above, where the Group and Company are lessees under a finance lease, comprise group of assets in digital services and vehicles:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Cost - capitalised finance leases	292,334,119	292,334,119	4,398,400	4,398,400
<u>Less</u> Accumulated depreciation	(69,797,015)	(40,250,769)	(2,366,701)	(1,487,021)
Net book amount	222,537,104	252,083,350	2,031,699	2,911,379

### 17 Goodwill

Goodwill is allocated to the Group's cash-generating units (CGUs) identified according to business segment as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Synergy	4,245,408,918	4,245,408,918	-	-
Real estate business	9,942,006,923	9,942,006,923	-	-
Power business	2,162,207,653	2,162,207,653	-	-
Water business	1,225,422,158	1,225,422,158	-	-
<b>Total</b>	17,575,045,652	17,575,045,652	-	-

The recoverable amount of a CGU is determined based on fair value less costs of disposal calculations by using a present value techniques that are within level 3 of the fair value hierarchy. These calculations use cash flow projections based on financial budgets approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated using the estimated growth rates that does not exceed the long-term average growth rate for the business in which the CGU operates.

The key assumptions used for fair value less costs of disposal calculations are as follows:

	Synergy Percentage	Real estate Percentage	Power Percentage	Water Percentage
Gross margin	44.5	63.1	-	26.5
Growth rate	19.7	3.9	(2.5)	6.3
Discount rate	6.3	7.1	5.5	2.8

Management determined budgeted gross margin based on past performance and its expectations of market development. The weighted average growth rates used are consistent with the forecasts included in industry reports. The discount rates used reflect specific risks relating to the relevant segments.

The recoverable amount will be equal to the carrying amount if the key assumptions used for fair value less costs of disposal changes to be as follows:

	Synergy Percentage	Real estate Percentage	Power Percentage	Water Percentage
Gross margin	37.5	54.0	-	14.7
Growth rate	17.6	2.6	(4.5)	(6.7)
Discount rate	7.6	8.0	7.7	29.2



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### 18 Deferred income tax

The analysis of deferred income tax assets and liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Deferred income tax assets:</b>				
to be recovered within 12 months	(287,901)	11,049,523	-	-
to be recovered after more than 12 months	116,877,983	130,667,391	-	24,779,232
	116,590,082	141,716,914	-	24,779,232
<b>Deferred income tax liabilities:</b>				
to be settled within 12 months	2,761,600	(6,382,436)	-	-
to be settled after more than 12 months	(3,086,487,593)	(2,615,794,882)	(475,722,925)	-
	(3,083,725,993)	(2,622,177,318)	(475,722,925)	-
<b>Deferred income tax asset, net</b>	(2,967,135,911)	(2,480,460,404)	(475,722,925)	24,779,232

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The movements in deferred income tax assets and liabilities during the year is as follows:

	Consolidated financial statements					
	Opening balance 2018 Baht	Recognised in profit or loss Baht	Recognised in other comprehensive income Baht	Closing balance 2018 Baht	Recognised in profit or loss Baht	Recognised in other comprehensive income Baht
<b>Deferred income tax assets</b>						
Allowance for doubtful debt	6,575,065	(1,962,391)	-	4,612,674	789,086	-
Available-for-sale investments	16,917,604	-	18,882,997	35,800,601	-	(40,647,897)
Investments in foreign entities	-	-	-	-	449,721	-
Prepaid expenses	19,153,618	6,160,690	-	25,314,308	(557,326)	-
Allowance for impairment of other long-term investments	143,400	-	-	143,400	-	-
Allowance for impairment of assets	2,033,199	-	-	2,033,199	-	-
Accrued expense	-	-	-	-	7,529,940	-
Provision for repair and maintenance	968,837	726,639	-	1,695,476	(1,076,247)	-
Interest paid on loans	13,750,350	24,083,557	-	37,833,907	986,613	-
Deferred revenue	108,738,953	(20,545,239)	-	88,193,714	(33,625,646)	-
Finance lease	-	182,401	-	182,401	(59,929)	-
Deposits from long-term lease agreement	1,886,567	637	-	1,887,204	(1,795,767)	-
Employee benefit obligations	23,168,870	6,502,693	-	29,671,563	8,127,535	(7,715,976)
Deferred expenses from operating lease agreement	586,559	-	-	586,559	(586,559)	-
Gain/loss from intercompany, net	50,227,284	4,409,458	-	54,636,742	29,921,851	-
Tax loss carry forward	97,892,307	63,117,475	-	161,009,782	516,759	-
	342,042,613	82,675,920	18,882,997	443,601,530	10,620,031	(48,363,873)
						405,857,688
<b>Deferred income tax liabilities</b>						
Fair value adjustment from business combination	(1,721,297,387)	67,998,050	-	(1,653,299,337)	17,786,307	-
Investments	-	-	(108,651,960)	(108,651,960)	-	(434,580,676)
Depreciation	(2,480,958)	2,480,958	-	-	-	-
Deferred income from operating lease agreement	(12,284,191)	2,297,949	-	(9,986,242)	8,562,159	-
Bond underwriting	(2,733,469)	(3,430,426)	-	(6,163,895)	1,831,087	-
Finance lease	(102,374)	102,374	-	-	-	-
Deferred revenue from rental	(947,388,431)	(198,572,069)	-	(1,145,960,500)	(42,530,542)	-
	(2,686,286,810)	(129,123,164)	(108,651,960)	(2,924,061,934)	(14,350,989)	(434,580,676)
						(3,372,993,599)
<b>Deferred income tax, net</b>	(2,344,244,197)	(46,447,244)	(89,768,963)	(2,480,460,404)	(3,730,958)	(482,944,549)
						(2,967,135,911)

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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	Separate financial statements					
	Opening balance 2018 Baht	Recognised in profit or loss Baht	Recognised in other comprehensive income Baht	Closing balance 2018 Baht	Recognised in profit or loss Baht	Recognised in other comprehensive income Baht
<b>Deferred income tax assets</b>						
Accrued expense	-	-	-	-	7,481,277	-
Deferred revenue	85,180,403	(22,630,897)	-	62,549,506	(21,862,129)	-
Deposits from long-term lease agreement	1,886,566	(8,915)	-	1,877,651	(1,877,651)	-
Employee benefit obligations	6,502,472	3,465,491	-	9,967,963	1,481,054	(2,584,438)
Tax loss carry forward	73,599,576	86,297,583	-	159,897,159	1,010	-
	167,169,017	67,123,262	-	234,292,279	(14,776,439)	(2,584,438)
						216,931,402
<b>Deferred income tax liabilities</b>						
Investments	(4,709,637)	-	(108,647,711)	(113,357,348)	-	(430,415,023)
Deferred income from operating lease agreement	(10,854,226)	2,292,067	-	(8,562,159)	8,562,159	-
Bond underwriting	(2,733,469)	(113,427)	-	(2,846,896)	206,943	-
Deferred revenue from rental	(52,823,946)	(31,922,696)	-	(84,746,644)	(61,495,359)	-
	(71,121,278)	(29,744,058)	(108,647,711)	(209,513,047)	(52,726,257)	(430,415,023)
						(692,654,327)
<b>Deferred income tax, net</b>	96,047,739	37,379,204	(108,647,711)	24,779,232	(67,502,696)	(432,999,461)
						(475,722,925)

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Deferred income tax assets are recognised for tax loss and carry forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. The Group did not recognise deferred income tax assets in respect of losses that can be carried forward against future taxable income as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Unused tax loss carry forwards	3,633,696,567	3,131,685,343	91,174,045	-
Unrecognised deferred income tax	726,739,313	626,337,069	18,234,809	-
Expired year	2020 - 2024	2019 - 2023	2020 - 2024	-

### 19 Loans

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Current</b>				
Short-term loans	4,410,819,143	1,615,980,331	2,645,819,143	1,315,980,331
Current portion of long term loans	124,729,533	-	-	-
Short-term loans from related parties (Note 33)	-	-	698,400,000	672,900,000
	4,535,548,676	1,615,980,331	3,344,219,143	1,988,880,331
<b>Non-current</b>				
Long-term loans	1,374,343,972	-	-	-
	1,374,343,972	-	-	-
<b>Total</b>	5,909,892,648	1,615,980,331	3,344,219,143	1,988,880,331

The movements in loans from investing activities during the year are as follows:

	Consolidated financial statements			
	Short-term loans Baht	Short-term loans from related parties Baht	Long-term loans Baht	Total Baht
Opening balance 2018	1,784,171,994	-	3,936,901,708	5,721,073,702
Cash flows	(191,706,967)	-	(3,999,000,000)	(4,190,706,967)
Amortisation of front-end fee	23,515,304	-	62,098,292	85,613,596
Closing balance 2018	1,615,980,331	-	-	1,615,980,331
Cash flows	2,766,343,179	-	1,499,000,000	4,265,343,179
Amortisation of front-end fee	28,495,633	-	73,505	28,569,138
Closing balance 2019	4,410,819,143	-	1,499,073,505	5,909,892,648

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	Separate financial statements			
	Short-term loans Baht	Short-term loans from related parties Baht	Long-term loans Baht	Total Baht
Opening balance 2018	1,384,171,994	1,302,000,000	-	2,686,171,994
Cash flows	(91,706,967)	(629,100,000)	-	(720,806,967)
Amortisation of front-end fee	23,515,304	-	-	23,515,304
Closing balance 2018	1,315,980,331	672,900,000	-	1,988,880,331
Cash flows	1,301,343,179	25,500,000	-	1,326,843,179
Amortisation of front-end fee	28,495,633	-	-	28,495,633
Closing balance 2019	2,645,819,143	698,400,000	-	3,344,219,143

The carrying amounts and fair values of certain long-term loans are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Carrying amounts	1,499,073,505	-	-	-
Fair values	1,499,073,505	-	-	-

The fair value of current loans equal their carrying amount, as the impact of discounting is not significant.

The fair values are based on discounted cash flows using a discount rate based upon the loan rate of 3.51% and are within level 2 of the fair value hierarchy.

The effective interest rates at the statement of financial position date were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Percentage	2018 Percentage	2019 Percentage	2018 Percentage
Short-term loans	1.65 - 2.17	1.75 - 2.40	1.65 - 1.85	1.75 - 1.86
Short-term loans from related parties	-	-	1.15 - 1.25	1.15
Long-term loans	2.87 - 3.51	-	-	-

Maturity of long-term loans is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Not later than 1 year	124,729,533	-	-	-
Later than 1 year but not later than 5 years	1,374,343,972	-	-	-
<b>Total</b>	<b>1,499,073,505</b>	<b>-</b>	<b>-</b>	<b>-</b>

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

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### 20 Trade and other payables

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Trade payables	456,452,663	506,634,314	34,812,435	15,509,008
Amounts due to related parties (Note 33)	1,165,277	3,343,238	7,543,856	6,503,569
Other payables	44,226,901	43,138,292	36,881,220	9,750,045
Accrued cost of real estate development	611,823,793	1,131,919,555	55,294,230	2,878,677
Accrued expenses	567,863,109	457,873,220	165,347,760	158,438,205
Dividend payable	14,259,004	11,083,736	-	-
Retention	126,851,579	69,838,014	24,312,538	61,649,498
Advance received income	441,941,980	321,026,728	54,454,923	41,427,521
Provisions from guarantee	7,635,925	5,273,708	7,635,925	5,273,709
Others	1,089,484,216	226,828,646	814,315,525	199,126,352
<b>Total</b>	<b>3,361,704,447</b>	<b>2,776,959,451</b>	<b>1,200,598,412</b>	<b>500,556,584</b>

### 21 Debentures

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Current portion of debentures	9,534,908,490	4,505,013,365	5,536,530,961	3,854,033,372
Debentures	23,779,475,392	30,259,458,270	14,229,603,659	14,066,066,534
<b>Total</b>	<b>33,314,383,882</b>	<b>34,764,471,635</b>	<b>19,766,134,620</b>	<b>17,920,099,906</b>

The movements in debentures from investing activities during the year are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Opening balance	34,764,471,635	28,677,394,756	17,920,099,906	14,180,695,978
Cash flows	(1,300,039,480)	6,222,638,853	1,837,960,520	3,731,608,342
Amortisation of bond underwriting	23,185,175	22,526,747	8,074,194	7,795,586
Amortisation of finance costs from business combination	(173,233,448)	(158,088,721)	-	-
<b>Closing balance</b>	<b>33,314,383,882</b>	<b>34,764,471,635</b>	<b>19,766,134,620</b>	<b>17,920,099,906</b>

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The carrying amounts and fair values of debentures are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Carrying amounts	33,314,383,882	34,764,471,635	19,766,134,620	17,920,099,906
Fair values	33,885,485,229	35,065,946,923	20,140,460,663	18,149,246,701

The fair values of debentures are based on clean price announced by Thai Bond Market Association that are within level 2 of the fair value hierarchy.

The interest rate on all debentures of the Group is fixed rates. The effective interest rates at the statement of financial position date were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Percentage	2018 Percentage	2019 Percentage	2018 Percentage
Debentures	2.13 - 5.69	2.13 - 5.79	2.13 - 5.02	2.13 - 5.02

Maturity of debentures is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Not later than 1 year	9,534,908,490	4,505,013,365	5,536,530,961	3,854,033,372
Later than 1 year but not later than 5 years	18,174,549,137	22,152,505,671	11,452,545,885	11,409,201,343
Later than 5 years	5,604,926,255	8,106,952,599	2,777,057,774	2,656,865,191
	33,314,383,882	34,764,471,635	19,766,134,620	17,920,099,906

## 22 Deferred revenue

The movements of deferred revenue are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Opening balance	4,571,542,145	4,358,874,024	2,529,702,070	2,585,823,295
Additions	214,607,108	477,933,389	214,095,082	91,162,327
Recognise income	(2,248,036,564)	(265,265,268)	(2,123,258,519)	(147,283,552)
Closing balance	2,538,112,689	4,571,542,145	620,538,633	2,529,702,070

On 6 November 2015, the Company sold assets to WHA Business Complex Freehold and Leasehold Real Estate Investment Trust but still undertook in guarantee minimum EBITDA. Their significant risk and reward were not transferred to the buyer, so the Company recorded the transaction as deferred revenue. Then during the period 2019, the Company has reconsidered the remaining guarantee EBITDA and found that existing risk and reward were insignificant. The Company has reversed deferred revenue and investment properties amounting to Baht 2,052.27 million and Baht 1,937.85 million, respectively, to statement of comprehensive income for this period.



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### 23 Employee benefit obligations

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Statement of financial position</b>				
Retirement benefits	150,638,378	140,353,043	44,322,897	41,612,279
<b>Profit or loss</b>				
Retirement benefits	49,097,425	22,708,854	15,632,807	7,301,467
<b>Other comprehensive income</b>				
Remeasurements of employee benefit obligations	(38,579,881)	-	(12,922,189)	-

The movement in the defined benefit obligation over the year is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Opening balance	140,353,043	117,644,189	41,612,279	34,310,812
Current service cost	22,688,076	19,703,732	6,450,616	6,357,911
Past service cost	23,595,849	-	8,150,643	-
Interest cost	2,813,500	3,005,122	1,031,548	943,556
	189,450,468	140,353,043	57,245,086	41,612,279
Remeasurements				
(Gain)/loss from change in demographic assumptions	(18,735,386)	-	314,896	-
Gain from change in financial assumptions	(10,941,472)	-	(7,438,610)	-
Experience gain	(8,903,023)	-	(5,798,475)	-
	(38,579,881)	-	(12,922,189)	-
Benefit payments	(232,209)	-	-	-
Closing balance	150,638,378	140,353,043	44,322,897	41,612,279

On 5 April 2019, an amendment bill to the Labour Protection Law was published in the Government Gazette. The amended law will become effective 30 days after its publication. The main amendment is that the compensation for employees who have retired and have more than or equal to 20 years of service has changed from 300 day's pay to 400 day's pay. The effects of the amendment were recognised as past service cost during the year.

The significant actuarial assumptions used were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Percentage	2018 Percentage	2019 Percentage	2018 Percentage
Discount rate	1.86 - 2.95	2.36 - 3.38	2.80	2.75
Future salary increases	5.50 - 6.50	5.00 - 8.00	6.50	8.00
Resignation rate	0.00 - 15.00	0.00 - 13.00	0.00 - 12.00	0.00 - 9.00
Retirement age	55 and 60 years	55 and 60 years	60 years	60 years

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Sensitivity analysis for each significant assumption used is as follows:

Consolidated financial statements					
Impact on employee benefit obligations					
Change in assumption	Increase in assumption		Decrease in assumption		
	2019	2018	2019	2018	
Discount rate	1%	Decrease by 3.75% - 13.11%	Decrease by 5.76% - 14.82%	Increase by 4.02% - 15.95%	Increase by 6.41% - 17.83%
Future salary increases	1%	Increase by 3.84% - 15.69%	Increase by 8.08% - 19.31%	Decrease by 3.66% - 13.17%	Decrease by 7.36% - 16.16%
Resignation rate	1%	Decrease by 3.96% - 14.30%	Decrease by 6.09% - 15.91%	Increase by 1.06% - 11.25%	Increase by 2.57% - 11.18%

Separate financial statements					
Impact on employee benefit obligations					
Change in assumption	Increase in assumption		Decrease in assumption		
	2019	2018	2019	2018	
Discount rate	1%	Decrease by 11.30%	Decrease by 14.82%	Increase by 13.32%	Increase by 17.83%
Future salary increases	1%	Increase by 13.15%	Increase by 19.31%	Decrease by 11.40%	Decrease by 16.16%
Resignation rate	1%	Decrease by 12.20%	Decrease by 15.91%	Increase by 5.02%	Increase by 4.06%

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the employee benefit obligations to significant actuarial assumptions the same method has been applied as when calculating the employee benefit obligations recognised within the statement of financial position.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the previous year.

### 24 Share capital and premium on share capital

	Authorised share capital		Issued and paid-up share capital		Share premium
	Share	Baht	Share	Baht	Baht
Opening balance 2018	15,677,730,186	1,567,773,019	14,322,430,321	1,432,243,032	12,391,309,606
Capital increase from warrant conversion	-	-	11,836,848	1,183,685	47,224,969
Closing balance 2018	15,677,730,186	1,567,773,019	14,334,267,169	1,433,426,717	12,438,534,575
Capital increase from warrant conversion	-	-	374,831,283	37,483,128	1,495,448,207
Closing balance 2019	15,677,730,186	1,567,773,019	14,709,098,452	1,470,909,845	13,933,982,782

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### 25 Warrant

	2019		2018	
	Unit	Baht	Unit	Baht
Opening balance	115,669,514	795,398,351	116,825,502	803,347,472
Exercise warrant	(36,606,049)	(251,720,527)	(1,155,988)	(7,949,121)
Closing balance	79,063,465	543,677,824	115,669,514	795,398,351

The significant conditions of WHA-W1 are as follows:

Selling proportion	:	3 increased ordinary shares for 1 warrant
Exercise price	:	Baht 3.4181 per share (after change warrant)
Exercise rate	:	1 warrant per 10 ordinary shares (after change par value)
Exercise date	:	25 December 2015
Expire date	:	4 March 2020

### 26 Dividend

At the Company's Board of Directors' meeting on 8 November 2019, the shareholders approved an interim dividend at Baht 0.0815 per share amounting to a total of Baht 1,198.79 million. The Company paid dividend on 6 December 2019.

At the Company's shareholders' meeting on 29 April 2019, the shareholders approved a dividend at Baht 0.0833 per share amounting to a total of Baht 1,198.80 million. The Company paid dividend on 28 May 2019.

At the Company's shareholders' meeting on 30 April 2018, the shareholders approved a dividend at Baht 0.0907 per share amounting to a total of Baht 1,299.39 million. The Company paid dividend on 28 May 2018. The meeting approved an appropriation of net profit of Baht 344,302 as additional legal reserve.

### 27 Components of other comprehensive income

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Investments				
Unrealised gains (losses)	2,737,529,649	364,695,864	2,718,861,860	566,786,747
<u>Less</u> Reclassification adjustments to profit or loss	(7,625)	(710,286)	-	-
	2,737,522,024	363,985,578	2,718,861,860	566,786,747
Currency translation	(162,794,681)	(90,974,382)	-	-
Remeasurements of employee benefit obligations	45,048,530	7,862,874	4,694,648	(8,227,541)
Share of other comprehensive income of associates and joint ventures	(26,146,562)	(17,579,956)	-	-
Total other comprehensive income	2,593,629,311	263,294,114	2,723,556,508	558,559,206
Income tax relating to components of other comprehensive income	(557,072,924)	(74,353,795)	(544,711,302)	(111,711,841)
<b>Total</b>	<b>2,036,556,387</b>	<b>188,940,319</b>	<b>2,178,845,206</b>	<b>446,847,365</b>

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### 28 Finance costs

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Bill of exchange	28,495,634	23,515,304	28,495,634	23,515,304
Loans from financial institutions	26,656,802	88,867,045	11,776,712	5,009,397
Debentures	898,757,686	972,529,481	673,967,738	605,729,952
Short-term loans from related parties	-	-	8,185,947	10,174,686
Finance lease agreements	10,039,760	11,211,448	134,052	209,115
Bond underwriting	17,835,642	18,653,390	8,074,194	7,795,587
Others	4,597,847	64,557,429	20,801,063	23,775,345
<b>Total</b>	<b>986,383,371</b>	<b>1,179,334,097</b>	<b>751,435,340</b>	<b>676,209,386</b>

### 29 Expense by nature

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Employee benefit expense	939,703,344	885,387,445	218,806,324	198,104,993
Depreciation and amortisation	459,708,022	496,983,911	46,104,632	134,639,126
Land rental expense	20,207,484	19,443,059	870,263	850,809
Consulting fee	59,728,337	44,182,350	12,535,712	8,859,092
Cost of real estate development sold	1,751,045,409	1,687,994,226	-	-
Special business tax and land transfer fee	222,008,841	136,003,055	-	-

### 30 Income tax

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Current income tax	301,331,440	278,793,690	-	-
Deferred income tax (Note 18)	3,730,958	46,447,244	67,502,696	(37,379,204)
<b>Total</b>	<b>305,062,398</b>	<b>325,240,934</b>	<b>67,502,696</b>	<b>(37,379,204)</b>

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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The income tax on the Group and Company's profit before tax differs from the theoretical amount that would arise using the basic tax rate as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Profit before income tax	4,267,775,631	4,203,328,052	1,924,179,633	2,108,409,468
<u>Less</u> Profit from promoted activities which exempt from payment of corporate income tax	(1,189,892,847)	(715,878,208)	-	(36,941,577)
Share of profit from associates and joint ventures	(1,945,693,061)	(2,542,619,585)	-	-
	1,132,189,723	944,830,259	1,924,179,633	2,071,467,891
Tax calculated at a tax rate of 20%	226,437,945	188,966,052	384,835,927	414,293,578
Tax effects of:				
Income not subject to tax	(52,887,348)	(50,111,911)	(342,731,021)	(455,131,162)
Additional income subject to tax	40,605,065	-	5,561,612	-
Expenses not deductible for tax purposes	14,068,592	20,453,897	4,032,488	12,964,498
Additional expenses deductible for tax purposes	(5,315,812)	(14,609,938)	(4,071,480)	(13,252,875)
Difference in overseas tax rate	(3,957,406)	23,903,115	-	-
Tax losses for which no deferred income tax asset was recognised	108,259,467	134,142,973	18,234,809	-
Adjustment in respect of prior year	(22,148,105)	22,496,746	1,640,361	3,746,757
Tax charge	305,062,398	325,240,934	67,502,696	(37,379,204)

The tax relating to component of other comprehensive income is as follows:

	Consolidated financial statements					
	2019			2018		
	Before tax Baht	Tax Baht	After tax Baht	Before tax Baht	Tax Baht	After tax Baht
Change in value of investments	2,376,142,864	(475,228,573)	1,900,914,291	448,844,816	(89,768,963)	359,075,853
Currency translation differences	(79,398,255)	-	(79,398,255)	(21,896,300)	-	(21,896,300)
Remeasurements of employee benefit obligations	38,579,881	(7,715,976)	30,863,905	-	-	-
Share of other comprehensive income of associates and joint ventures	(12,418,877)	-	(12,418,877)	(1,177,960)	-	(1,177,960)
<b>Total</b>	2,322,905,613	(482,944,549)	1,839,961,064	425,770,556	(89,768,963)	336,001,593

	Separate financial statements					
	2019			2018		
	Before tax Baht	Tax Baht	After tax Baht	Before tax Baht	Tax Baht	After tax Baht
Change in value of investments	2,152,075,113	(430,415,023)	1,721,660,090	543,238,557	(108,647,711)	434,590,846
Remeasurements of employee benefit obligation	12,922,189	(2,584,438)	10,337,751	-	-	-
<b>Total</b>	2,164,997,302	(432,999,461)	1,731,997,841	543,238,557	(108,647,711)	434,590,846

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### 31 Earnings per share

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Profit attributable to owners of the parent (Baht)	3,229,253,657	2,906,809,574	1,856,676,937	2,145,788,672
Weighted average number of ordinary shares (shares)	14,545,890,364	14,329,775,718	14,545,890,364	14,329,775,718
Number of ordinary shares from warrants (shares)	185,570,324	193,990,144	185,570,324	193,990,144
Number of dilutive potential ordinary shares (shares)	14,731,460,688	14,523,765,862	14,731,460,688	14,523,765,862
Basic earnings per share (Baht)	0.2220	0.2029	0.1276	0.1497
Diluted earnings per share (Baht)	0.2192	0.2001	0.1260	0.1477

### 32 Derivative financial instruments

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Financial assets</b>				
Interest rate swaps	39,247,720	408,723	1,760,548	408,723

The net fair values of derivative financial instruments at the statement of financial position date which are within level 2 of the fair value hierarchy were:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Contracts with positive fair values (Gain)	54,671,023	4,823,005	10,392,125	4,823,005
Contracts with negative fair values (Loss)	(6,791,726)	(54,390,068)	-	-

### 33 Related party transactions

Company's major shareholders are WHA Holding Co., Ltd., the Anataprayoons and the Jarukornsakuls in proportion of 41.71%. The remaining 58.29% of the shares are widely held.

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

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Additional information for transactions with related parties are as follows:

### Transactions

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Subsidiaries</b>				
Management income	-	-	8,938,200	7,339,200
Rental income	-	-	-	81,600
Dividend income	-	-	1,666,224,175	1,923,156,153
Interest income	-	-	215,823,727	90,322,463
Service fee expense	-	-	3,190,770	3,158,712
Interest expense	-	-	8,185,947	10,174,686
Rental expense	-	-	595,083	-
<b>Associates</b>				
Revenue from water business	213,595,728	188,129,278	-	-
Revenue from leases and services	49,832,134	79,089,995	-	-
Other income	20,096,858	24,833,831	-	-
Commission and management income	19,310,758	9,203,894	-	-
Interest income	34,490,451	54,087,897	-	-
<b>Joint ventures</b>				
Revenue from water business	7,394,779	97,440	-	-
Revenue from leases and services	13,341,464	4,063,805	-	-
Other income	1,116,351	-	-	-
Commission and management income	12,999,846	14,743,855	10,970,040	13,844,855
Dividend income	-	-	47,430,929	352,499,658
Interest income	11,398,141	1,739,746	-	890,283
<b>Other related parties</b>				
Interest income	694,411	448,904	-	-
Rental expense	12,199,884	12,192,025	10,446,448	10,438,590

### Outstanding balances

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Receivables</b>				
Subsidiaries	-	-	214,651,203	34,057,676
Associates	591,669,190	66,384,459	-	-
Joint ventures	3,877,196	844,893	194,098	-
Other related parties	-	123,151	-	-
<b>Total</b>	595,546,386	67,352,503	214,845,301	34,057,676
<b>Payables</b>				
Subsidiaries	-	-	6,637,916	5,598,176
Associates	140,224	-	-	-
Joint ventures	861	314	861	314
Other related parties	1,024,192	3,342,924	905,079	905,079
<b>Total</b>	1,165,277	3,343,238	7,543,856	6,503,569



## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

For the year ended 31 December 2019

### Short-term loans to related parties

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Subsidiaries	-	-	8,001,150,000	3,821,900,000
Associates	-	701,550,500	-	-
Joint ventures	283,490,552	53,000,000	-	-
Other related parties	-	100,000,000	-	-
<b>Total</b>	<b>283,490,552</b>	<b>854,550,500</b>	<b>8,001,150,000</b>	<b>3,821,900,000</b>

Short-term loans to related parties can be called at any time and are unsecured. The loans bear interest at 3.55 - 3.73% per annum (2018: 1.45 - 4.25% and MLR minus 1.25% and MLR per annum).

### Short-term loans from related parties

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Subsidiaries	-	-	698,400,000	672,900,000

Short-term loans from related parties can be called at any time and are unsecured. The loans bear interest at 1.15 - 1.25% per annum (2018: 1.15% per annum).

### Key management compensation

Key management includes directors (executive and non-executive), members of the executive committee. The compensation paid or payable to key management are as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Salaries and other short-term employee benefits	391,067,912	482,122,167	91,337,482	86,421,598
Post-employment benefits	17,046,416	11,714,116	3,305,109	4,837,159
<b>Total</b>	<b>408,114,328</b>	<b>493,836,283</b>	<b>94,642,591</b>	<b>91,258,757</b>

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

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### 34 Commitments and contingencies

#### Capital commitments

Capital expenditure contracted but not recognised as liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Purchase of land	906,443,400	693,278,600	-	-
Construction of warehouse and office building	1,740,098,249	621,914,989	1,653,021,627	340,589,502
Construction of ready-built factories and public utilities	491,418,386	315,626,146	-	-
<b>Total</b>	<b>3,137,960,035</b>	<b>1,630,819,735</b>	<b>1,653,021,627</b>	<b>340,589,502</b>

#### Non-cancellable operating leases - where the Group and Company are the lessees

Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
Within 1 year	48,031,889	51,941,294	3,649,711	3,619,516
Later than 1 year but not later than 5 years	96,260,390	108,369,609	15,074,881	14,867,051
Later than 5 years	119,331,500	141,487,601	49,001,521	52,659,063
<b>Total</b>	<b>263,623,779</b>	<b>301,798,504</b>	<b>67,726,113</b>	<b>71,145,630</b>

#### Bank guarantees

Banks have provided guarantees on behalf of the Group and Company as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Baht currency</b>				
Infrastructure	30,604,494	27,937,630	6,371,330	6,943,530
Industrial Estate Authority of Thailand	499,949,025	336,506,951	-	-
Performance bond with power group	175,588,833	257,962,476	-	-
Tax refund before tax audit	449,059,540	473,184,205	55,125,610	79,250,275
Others	157,918,687	151,583,175	5,866,100	11,856,845
<b>Total</b>	<b>1,313,120,579</b>	<b>1,247,174,437</b>	<b>67,363,040</b>	<b>98,050,650</b>
<b>USD currency</b>				
Performance bond with power group	5,500,277	7,721,436	-	-
<b>Total</b>	<b>5,500,277</b>	<b>7,721,436</b>	<b>-</b>	<b>-</b>

## NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

WHA Corporation Public Company Limited

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### *Other guarantees*

The Company has guaranteed of the hire purchase agreements of its related parties in the total credit line of Baht 212.26 million (2018: Baht 237.58 million).

## 35 Events occurring after the reporting period

On 25 December 2019, the Company increase paid-up share capital from warrants conversion 237,503,067 shares of Baht 0.10 each, amounting to Baht 23,750,307 with premium on share of Baht 947,555,739. The Company registered the increased share capital with the Ministry of Commerce on 7 January 2020.

On 21 February 2020, the Group issued the debentures with the total principal amount of Baht 3,000 million, under the Medium Term Notes Program by approved on 7 February 2020. The issuance is by virtue of the resolution of Extraordinary General (EGM) No. 1/2017 dated 30 June 2017 and the resolution of the 2018 Annual General Meeting (AGM) dated 27 April 2018.