

AMD 66043/OCO

February 23, 2023

Subject: Management Discussion and Analysis for the year ended December 31, 2022  
To President  
The Stock Exchange of Thailand

Index International Group (Public) Company Limited (the "Company") submits its Management Discussion and Analysis for the year ended December 31, 2022, with the details as follows:

### Overview of Past Performances

Index International Group (Public) Company Limited ("Company" or "IND") is a company that provides various forms of engineering consultation services, including survey and feasibility study of projects, conceptual and detailed design, project management and construction supervision, and design-build services, to both public and private sectors by a team of experienced and expert engineers and architects and the application of appropriate technologies to enhance operational efficiency, which the Company finally gains trust and confidence from customers.

The Company has experiences and expertise and provides services of all engineering fields, covering all areas of the operation, such as feasibility study, preparation of a master plan and study of the suitability of projects, topographic surveys, financial, economic and investment analysis and study, environmental impact analysis, calculation and detailed design in terms of engineering and architecture, project management and construction supervision as well as design-build services.

The Company's services can be classified into 3 categories as follows:

- 1) Conceptual Design & Detailed Design: It is the conceptual design or preliminary planning. The technical and design department will study all components of works for customers so that they can make decisions. The engineering design is also offered for using in the bidding and construction.
- 2) Project Management & Construction Supervision: The Company will act as the employer's agent to perform any operations, such as personnel recruitment, contract preparation, price checking, construction supervision, etc.

- 3) Design-Build: It includes the preparation of master plans and comprehensive designs, studying environment, providing advice on the development of product storage systems, project construction, and the construction of the public utility system of projects.

Regarding the overview of the Company's operations in 2022, the Company's total revenue was 611.37 million Baht, divided into the revenue from service of 608.14 million Baht, or accounting for 99.47% of the total revenue, and other revenues, consisting of interest income, profits from disposal of assets, revenues from documentation, revenues from disposal of the Company's non-operating assets, etc. In 2022, the Company had other revenues of 3.23 million Baht or accounting for 0.53% of the total revenue. In 2022, revenues and net profit increased from the year 2021 due to the increase in revenues from the operations of large-scale projects in 2022 and the increase in new projects operated by the Company in 2022.

#### Performance Analysis Revenue

Table showing revenue by type

Revenue Structure	Year 2021		Year 2022		Increase (decrease)	
	Million Baht	percentage	Million Baht	percentage	Million Baht	percentage
<b>Revenue by type of service</b>	<b>468.19</b>	<b>98.83</b>	<b>608.14</b>	<b>99.47</b>	<b>139.95</b>	<b>29.89</b>
Preliminary and detailed design work	49.94	10.54	113.02	18.49	63.08	126.31
Project management and construction supervision	31.79	6.71	41.93	6.86	10.14	31.90
Design and construction	384.94	81.26	449.94	73.59	65.00	16.89
Other services <sup>1</sup>	1.52	0.32	3.25	0.53	1.73	113.82
<b>Revenue by project type</b>	<b>468.19</b>	<b>98.83</b>	<b>608.14</b>	<b>99.47</b>	<b>139.95</b>	<b>29.89</b>
Tank Farm & Pipeline	403.97	85.28	453.66	74.20	49.69	12.30
Mass Transit	6.93	1.46	18.64	3.05	11.71	168.98
Highway & Expressway	35.52	7.50	67.21	11.00	31.69	89.22
Airport	11.31	2.39	26.87	4.39	15.56	137.58
Irrigation	4.38	0.92	19.03	3.11	14.65	334.47
Building	6.08	1.28	22.73	3.72	16.65	273.85
<b>Total revenue from services</b>	<b>468.19</b>	<b>98.83</b>	<b>608.14</b>	<b>99.47</b>	<b>139.95</b>	<b>29.89</b>

Private sector	421.70	89.02	496.46	81.20	74.76	17.72
Government sector/ State enterprise	46.49	9.81	111.68	18.27	65.19	140.22
<b>Total revenue from services</b>	<b>468.19</b>	<b>98.83</b>	<b>608.14</b>	<b>99.47</b>	<b>139.95</b>	<b>29.89</b>
Other revenue <sup>2</sup>	5.55	1.17	3.23	0.53	(2.32)	(41.80)
<b>Total revenue</b>	<b>473.74</b>	<b>100.00</b>	<b>611.37</b>	<b>100.00</b>	<b>137.63</b>	<b>29.05</b>

Note: <sup>1</sup> Other services such as Test and Calibrate Additive Injection

<sup>2</sup> Other revenue includes interest, profit from the sale of assets, documentation fees, income from the sale of goods other than contracts, income from the sale of assets that are not used in the Company's operations, etc.

### Revenue from Services

In 2022, the Company's revenues from services were 608.14 million Baht or accounting for 99.47% of the total revenue. The majority of revenues from service derived from design-build, accounting for 73.59% of the total revenues, followed by the revenue from conceptual design and detailed design, project management and construction supervision, and other services, accounting for 18.49%, 6.86%, and 0.53% of the total revenues, respectively. The total revenues from service increased by 139.95 million Baht from 2021 or accounting for 29.89%. The main reason derived from the increase in revenue recognition of large-scale projects in 2022 compared with the year 2021. These projects have been operated continuously from the previous year. In addition, the Company received more new projects during 2022 from the segments of conceptual design and detailed design, project management and construction control, and ready-to-build design.

Revenue from conceptual design and detailed design in 2022 increased by 126.31% from 2021 or increased from 49.94 million Baht to 113.02 million Baht. This was because the Company operated 8 new design projects, where the size of the contractual revenue of 4 projects out of 8 projects was worth more than 15.00 million Baht. The projects with the highest contractual revenue value are engineering survey and detailed design projects. The project of employment of consulting engineers and survey and design of 4-lane highway, a new highway linking Highway No. 2 – Highway No. 222 Udon Thani – Bueng Kan, has the contractual revenue value of 22.56 million Baht. As a result, in 2022, the Company's revenues from the conceptual and detailed design segment were higher than the previous year.

Revenue from project management and construction supervision in 2022 increased by 31.90% from 2021 or increased from 31.79 million Baht to 41.93 million Baht, as a result of the increase in project management and construction supervision operated by the Company, consisting of 5 projects in 2022. Among these 5 projects, the largest project is the project management and civil construction supervision, the MRT Purple Line, TaoPoon - Rat Burana (Kanchanapisek Ring), with a contractual revenue value of 345.41 million Baht. In addition, there are projects that recognize ongoing revenues from 2021, such as the construction supervision of the water transmission tunnel with related work in the 9th Master Plan Plumbing Improvement Project and the supervision of the north parallel driveway system and the improvement of the end of the taxi lane of Mae Fah Luang Airport, etc. As a result, the Company's revenues from such segment were higher than the previous year.

Revenue from design-build services in 2022 increased by 16.89% from 2021 or increased from 384.94 million Baht to 449.94 million Baht, because the Company recognized ongoing revenues from large-scale projects from 2021, such as design-build project - Fuel service system of U-Tapao Airport and design-build project - aircraft fuel storage tank (T-2306). In addition, in 2022, the Company performed one new design-build project, namely, design-build project - oil pipeline transformation project in overlapping territorial claims area of the High-Speed Rail Linked 3 Airport Project, Phaya Thai-Bang Sue-Klang Krung Housing Estate, with a contractual value of 161.20 million Baht. As a result, the Company's revenues from design-build segment in 2022 were higher than the year 2021.

Revenue from other services provided by the Company in 2022 increased by 113.82% from 2021 or increased from 1.52 million Baht to 3.25 million Baht, because in 2022 the Company recognized revenues from 8 new projects, such as Jet A-1 16-inch T-2302 oil pipeline improvement, Automatic Tank Gauging (ATG), Terminal Automatic System (TAS), Scada/PLC System, and Test and Calibrate Additive Injection, etc. In addition, the nature of these projects is a project with a short implementation period. As a result, the Company's revenues from other services in 2022 were higher than the year 2021.

### Other Revenues

In 2022, the Company's other revenues amounted to 3.23 million Baht or 0.53% of the total revenue. Other revenues consist of interest income, profits from disposal of assets, revenues from documentation, revenues from disposal of the Company's non- operating assets, etc.

### Cost and Gross Profit

#### Cost

#### Cost of Service

The Company's cost of service includes important items as follows: 1) labor costs, such as salaries, employee wages, work allowances, overtime pay, professional service fees, etc., 2) costs of sub-contractors' wages, 3) overhead costs, such as public utility fees, depreciation of operating assets, and 4) costs of construction materials.

In 2022, the Company's cost of service increased by 26.87% from 2021 or increased from 374.93 million Baht to 475.67 million Baht. The main reasons were the increase in sub-contractor wages and the cost of construction materials of the design-build project - Fuel service system of U-Tapao Airport and the design-build project - oil pipeline transformation project in overlapping territorial claims area of the High-Speed Rail Linked 3 Airport Project, Phaya Thai-Bang Sue-Klang Krung Housing Estate, which are the large-scale project of the Company. The increased cost of services was in line with the increase in revenues from service.

### Administrative Expenses

The Company's administrative expenses include wages, employee remuneration and welfare, bonuses, repair and maintenance fees of office supplies, vehicles, public utility fees, depreciation of assets, and other expenses. In 2022, the Company's administrative expenses increased by 18.39% from 2021 or increased from 79.64 million Baht to 94.29 million Baht. This was mainly the result of the increase in employee remuneration and welfare. As the COVID-19 outbreak in 2022 started to improve, the Company was able to carry out its business and perform its operations normally. Therefore, administrative costs increased. In addition, there were other expenses that increased from the year 2021, such as corporate public relations (CSR) expenses, seminars, certification fees, computer-related expenses, and transportation fees for business operations, etc.

## Gross Profit and Net Profit

Unit: Million Baht

Gross Profit Margin	Year 2021	Year 2022	Increase (Decrease)	Increase (Decrease) Percentage
Service income	468.19	608.14	139.95	29.89
Cost of service	374.93	475.67	100.74	26.87
Gross profit	93.27	132.47	39.20	42.03
Gross profit margin	19.92%	21.78%	1.86%	9.34

In 2022, the Company's gross profit increased by 42.03% from 2021 or increased from 93.27 million Baht to 132.47 million Baht. The increase in gross profit derived from the increase in revenues from service as mentioned above. The gross profit margin in 2022 increased from the previous year at a rate of 9.34% or increased from 19.92% to 21.78% because in 2022 the Company performed more projects in 3 types. In addition, the design-build project of Fuel service system of U-Tapao Airport gradually recognized more revenues. As a result, the Company's gross profit margin in 2022 was higher than the previous year.

For the net profit of the Company in 2022, it increased by 127.46% or increased from 14.26 million Baht to 32.43 million Baht. This was mainly because the Company generated higher revenue. As a result, in 2022, the Company's net profit was higher than the year 2021.

## Total Assets

As at December 31, 2022, the Company's total assets were 774.13 million Baht, increased by 102.56 million Baht from the year 2021 or 15.27%. They were divided into current assets of 625.33 million Baht and non-current assets of 148.80 million Baht, or accounting for 80.78% and 19.22%, respectively. The key items are as follows:

### Cash and Cash Equivalents

As at December 31, 2022, the Company's cash and cash equivalents increased by 7.99 million Baht or 5.07%. This was due to (1) an increase in profit before income tax from 18.52 million Baht in 2021 to 40.76 million Baht in 2022 as a result of the increase in the Company's revenue from the design-build project - Fuel service system of U-Tapao Airport and the design-build project - oil pipeline transformation project in overlapping territorial claims area of the High-Speed Rail Linked

3 Airport Project, Phaya Thai-Bang Sue-Klang Krung Housing Estate, compared with the year 2021, resulting in an increase in the Company's profits, (2) a decrease in trade receivables as a result of the Company's accelerated monitoring of payment collection from employers in accordance with the goal. As a result, in 2022, the Company's cash and cash equivalents were higher, compared with those as at December 31, 2021.

#### Trade Receivables and Other Receivables

The Company has the policy to set up receivables from the delivery of projects under contracts to the employer. Once the employer completely performs the incoming inspection, the Company will prepare an invoice and submit it to the employer. The Company's trade receivables and other receivables as at December 31, 2022, decreased by 14.62 million Baht from those as at December 31, 2021, or 12.30% due to the decreasing receivables of design-build projects from the aircraft fuel storage tank (T-2306) design project, which was nearly completed in 2022, resulting in the decrease in the outstanding receivables of this project compared with the year 2021, and the receivables of several conceptual and detailed design projects closed in 2022.

#### Contract Assets

The Company recognized the contract assets when the Company recognized revenues from the performance of obligations under contracts prior to receiving payments or reaching the payment due under contracts. As at December 31, 2022, the contract assets increased from 196.13 million Baht to 297.21 million Baht or increased by 51.54%, compared with those as at December 31, 2021. The contract assets will be transferred to trade receivables once the Company has fully performed operations under the contractual agreement with the employer. However, the Company will issue an invoice according to the period or progress specified in the contract, which is usually within 1 year.

#### Other Current Assets

As at December 31, 2022, the Company's other current assets decreased by 8.77% from the year 2021 or decreased from 52.06 million Baht to 47.50 million Baht. Other current assets include withholding tax, undue input tax, and deposit.

#### Bank Deposits with Guarantee Obligation

As at December 31, 2022, the Company's deposits with guarantee increased by 38.29% from the year 2021 or increased from 53.49 million Baht to 73.97 million Baht. The Company used

abovementioned bank deposits as collateral for the application for credit limits in the type of letter of guarantee under any project contracts and as collateral for short-term loans with the banks

#### Other Non-Current Financial Assets

As at December 31, 2022, the Company's other current financial assets decreased by 11.16% from the year 2021 or decreased from 55.51 million Baht to 49.31 million Baht. As, in 2022, the Company set allowances for impairment of investments in the ordinary shares of Fuel Pipeline Transportation Limited (FPT), the Company's other non-current financial assets as at December 31, 2022 decreased, compared with the previous year.

#### Property, Plant, and Equipment

As at December 31, 2022, the Company's property, plant, and equipment increased by 4.22% from the year 2021 or increased by 13.86 million Baht to 14.44 million Baht. This was because the Company invested in the purchase of vehicles, additional building improvements, tools, office supplies, and office equipment. The Company deducted depreciation in accordance with the accounting policy specified by the Company, resulting in an increase in the Company's property, plant, and equipment from the previous year.

#### Other Non-Current Assets

As at December 31, 2022, the Company's other non-current assets increased by 13.25% from the year 2021 or increased from 0.24 million Baht to 0.27 million Baht. The Company's other non-current assets include other guarantees, such as guarantees for electricity meters, performance bond, and any deposits relating to the Company's operations.

### Liabilities

As at 31 December 2022, the Company had the total liabilities of 367.71 million Baht, increased by 75.13 million Baht or 25.68% from the year 2021. They were divided into the current liabilities of 345.55 million Baht and the non-current liabilities of 22.16 million Baht, or accounting for 93.97% and 6.03% of total liabilities, respectively. The significant items were as follows:

#### Trade Payables and Other Payables

As at December 31, 2022, the Company's trade payables and other payables were 226.62 million Baht or accounting for the proportion to the liabilities and total shareholders' equity of 29.27%. The value of liabilities and shareholders' equity increased by 30.91 million Baht or 15.79% compared with the end of the year 2021. The increasing trade payables were the result of the



increasing workload, especially the increasing trade payables in design-build projects and the implementation of large-scale design-build projects in 2022. These resulted in increasing trade payables.

However, other payables increased because the Company had more liabilities with guarantee obligations due to the deposit of guarantees of sub-contractors.

#### Contractual Liabilities

The Company recognizes contractual liabilities upon receiving payments from customers or reaching the payment due under contracts before the Company fulfilled its obligations under contracts. As at December 31, 2022, the Company's contractual liabilities were 62.59 million Baht or accounting for 8.08% of the total liabilities and shareholders' equity. The value of contractual liabilities increased by 34.45 million Baht or 121.69% compared with the end of the year 2021. The contractual liabilities of the Company derived from the difference between the amount collected from the project owner and the work in progress of the Company. In the event that the amount collected from the project owner is greater than the work in progress of such project, such amount will be recognized as contractual liabilities.

#### Other Current Liabilities

As of December 31, 2022, the Company's other current liabilities increased by 15.64% from the year 2021 or increased from 7.27 million Baht to 8.41 million Baht. Other current liabilities include Revenue Department payables and deferred output tax.

#### Shareholders' Equity

As at December 31, 2022, the total shareholders' equity of the Company was 406.42 million Baht or 52.50% of the liabilities and total shareholders' equity. The value of shareholders' equity as at December 31, 2022 increased from 378.99 million Baht as at December 31, 2021 to 406.42 million Baht, or increased by 7.24%, because the Company's operations generated net profit in 2022.

#### Cash flows, Liquidity, and Significant Financial Ratios

For the year ended December 31, 2022, the Company's net cash inflow was 7.99 million Baht, changing from the end of the year 2021 where the net cash outflow was 81.07 million Baht, due to the cash from operating activities. The Company's profit before income tax increased from 18.52 million baht in 2021 to 40.76 million in 2022. The Company's trade receivables and other receivables decreased as the Company accelerated the payment collection from employers. As a

result, the Company's net cash from operating activities in 2022 was higher than the previous year. In addition, the Company's overall trade payables increased as a result of increasing costs incurred in line with increasing revenues from service. As a result, the Company's current ratio decreased from 2.01 times at the end of the year 2021 to 1.81 times at the end of the year 2022 and the quick ratio decreased from 1.03 times at the end of the year 2021 to 0.78 times at the end of the year 2022, which was considered the good level.

Since the Company operates the business of engineering consultation and design-build services under the signed contracts, the Company does not have finished goods as inventory. As a result, the average inventory period is not applied to the Company's cash cycle calculation.

In 2022, the Company's average payment period for its trade payables slightly increased to 58 days and the average collection period decreased to 45 days, as revenues from service in the design-build revenues increased significantly from the delivery of large-scale projects based on the success of projects. After the employer performed the incoming inspection, the Company could issue an invoice within the specified period and successfully collect debts from the trade receivables based on the goal. As a result, the Company's average collection period decreased.

In 2022, the Company's return on equity ratio decreased from 3.86% in 2021 to 8.26% in 2022 as a result of the increasing workload. This caused an increase in the Company's revenues and net profit.

The Company's debt-to-equity ratio (D/E Ratio) was 0.90 times as at December 31, 2022, increased from 0.77 as at December 31, 2021, due to the increase in trade payables and other payables. As a result, the Company's debt equity and debt-to-equity ratio increased from the end of the year 2021.

When considering the debt-to-equity ratio by using interest bearing liabilities in the calculation, it was found that, as at December 31, 2022, the Company had the interested bearing debt to equity ratio of 0.01%, which was not different from the previous year. Liabilities of the Company consisted of; 1) Car hire-purchase payables, and 2) Photocopier lease payables.

Cash Flow and Key Financial Ratios	Year 2021	Year 2022	Increase (Decrease)
<b>Net Cash (Million Baht)</b>			
Net cash at the beginning of the year	238.84	157.77	(81.07)
Cash flows from operating activities	(22.97)	21.87	44.84
Cash flows from investment activities	(53.37)	(18.01)	35.36

Cash Flow and Key Financial Ratios	Year 2021	Year 2022	Increase (Decrease)
Cash flows from financing activities	(4.73)	4.14	8.87
Net cash at the end of the year	157.77	165.76	7.99
<b>Liquidity (Times)</b>			
Ratio of working capital	2.01	1.81	(0.20)
Quick ratio of liquidity	1.03	0.78	(0.25)
<b>Ability to Pay Off Debt (Times)</b>			
Debt-to-Equity Ratio	0.77	0.90	0.13
Interest-bearing debt to equity ratio	0.01	0.01	0.00
Interest coverage ratio	(55.50)	37.58	93.08

Please be informed accordingly.

Yours sincerely,

(Mr. Rathawit Na Lamphun)

Assistant Chief Executive Officer and Company Secretary

Index International Group Public Company Limited