

# SAVE EARTH, SAFE US WITH **SMART BUSINESS**



Sustainability Report

# 2019

AMATA CORPORATION PUBLIC COMPANY LIMITED

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## VISION

“Creating Perfect Cities where possibilities happen”

## MISSION

“Committed to creating a culture of ALL WIN for our stakeholders by expanding new frontiers and exploring innovation to build a Smart City that enriches quality of life”

## Business Philosophy

# ALL WIN

## Corporate Culture – AMATA DNA

### D

#### Dependable

- Being professionalism
- Adhering to code of ethics
- Credible
- Reliable

### R

#### Responsive

- Fast and accurate responding
- Being responsible to stakeholders & environment

### I

#### Innovative

- Promoting innovation in products and services including working process improvement

### V

#### Visionary

- Having long term projection
- Creating opportunities for everyone

### E

#### Efficient

- Working with high standard and excellent team

## Message from Chairman



**“AMATA is committed to develop the Perfect Smart City in order to develop the Thai economy to grow along with maintaining the balance between the industry and the surrounding communities to live together with quality, creating the opportunities and access to all groups of stakeholders by integrating the sustainable development approaches into the Company’s business development plan in conjunction with an adoption of innovation and technology to enhance the efficiency of operations and reduce the environmental impacts striving to become a Low Carbon City in 2040 according to SAVE EARTH, SAFE US concept in order to respond to the global changes, especially the intensifying climate change; additionally, to support the UN Sustainable Development Goals (SDGs) in another way. Moreover, AMATA is still committed to strictly operate the business in accordance with the ALL WIN philosophy in order to create the sustainable value for economy, society and environment at the community, national and global levels which is our main mission that has always given AMATA great pride.”**

In 2019, the Company has totally 9 industrial estate and urban development projects, 3 projects increased from 2018; namely, AMATA Service City Long Thanh 1 and AMATA Service City Long Thanh 2 in Vietnam, as well as, Yangon AMATA Smart and Eco City in Myanmar. These projects have been developed in accordance with the sustainable development framework emphasizing on the business growth along with the use of resources for maximum benefits and the efficient environmental management

by having been designed according to the principles of Smart City Design equipped with modern technology in order to be a “Livable City” for everyone.

One of the arising challenges in moving towards being a leading smart city in this region is human capital development to sufficiently meet the demand by having the skills, knowledge and capability consistent to the future industry (New S-Curve). In 2019, the Company, therefore, had opened the DEPA AMATA Smart Classroom and AMATA Smart City Showcase in collaboration with the Digital Economy Promotion Agency (DEPA) to be a learning center for potential development of the Company’s personnel, the personnel of the factories in AMATA Industrial Estates and the general public, and the Company also started the Edu-town and Medi-town Projects resulted from the collaboration between the educational institutions and the industrial sector in development of human capital and labor skills needed for the targeted industries in the Eastern Special Development Zone.

Since the Company is well aware of the importance of engagement in helping to reduce the greenhouse gas emissions, which is the main cause of climate change, the Company has continuously implemented the Smart Energy and Smart Environment Projects under the “SAVE EARTH, SAFE US” concept. Additionally, the Company has encouraged and supported the factory operators in its industrial estates to realize and participate in reducing the greenhouse gas emissions including helping to develop the neighboring communities in

wastewater and waste management so that AMATA City will be able to achieve its goal of being a low carbon city in 2040.

With our commitment to operations and the dedication of our executives and employees of all levels including the cooperation and the support from all groups of stakeholders, it is obvious that the Company has continuously developed in accordance with the main strategy to drive the organization towards sustainability causing the Company being listed on the Thailand Sustainability Investment (THSI 2019) for 2<sup>nd</sup> year consecutively and being awarded the 2019 Highly Commended Sustainability Excellence from the Stock Exchange of Thailand. In addition, both AMATA industrial estates in Thailand have been certified to be Eco-Industrial Towns at Eco-Excellence: E2 Level. Also in this year, the Company has been awarded an Eco-Industrial Estate 4.0 regarding the Smart Water Management as well.

Lastly, on behalf of our Board of Directors, all executives and employees, I would like to express my sincere thanks to everyone for the trust, the support and the encouragement to our Company to grow steadily. We will further continue striving to operate the business with “ALL WIN” philosophy for continuous development and sustainability in all sectors.



**Vikrom Kromadit**

Chairman  
and Acting Chief Executive Officer

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# Our Pride

2019

7 Awards



SET Awards 2019 in “Highly Commended Sustainability Excellence” granted by the Stock Exchange of Thailand



Member of “Thailand Sustainability Investment (THSI) 2019” selected by the Stock Exchange of Thailand



**“Excellent CG Scoring” in Corporate Governance Report of Thai Listed Companies 2019**

from Thai Institute of Directors



**“Eco-Industrial Town at Eco-Excellence: E2 level”**

for AMATA City Chonburi Industrial Estate certified by the Industrial Estate Authority of Thailand



**“Eco-Industrial Town at Eco-Excellence: E2 level”**

for AMATA City Rayong Industrial Estate certified by the Industrial Estate Authority of Thailand



**“Smart Eco-Industrial Estate 4.0 in Smart Water category”**

certified by the Industrial Estate Authority of Thailand



**Sustainability Report Award 2019 – “Sustainability Disclosure Recognition”**

granted by Thaipat Institute.

# About This Report



AMATA Corporation Public Company Limited (the Company) publishes the sustainability report annually (Disclosure 102-52) to disclose its management approaches and performance in regard to the material topics related to economy, governance, environment, and society including the response to the United Nations Sustainable Development Goals (SDGs) to its stakeholders and public.

This is the sixth Sustainability Report which covers the performance during 1 January to 31 December 2019 (Disclosure 102-50). This report has been prepared in accordance with the GRI Standards: Core Option (Disclosure 102-54).

## Reporting Boundary

(Disclosure 102-45, Disclosure 103-1)

This report presents the performances and operating data of all business units under AMATA Corporation Public Company Limited and its subsidiaries that AMATA holds greater than 50 percent or has management control and also operate their business in AMATA Industrial Estates in Thailand, namely

- AMATA Water Company Limited
- AMATA Facility Services Limited
- AMATA City Rayong Company Limited
- AMATA Summit Ready Built Company Limited
- AMATA Energy Company Limited
- AMATA Kinderworld Education Company Limited



This report excludes the performance of other businesses that AMATA holds less than 50 percent or does not directly participate in their management, or only supervision through their board of directors.

## Reporting Content

In 2019, the Company has improved the materiality assessment to be more efficient and follow GRI standards guidance in order to correctly identify and prioritize the material topics. This year, 14 material topics were identified and similar to the topics disclosed in the previous report. Some topics were renamed to be more appropriate. Two new topics which are climate change and ecological and biodiversity protection were added to this report. The content in this report covers all 14 material topics. The Company also discloses its greenhouse gas emission for the first year in this report. (Disclosure 102-49).

## Assurance of this report

The key contents of the report were reviewed and approved by high-level executives of each department and subsidiary (Disclosure 102-32) to ensure the accurate content and responses to stakeholders. The Company did not use the third party to certify this report, but the environmental performance data has been certified by the private agencies that have been registered with the government agencies to assure that the operation data is reliable, accurate and transparent.

## Contact Point (Disclosure 102-53)

For additional information, any inquiries or suggestions on this report, please contact us at:

Company Secretary Department  
AMATA Corporation Public Company Limited  
2126 Kromadit Building, New Petchburi Road,  
Bangkapi, Huay Kwang, Bangkok  
10310 Thailand

**Tel** : +66 (0) 2 792 0000

**email** : [sustainability@amata.com](mailto:sustainability@amata.com)



# About AMATA

## At A Glance

AMATA Corporation Public Company Limited (Disclosure 102-1), one of Thailand's leading industrial estate developers, was founded on 6 March 1989 and was listed in The Stock Exchange of Thailand in 1997. AMATA specializes in the industrial estate development and entire businesses related to the industrial estate. (Disclosure 102-2). The Company not only develops international standard industrial estates that adhere to strict environmental protection, but also strives to create "A Perfect City" in order to improve quality of life of the people working in the industrial estates and people in surrounding communities, so that they can work and live happily.

At present, the Company operates the industrial estates and jointly invest in land development and urban communities in Thailand and abroad. Our sites are home for global clientele who produce annually almost USD 62 Billion worth of output.

## 9 Existing Projects



**105.26**

Square Kilometer area



**1,358** factories and tenants  
from **30** nationalities



**329,660** people  
working in factories



AMATA Corporation Public Company Limited has its headquarter at 2126 Kromadit Building, New Petchburi Road, Bangkok, Huay Kwang Bangkok 10310, Thailand (Disclosure 102-3)



An office branch is at 700 Bangna-Trad Highway Km.57, A. Muang, Chonburi 20000, Thailand



As of 31 December 2019, the total number of employees in all types was 268. (Disclosure102-7)

## Location of Operations

(Disclosure102-4)



### Yangon AMATA Smart & Eco City

Area: 8.09 sq.km.

Status: Under development

Strategic location in Yangon Region. Located on Yangon Outer Ring developing area connected to infrastructure and transportation network both railway and motorway. 24 km from Yangon International Airport and 386 km from Thai border.



**AMATA**  
CITY HALONG

**AMATA City Halong**

Area (Phase 1): 7.14 sq.km.  
Total Area: 57 sq.km.  
Status: Under development

Strategic location in the North of Vietnam.  
Closed to Deep Sea Port of 30 km, International Airport of 30 km and less than 200 km to China border.

**AMATA**  
CITY BIEN HOA

**AMATA City Bien Hoa**

Area: 7 sq.km.  
No. of factories and tenants: 194  
No. of factories' employees: 49,528

Strategic location on Highway No.1, connecting the South and the North of Vietnam.  
35 km from Ho Chi Minh City Airport,  
33 km to Cat Lai Port and 50 km to Cai Mep Port

**AMATA**  
CITY LONG THANH

**AMATA City Long Thanh**

Area: 4.10 sq.km.  
Status: Under development

**AMATA Service City Long Thanh 1**

Area: 0.554 sq.km.  
Established on 30 August 2019

**AMATA Service City Long Thanh 2**

Area: 0.519 sq.km.  
Established on 30 August 2019

**AMATA**  
TOWNSHIP LONG THANH

**AMATA Township Long Thanh**

Area: 7.53 sq.km.  
Status: Under development

Located in North-East of Ho Chi Minh City around 20 km from Bien Hoa City, along Long Thanh-Dau Giay express way, 10km to new Airport, 20 km from Ho Chi Minh City

**AMATA**  
CITY RAYONG

**AMATA City Rayong**

Area: 27.03 sq.km.  
No. of factories and tenants: 395  
No. of factories' employees: 71,390

Best location for export-oriented companies.  
27 km from Laem Chabang Deep Sea port,  
99 km from Suvarnabhumi International Airport and 114 km from Bangkok

**AMATA**  
CITY CHONBURI

**AMATA City Chonburi**

Area: 43.30 sq.km.  
No. of factories and tenants: 769  
No. of factories' employees: 208,742

In the heart of the Eastern Seaboard, a leading center for industry and manufacturing. 42 km from Suvarnabhumi International Airport, 46 km from Laem Chabang Deep Sea port and 57 km from Bangkok

## Our Business (Disclosure 102-2, 102-6)

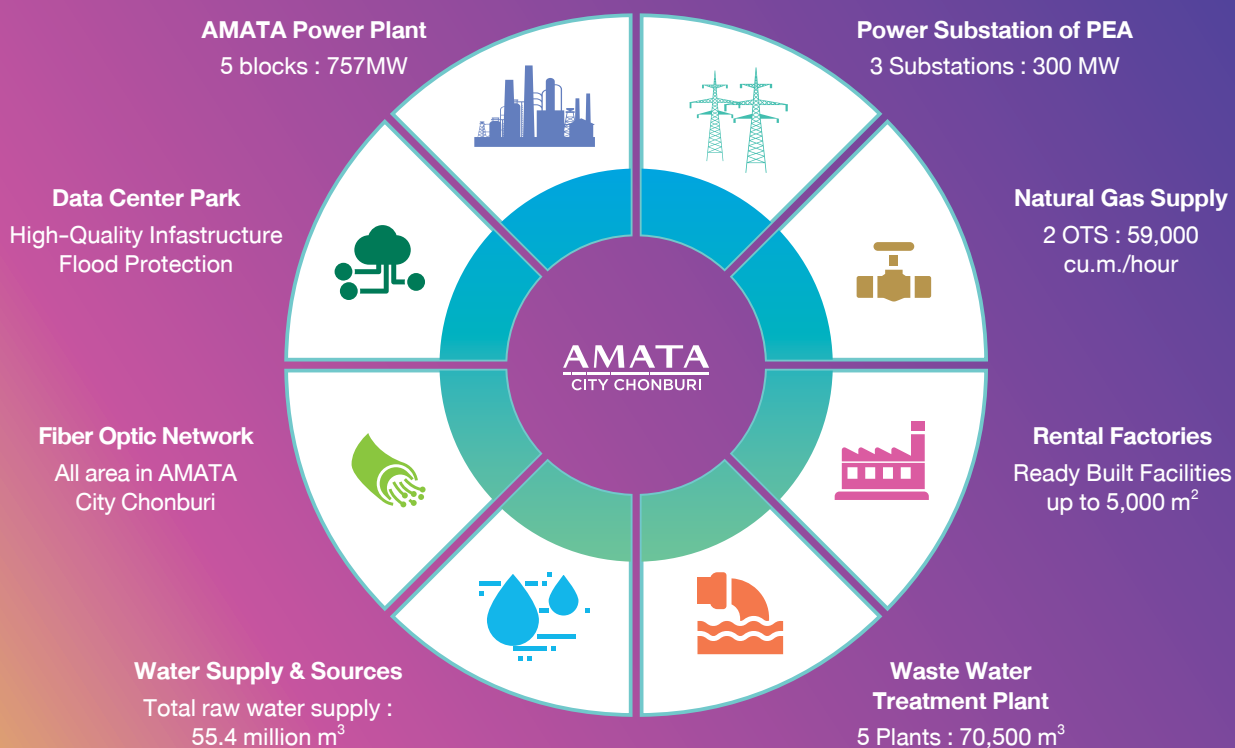


The Company’s businesses have been developed by adhering to the sustainable development policy that focuses on economic development along with a happy coexistence between industry and surrounding communities. The key success factor of AMATA industrial

estates is creating businesses that completely support the investors’ business operation and fulfill the needs of stakeholders in all areas. The types of businesses are categorized as follows:

Industrial Estate Business and Urban Development	Utilities	Services in industrial estates	Investment
<p><b>Industrial Estate</b></p> <ul style="list-style-type: none"> <li>● AMATA City Chonburi</li> <li>● AMATA City Rayong</li> <li>● AMATA City Bien Hoa</li> <li>● AMATA City Long Thanh</li> <li>● AMATA City Halong</li> <li>● Yangon AMATA Smart &amp; Eco City</li> </ul> <p><b>Urban Development</b></p> <ul style="list-style-type: none"> <li>● AMATA Township Long Thanh</li> <li>● AMATA Service City Long Thanh 1</li> <li>● AMATA Service City Long Thanh 2</li> </ul>	<ul style="list-style-type: none"> <li>● Power plant</li> <li>● Water supply plant and distribution for industry</li> <li>● Wastewater treatment plant</li> <li>● Natural gas network and control station for industrial estate</li> <li>● Industrial gas business</li> <li>● Fiber optics network</li> <li>● Renewable Energy business</li> </ul>	<ul style="list-style-type: none"> <li>● Solid waste and industrial waste management</li> <li>● Ready built factory for rent</li> <li>● Logistics and distribution centers</li> <li>● Security</li> <li>● Telecommunication</li> <li>● Maintenance for office and factory</li> <li>● Hospital</li> <li>● Education</li> <li>● Residential</li> <li>● Commercial</li> </ul>	<ul style="list-style-type: none"> <li>● AMATA Asia</li> <li>● AMATA VN</li> <li>● AMATA Global</li> <li>● AMATA Energy</li> <li>● AMATA Asia (Myanmar)</li> </ul>

## Infrastructure and utilities at AMATA City Chonburi Industrial Estate



## Services in urban area at AMATA City Chonburi Industrial Estate



**AMATA Mansion**  
5-Floor, Condominium 168 Unit



**Satit Kaset Laboratory School**  
Grade 1-12



**AMATA Spring Country Club**  
18 hole world class golf club



**AMATA Vibharam Hospital**  
a 200-bed hospital with specialist services



**AMATA Singapore International School**  
Education Grade 1-6,  
English Program



**Financial Street**  
9 Major Banks  
and leasing companies

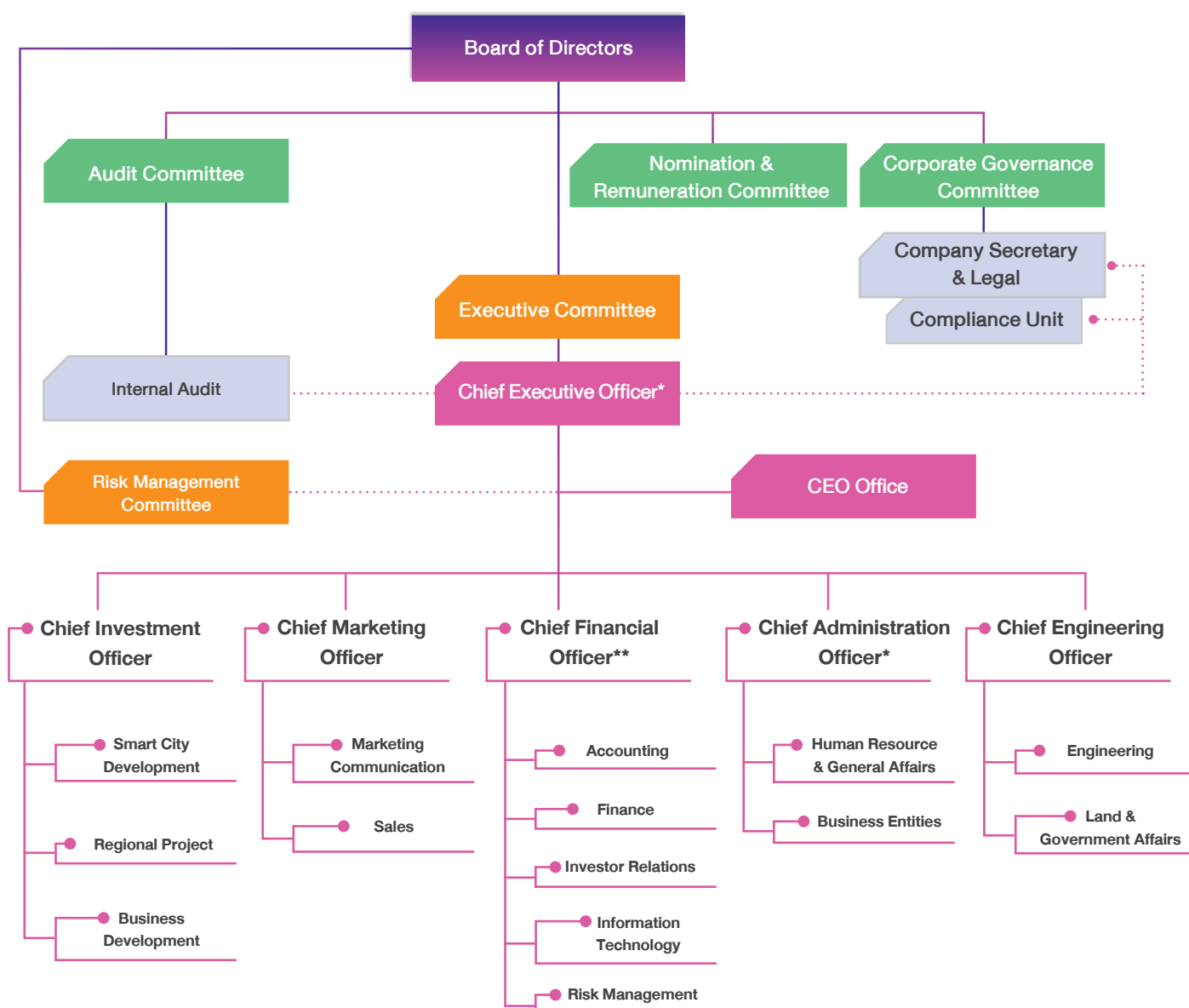
# Shareholding Structure (Disclosure102-5)



## Organization Structure (Disclosure102-18)

The corporate structure of AMATA Corporation Public Company Limited consists of the Board of Directors and 4 subcommittees which were appointed by the Board of Directors to effectively support their works. The 4 subcommittees are:

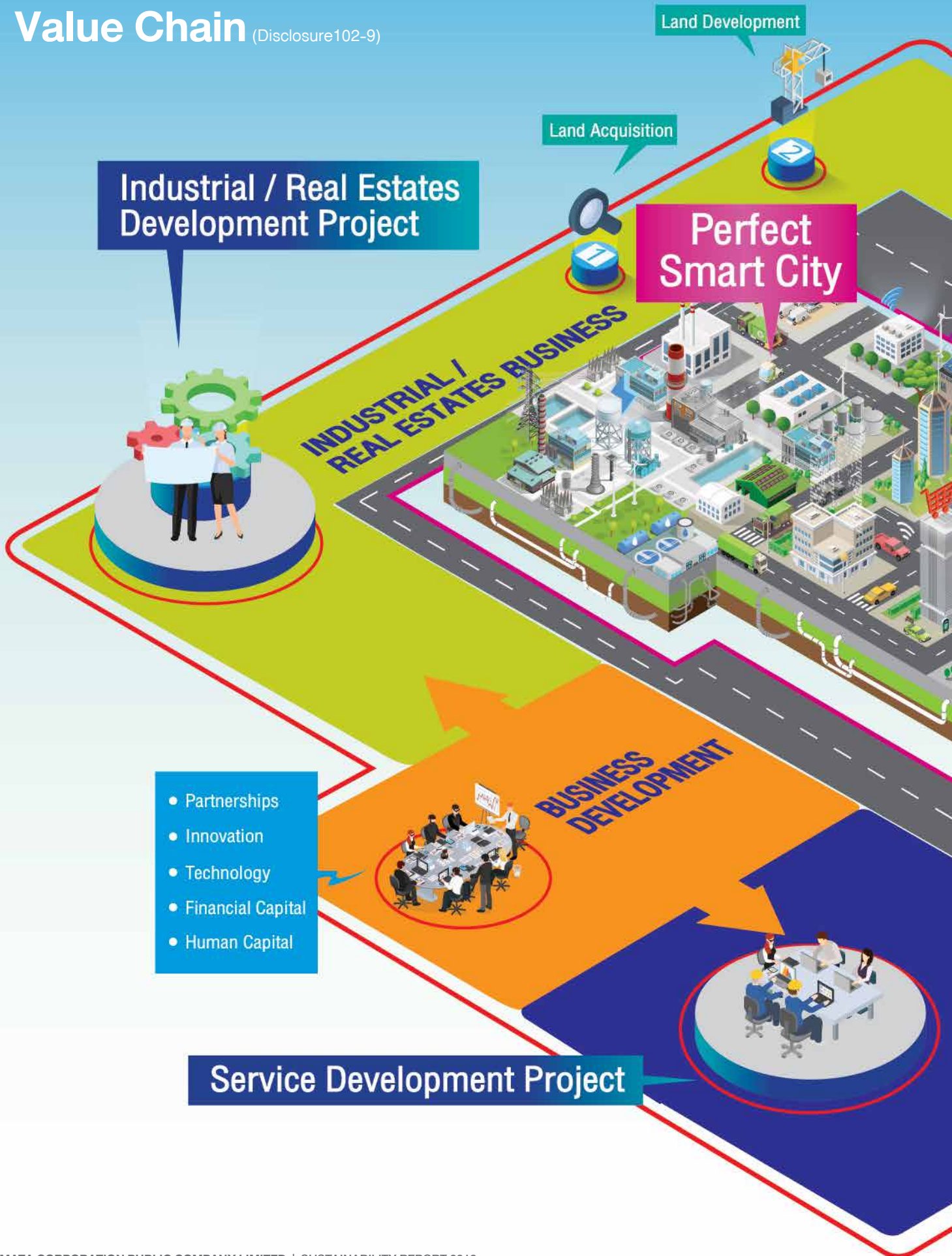
- (1) Executive Committee
- (2) Audit Committee
- (3) Nomination and Remuneration Committee
- (4) Corporate Governance Committee



\* In 2019, Chairman of the Board of Directors was Acting Chief Executive Officer and Acting Chief Administration Officer.

\*\* Senior Vice President - Accounting & Tax, Finance & Treasury, Investor Relations and Information Technology performing duties on behalf of Chief Financial Officer.

# Value Chain (Disclosure102-9)



**Industrial / Real Estates Development Project**

Land Acquisition

Land Development

**Perfect Smart City**

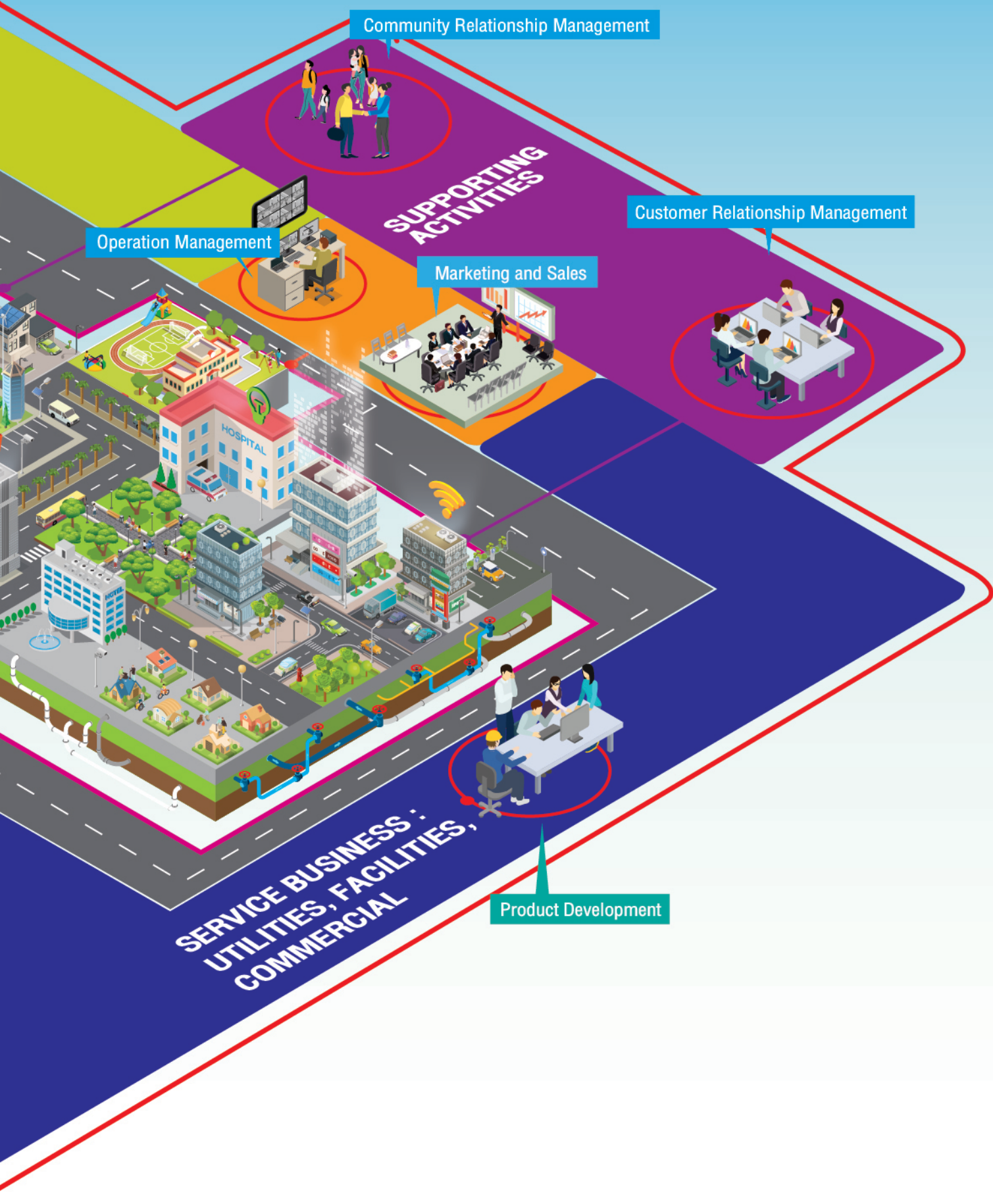
**INDUSTRIAL / REAL ESTATES BUSINESS**

**BUSINESS DEVELOPMENT**

- Partnerships
- Innovation
- Technology
- Financial Capital
- Human Capital

**Service Development Project**





## Membership (Disclosure102-13)

### AMATA Corporation Public Company Limited

	Organization	Status
1	Australian - Thai Chamber of Commerce	Member
2	British Chamber of Commerce Thailand	Member
3	German - Thai Chamber of Commerce	Member
4	Korean - Thai Chamber of Commerce	Member
5	Malaysian - Thai Chamber of Commerce	Member
6	Singapore - Thai Chamber of Commerce	Member
7	The American Chamber of Commerce in Thailand	Member
8	Thai - Japanese Association	Member
9	Thai Industrial Estate and Strategic Partner Association	Member
10	Thai Listed Companies Association	Member
11	The Federation of Thai Industries	Member
12	Personnel Management Association of Thailand	Member

### Subsidiaries

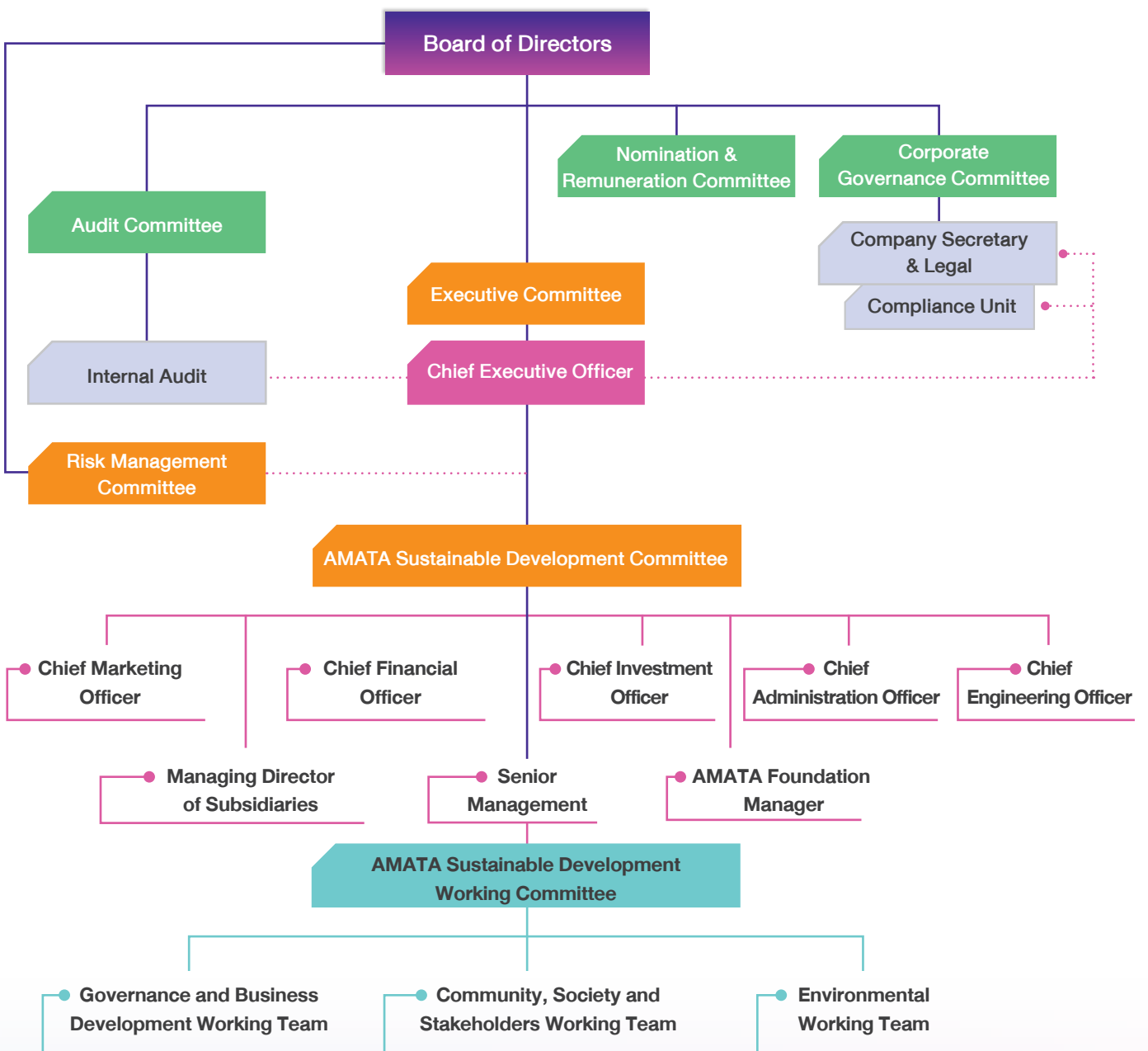
	Organization	Status	Country
1	Thai - Vietnam Business Council	Member	Vietnam
2	Thai - Vietnam Friendship Association	Member	Vietnam
3	Thai Business (Vietnam) Association	Member	Vietnam

# AMATA Sustainable Development

The Company emphasizes on an involvement of all sectors within the organization in the development of the Company's sustainability. Therefore, the Board of Directors, management and employees are set to jointly move the development in economic, social and environmental aspects. Knowledges and understanding as well as strong culture that support the operation are also created to ensure the sustainability can actually be established.

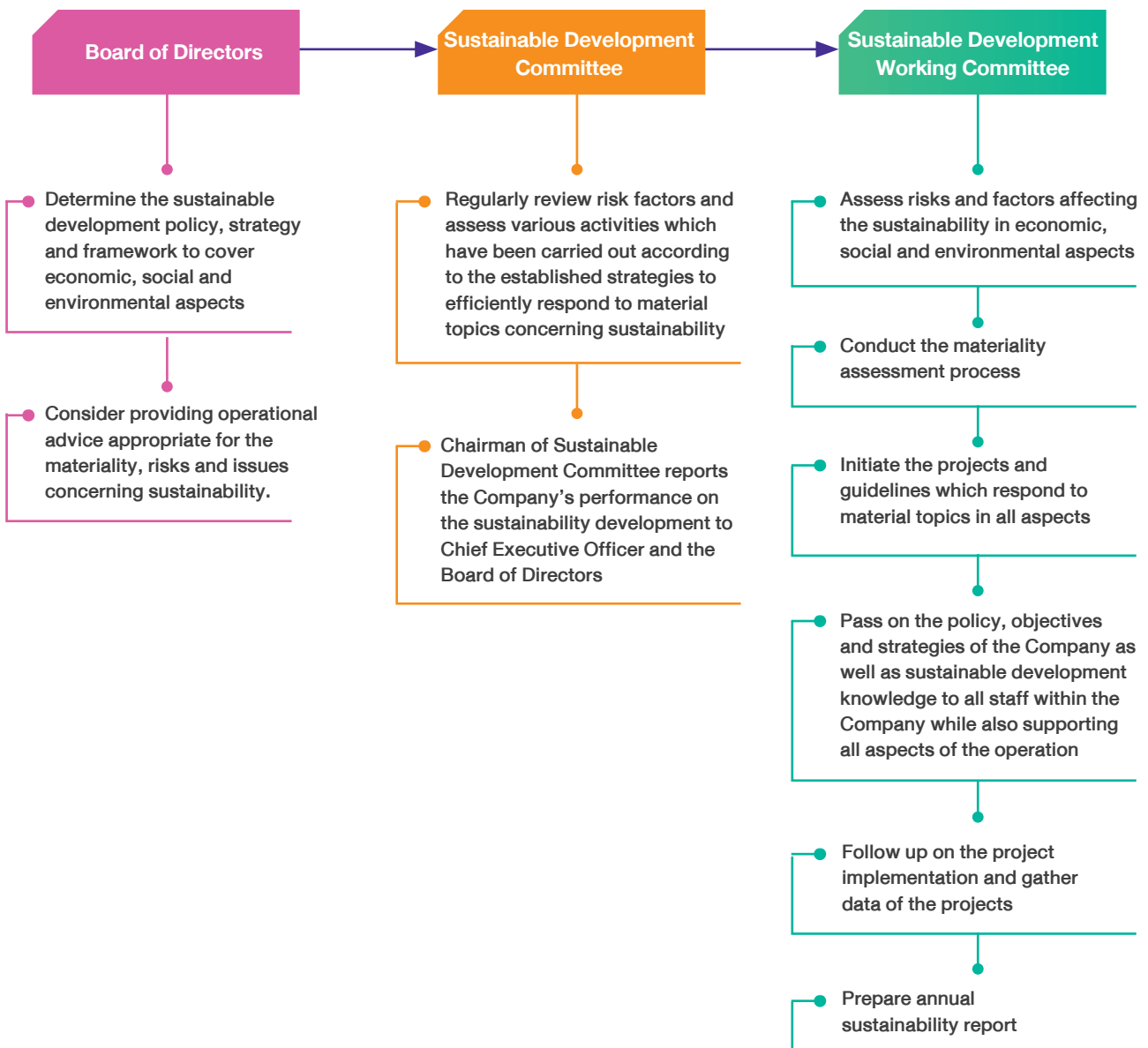
Moreover, consciousness on the responsibility to all stakeholders, society and environment is built to bring about the stability and sustainability of the business and society as a whole going forward.

The organization's sustainability management framework is set forth below (Disclosure 102-19, 102-20):



The Company has set up AMATA Sustainable Development Committee, comprising the management from the departmental level and above. AMATA Sustainable Development Working Committee consists of representatives from all departments of the Company and its subsidiaries (Disclosure 102-19,102-20) under supervision and monitoring by the Chief Executive Officer to jointly drive the projects gearing towards the sustainability of the Company.

The Company has driven the sustainable development in three levels which covers the operation of all three levels, i.e. economy, society and environment. The Company has considered risk factors from internal and external changes, global trends and mega forces which may impact the Company and stakeholders and also considered the stakeholders' needs and expectations to set targets, develop strategies and plans to efficiently respond to the material sustainability topics.



The Sustainable Development Working Committee meets on a quarterly basis while the Governance and Business Development Working Team, the Community, Society and Stakeholders Working Team and the Environmental Working Team meet at least once a month for the continuity of the operation.

## Sustainable Development Principle and Framework (Disclosure 102-16)

### “ALL WIN”

Everyone **SUCCEEDS**  
 Friendly to **ENVIRONMENT**  
 Responsible to **SOCIETY**  
 Walking **TOGETHER**

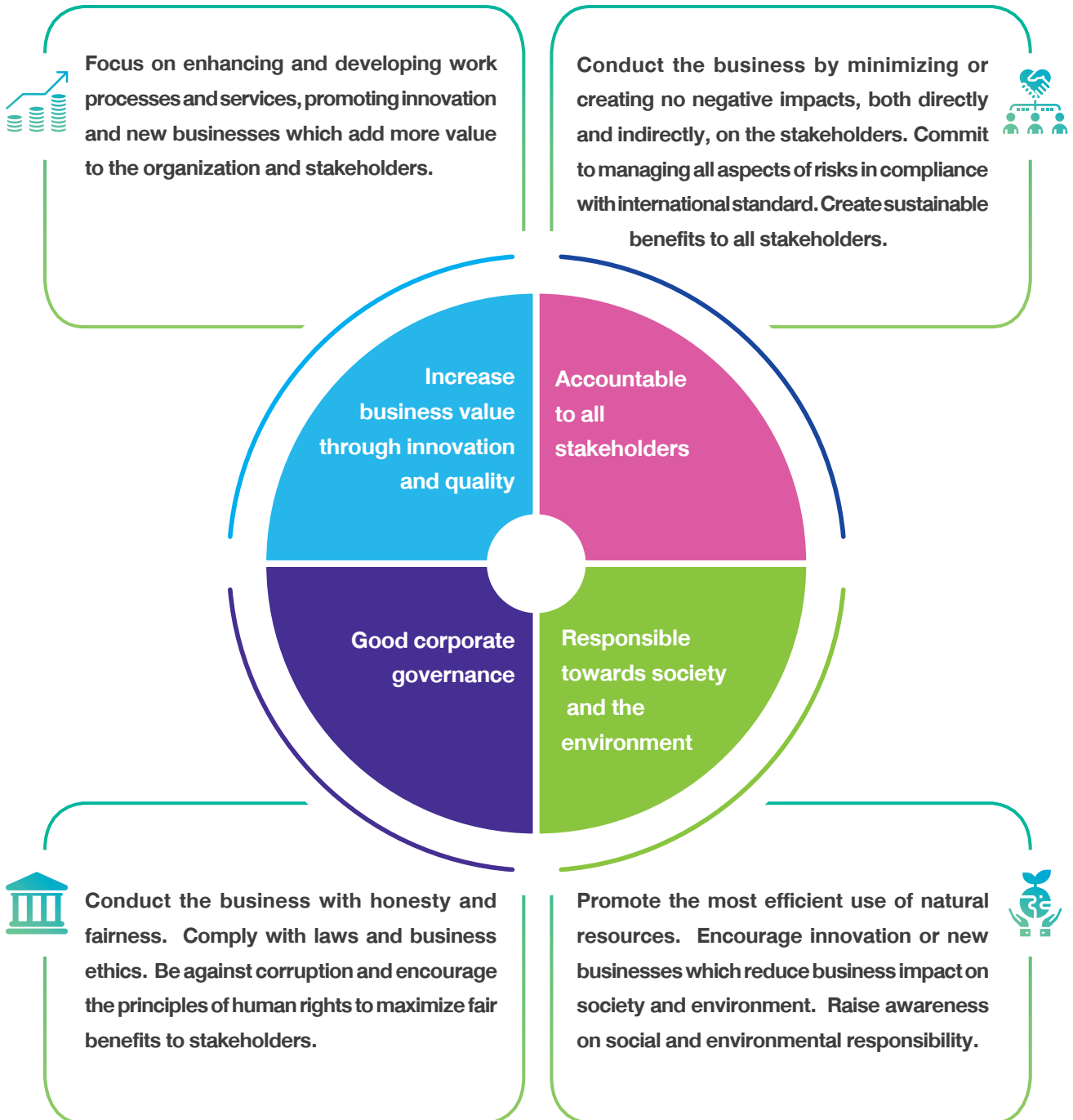


The Company is determined to grow its business and socio-economy together with good coexistence between the industries and surrounding communities on the basis of responsibility to natural resources and environmental preservation. As large industrial cities consume a lot of resources by nature, it thus directly and indirectly causes both positive and negative impacts on the economy, society and environment. Therefore, the Company has been operating strictly according to the **“ALL WIN”** philosophy. The Company does not only focus on its own interests but also recognizes the importance of all stakeholders in the value chain e.g. employees, customers, suppliers, business partners and the surrounding communities including society, natural resources and environment as a whole.

The Company has developed its management approaches from material sustainability topics, leading to the change of policies, management standards or additional practices as well as creating innovative processes or new businesses in order to minimize or create no negative impacts on society and environment and to yield long-term value for all stakeholders according to **“ALL WIN”** philosophy.

In addition, the strong corporate culture will enhance the Company to sustainability, as the result, the Company has imprinted management and employees with value, behaviors, and attitudes through **“AMATA DNA”**, consisting of 5 principles which are Dependable, Responsive, Innovative, Visionary and Efficient, which will drive the Company to grow steadily and sustainably.

The Company’s “ALL WIN” philosophy is the foundation of stable and sustainable growth. The “Sustainable Development Policy”, therefore, has been set for AMATA Group as follows:



“AMATA Sustainability Framework” used as a guideline for the Company’s operation maintains a balance of quality living between the industry and society on the basis of social and environmental responsibility



Apart from the policy and operational framework, this year the Company has also adopted other standards as a guideline for sustainable development, e.g. criteria for sustainability assessment of the Stock Exchange of Thailand, ISO standards, GRI Standards, criteria for Eco-industrial estate at Eco-Excellence level as defined by the Industrial Estate Authority of Thailand, in order to enhance all aspects of the Company’s sustainable development.

# Key Strategies for AMATA Sustainable Development

By integrating sustainable development concept into business strategy, the Company has revised its business plans and moves toward being the developer of Smart City in the Eastern Special Development Zone (EEC) aiming to respond to the stakeholders' needs, to be able to cope with global changes and emerging risks more efficiently, and also to create a perfect city which provides opportunities and benefits to all stakeholders, and to develop the business and grow the socio-economy simultaneously with the peaceful co-existence between the industry and surrounding community on the basis of natural resources and environmental conservation. The Company has thus established key strategies for sustainable business as follows:



## 1. Enhancing competitiveness through the Smart City concept

The Company has been transforming its business model from being a developer of an industrial estate used as production base of various industries from other countries to be a leading developer of a smart city in the eastern region of Thailand in order to better meet the requirements of the customers from 12 targeted industries promoted in the Eastern Special Development Zone (EEC). The Company is committed to developing quality products and services in order to differentiate and create a competitive advantage to the Company while adding value to the customers as well as reducing social and environmental impacts.

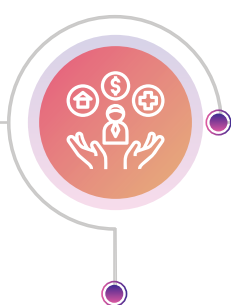
## 2. Growing through strategic business partnerships

The Company sets a strategy to develop new business related to the smart city in order to promptly meet the customers' needs and expectation and to grow with quality through a joint venture with strategic business partners who are well-known and professional in various businesses. This enables the Company to create new products and services that can respond efficiently to customers' needs. This would also be an additional source of revenue and diversify risks from the Company's core business.

## 3. Creating a safe and environmental-friendly society

The Company places an importance on the safety of its stakeholders and the responsibility for natural resources and environment by encouraging the members of the industrial estates and surrounding communities to realize and pay attention to the efficient waste management and natural resources management. In addition, the Company keeps developing its work processes to reduce the impact on society and environment and developing new businesses that can more efficiently utilize natural resources and energy. The Company also discloses its information on practices and the result of natural resources and environmental management in a transparent manner through several channels.

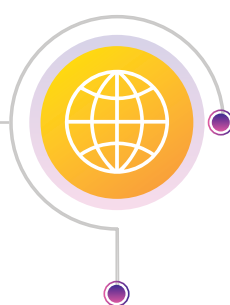




#### 4. Creating opportunities for stakeholders

Businesses developed by the Company at present and in the future could benefit and create opportunities not only for AMATA but also for a wide range of stakeholders inside and outside the Company. The Company promotes the advancement and development of employee learning by providing the employees an opportunity to adjust or rotate their job duties to suit their knowledge and capabilities in order to create job motivation and organizational commitment.

The Company gives stakeholders the opportunity to jointly invest in its new business development in order to solve the problems or meet the needs of customers and people living in and outside the industrial estates. It also provides opportunities for people in and out of the industrial estates to conveniently access to products and services, such as medical care, education, government services, as well as creating jobs for public with the aim to improve quality of life and the community economy in tandem with the Company's growth.



#### 5. Building a decent civil society to create benefits for the society as a whole

The Company places importance on all stakeholders, especially primary stakeholders. The happy co-existence and support of each other are crucial driving forces for sustainable business. A good society within the Company, i.e. the employees which are main resources, will lead the organization to success. Therefore, the Company takes good care of its employees to ensure that they are happy at work and provides them both skill and mental development in order to collaboratively create valuable work and contribute to the external society.

The external civil society is a collaboration among customers within the industrial estates and surrounding communities together with local government entities to create collective impacts with the same target and understanding in the role of each other, to minimize resistance and to encourage cooperativeness on doing good things for a better society as a whole.

# Challenges and Opportunities



## 1. U.S.–China trade war

The current trade war between the United States and China brings both challenges and opportunities for Thailand. Trade conflicts between the two countries are increasing due to the imposing tariffs of each other's goods. Beside the direct effect to the U.S. and Chinese economy, the trade war between the world's two largest economies also threatens to derail global supply chains and world economy and causes the delay of investment decision making. The industries affected by this trade war, such as automobile, machinery, electronics, chemicals, products, technology / telecom, aerospace, have been considering the new production bases or other raw materials sources outside

China to diversify the risks that may arise from this issue. The countries in Southeast Asia are in the interest of these industries. This would bring more business opportunities to the Company.

After the easing of the U.S.–China trade war in late 2019, the global impact from the U.S.–China trade war is expected to be gradually decreasing which will help the global economy and industrial sectors recover next year. (source: The Economic Intelligence Center (EIC) of Siam Commercial Bank Public Company Limited, 18 December 2019).

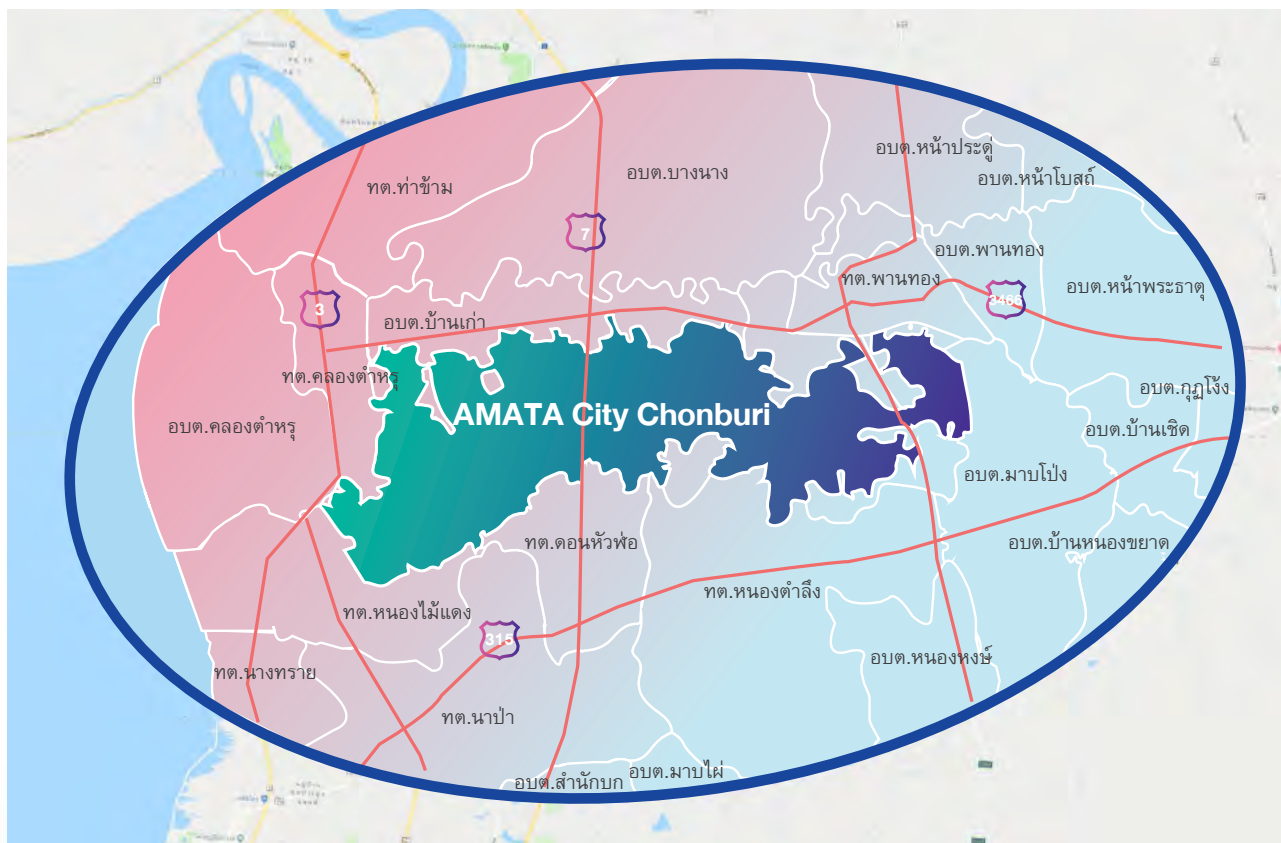
## 2. Population Growth

The development of AMATA Industrial Estates in Chonburi and Rayong provinces causes the economic growth and social changes in the industrial estates and the surrounding area. Those directly affected by the Company's business are the surrounding local communities. Therefore, the Company closely pays attention to and care for the local communities in the radius of 5 kilometers away from AMATA Industrial Estates in order to reduce the negative impacts that may occur and strengthen the relationship for a sustainable co-existence.

AMATA City Chonburi Industrial Estate currently has an area of over 43 square kilometers covering 5 districts

and 23 subdistricts in Chonburi and Chachoengsao provinces. There are 212 villages within the radius of 5 kilometers from the boundary of the project covering the area of more than 260 square kilometers. The registered population at present is approximately 303,822 people but the total population including non-registered population who migrate to work in the industrial estate are 685,382 people (source: The Department of Provincial Administration, Ministry of Interior, Population and House Statistics Report for the year 2019). As of 31 December 2019, the number of employees in the factories within AMATA City Chonburi Industrial Estate was over 200,000 people.

Figure demonstrating location of AMATA City Chonburi



**2 provinces    5 districts    23 subdistricts    212 villages**

AMATA City Rayong Industrial Estate currently has an area of 27 square kilometers covering 4 districts and 6 subdistricts in Chonburi and Rayong provinces. As of 31 December 2019, the number of employees in the factories within AMATA City Rayong Industrial Estate was over 71,000 people. There are 19 villages and approximately 100,552 registered people living in the area within the radius of 5 kilometers from the boundary of the project (source: The Department of Provincial Administration, Ministry of Interior, The Statistics of Civil Registration System for the year 2019).

Increasing population in these areas creates both opportunities and problems that are extremely challenging for sustainable development in social, economic and environmental dimensions. Therefore, the Company has consistently surveyed its impacts and obtained an opinion from the community within and outside the industrial estates on a regular basis. It also places importance on the participation of the community in solving social problems. Additionally, the Company promotes the participation of people in and outside the industrial estates in various activities while providing opportunity for everyone to access to the facilities it has developed in order to help raise the quality of life of local community.

Figure demonstrating location of AMATA City Rayong

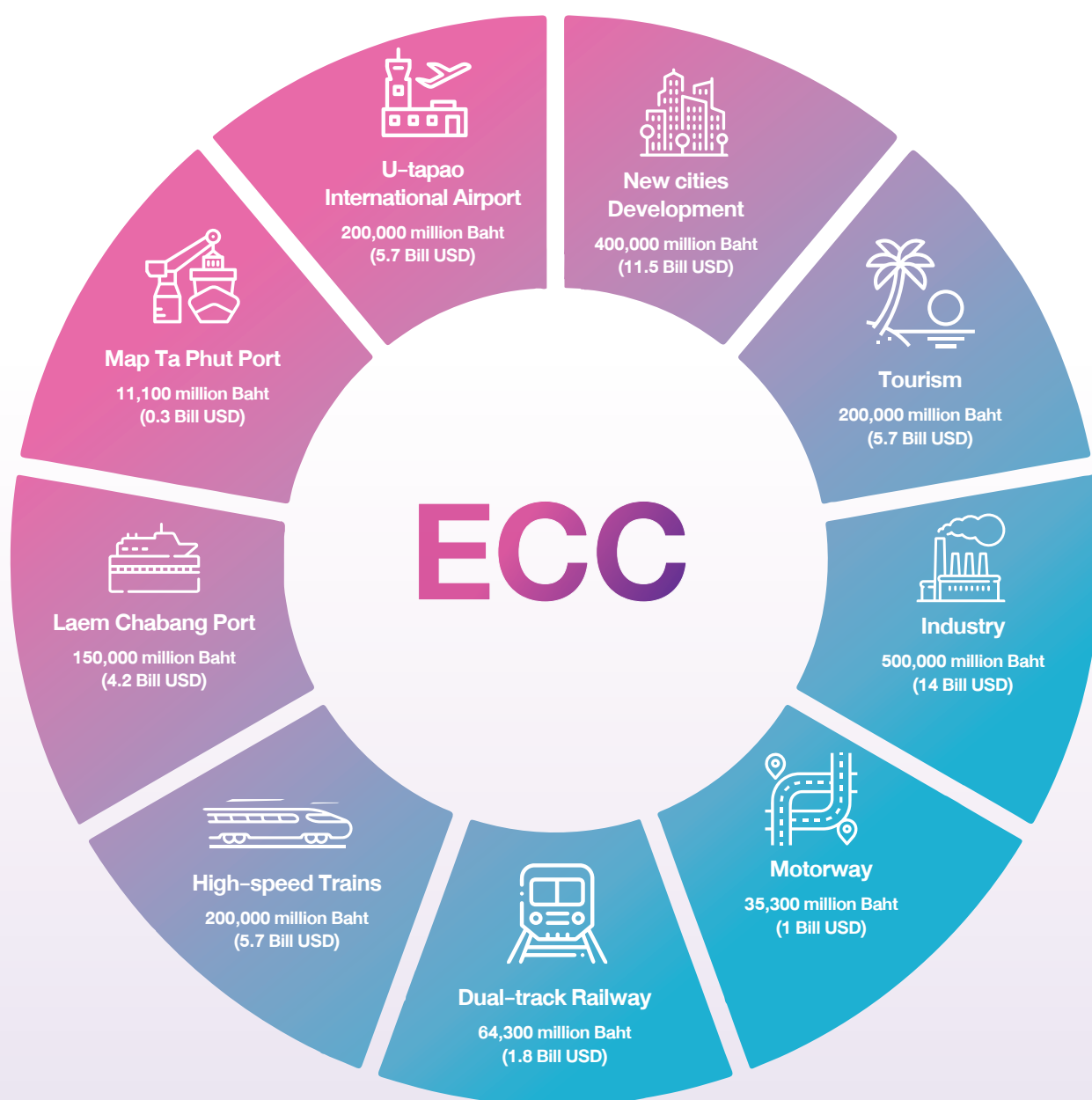


**2 provinces 4 districts 6 subdistricts 19 villages**

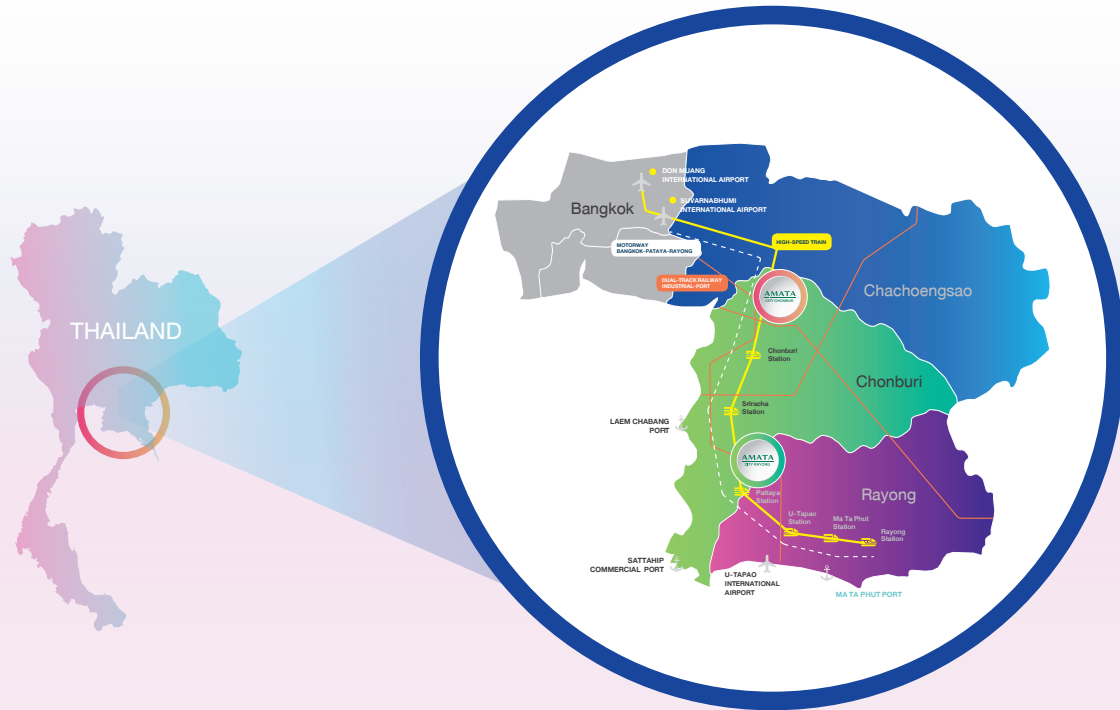
### 3. Eastern Special Development Zone (EEC)

The Eastern Special Development Zone or EEC Project worth over 1.7 trillion Baht was stipulated covering 3 provinces which are Chachoengsao, Chonburi and Rayong. The objectives of EEC Project are to improve infrastructures to support the investment and economic expansion and to facilitate business operation of private sector by intending to transform the EEC into the most advanced economic area in ASEAN.

#### Estimated Public/Private Investment 1.7 Trillion Baht (49.9 Billion USD) in 2017–2022



With high potential as ASEAN strategic location, EEC area could be the linking hub of the north-south and east-west economic corridors. It will also be the linking hub between Indian Ocean and Pacific Ocean as well as countries along Mekong river and the southern part of China.



The Eastern Special Development Zone (EEC) Project aims to attract foreign investment in 12 targeted industries which are next-generation automotive, smart electronics, affluent medical & wellness tourism, food for the future, and agriculture and biotechnology, as well as the five new S-Curve industries which are industrial robotics, aviation and logistics, biofuels and biochemicals, digital, and medical hub. Two additional targeted industries which are national defense industry and education and human resource development were added in late 2018.

On 10 December 2019, the Eastern Special Development Zone Policy Committee announced the land use plan together with the diagram of the development of infrastructure and utility systems in the Eastern Special Development Zone 2019 comes into force. This announcement stipulates principles for the laying and making of land use plans and diagram of the development of infrastructure and utility systems in the Eastern Special Development Zone which makes it clear to the Company's area development. By the area of the Company which has been declared a promotion zone is designated as purple area Land in the area of special economic promotion

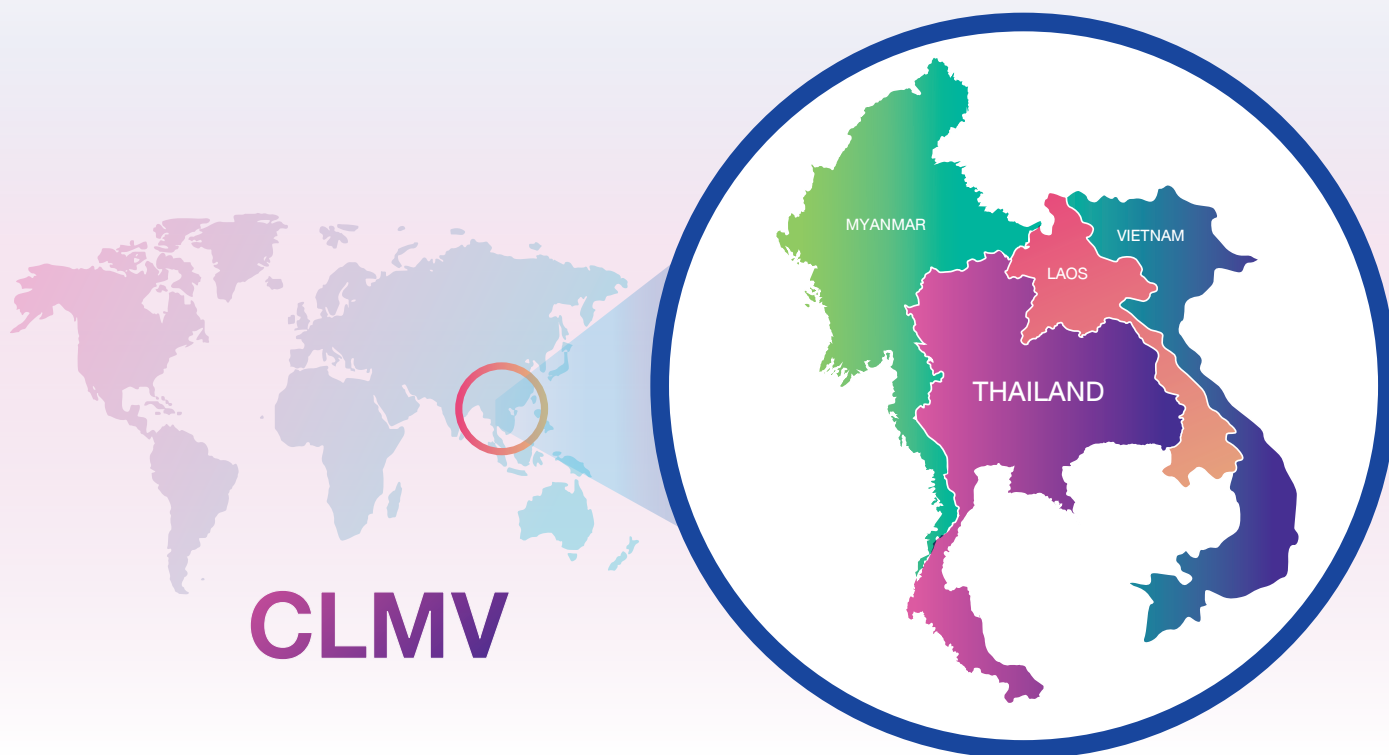
zones for industrial activities. This area zone is able to use the land for industrial, commerce, living, agriculture, government institutions, public utilities, public facilities, research and development and other businesses related to special economic promotion zones for industrial activities.

However, in spite of the increase in business opportunity from the EEC project, economic, social and environmental challenges are expected to follow, e.g. increasing competition in the area, the number of skilled labor and wages, natural resource utilization, industrial waste management, etc.

The Company has set out the strategy to move the business towards smart city developer to increase its competitive advantage, to support demand from both the investors and inhabitants in the area, and to be prepared for the environmental problems. In the previous year, the Company had already commenced several sub-projects under the AMATA Smart City Project in collaboration with business partners.

## 4. Growth of CLMV Countries

The establishment of the ASEAN Economic Community (AEC) during the end of 2015 has brought ASEAN to become an important market for global investors, especially CLMV countries (Cambodia, Laos, Myanmar and Vietnam) due to several factors, e.g. economic growth rate, low labor cost, abundant natural resources, supports from the government of each country in terms of free trade, business facilities, and the establishment of special economic zones with a number of tax privileges to promote investment in production sector.



Moreover, CLMV countries are located at the heart of the ASEAN region which is a connecting point of major trade routes from all corners of the world. CLMV countries have been continuously developing and improving their infrastructure, supported by powerful nations such as China, Japan, and the United States.

These factors, therefore, lead to a continuously high growth rate, likely to be approximately 6 - 7% in 2019, of the economy of CLMV countries. Such high growth is expected to be maintained going forward (source: The Economic Intelligence Center (EIC) of Siam Commercial Bank Public Company Limited). As a result,

CLMV countries are attractive to the operators who want to reduce costs by moving their production base, causing continual investment from various countries.

The rapid growth of CLMV countries has thus created both challenges for businesses in Thailand and business opportunity for Thai investors to develop new businesses in these countries. The Company, therefore, has adopted AMATA Smart City Development Model in the development of land in CLMV countries to differentiate and create a competitive advantage in industrial estate and land development business.

# Stakeholders



The Company has placed importance on the participation of all stakeholders as a part of our sustainable development process, especially stakeholders in value chain who are both positively and negatively affected by the Company's operations. The Company defines its stakeholders who have got economic, social and environmental impacts by the Company's operations. The Company reviews the identification and level of importance of the stakeholders on an annual basis by considering various factors, for example, dependency, responsibility, influence or other related factors. The stakeholder prioritization is considered by level of impact on stakeholders in economic, social and environmental aspects and by level of impact or influence of stakeholders to the Company. (Disclosure 102-42).



The Company has provided various communication channels to convey opinions from stakeholders administered by the business unit related to the stakeholders, under supervision of AMATA Sustainable Development Committee, to cover all groups of stakeholders. Material topics were analyzed from the expectations, needs, concerns and opinions material to the Company's business and response will be made in various forms as deemed appropriate.


In 2019 the Company continues to classify the stakeholder groups into 10 groups, i.e. employee, shareholder, customer, community, supplier/contactor, business partner, creditor, government agency/ state enterprise, media and competitor (Disclosure 102-40).








## Stakeholder Engagement (Disclosure 102-43, 102-44)

Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
<b>Employee</b> 	<ul style="list-style-type: none"> <li>Annual meeting between top executives and employees</li> <li>Monthly staff meetings</li> <li>Online communication, intranet and email</li> <li>Direct channel to CEO for staff's complaint and suggestions</li> <li>Quarterly meeting of Welfare Committee</li> <li>Annual Employee Engagement Survey</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate compensation and welfare</li> <li>Fair Performance evaluation</li> <li>Security and career advancement</li> <li>Good working environment and atmosphere</li> <li>Development of employee's capability, knowledge and ability</li> </ul>	<ul style="list-style-type: none"> <li>Regularly reviewed and improved compensation and offered appropriate welfare</li> <li>Improved performance evaluation to be more efficient</li> <li>Offered priority to internal employees for job rotations and recruitment for job positions within the group of companies</li> <li>Provided adequate working equipment and creating a safe and happy workplace</li> <li>Organized training courses that meet the needs and keep up with global changes</li> </ul>
<b>Customer</b> 	<ul style="list-style-type: none"> <li>Annual Customer Satisfaction Survey</li> <li>Customer relation activities/ marketing activities</li> <li>Online / Email Communications</li> <li>Face to face meeting</li> <li>Call Center</li> </ul>	<ul style="list-style-type: none"> <li>Good quality of after sales services</li> <li>Customer relation management</li> <li>Traffic problem</li> <li>Environmental impact management</li> <li>Water management</li> <li>Energy management</li> <li>Risk management and crisis management</li> </ul>	<ul style="list-style-type: none"> <li>Supported customers' business operations, such as organizing training courses for customers in accordance with the law</li> <li>Responded to customer complaints effectively</li> <li>Solved traffic problems by collaboration from many sectors and used technology to help manage traffic</li> <li>Strictly complied to environmental laws and regulations</li> <li>Disclosed accurate and transparent information.</li> <li>Developed sustainable water management to ensure water resource is sufficient for all users</li> <li>Developed sources of renewable energy in Industrial estates</li> <li>Conducted risk management process in all aspects. Prepared crisis management plan and emergency response plan including well-trained officers and equipment</li> </ul>

Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
<p><b>Local Community</b></p> 	<ul style="list-style-type: none"> <li>Public hearing and meetings with management</li> <li>Community activities</li> <li>Community satisfaction survey (annual and by activity)</li> <li>Online / Email Communication</li> <li>Other communication Channels for suggestion and complaint.</li> </ul>	<ul style="list-style-type: none"> <li>Traffic problem</li> </ul>	<ul style="list-style-type: none"> <li>Solved traffic problems by collaboration from many sectors and used technology to help manage traffic</li> </ul>
		<ul style="list-style-type: none"> <li>Water management</li> </ul>	<ul style="list-style-type: none"> <li>Developed and enhanced the capacity of reclamation process to reduce the usage of raw water</li> </ul>
		<ul style="list-style-type: none"> <li>Environmental impact management of both the Company and the factories</li> </ul>	<ul style="list-style-type: none"> <li>Disclosed accurate and transparent information of waste management</li> <li>Encourage the factory operators to have efficient waste management</li> <li>Conducted projects to protect and restore ecosystems in the area</li> </ul>
		<ul style="list-style-type: none"> <li>Environmental compliance of both the Company and the factories</li> </ul>	<ul style="list-style-type: none"> <li>Strictly complied to environmental laws and regulations</li> <li>Promoted and ensured that factory operators strictly comply with environmental laws</li> </ul>
		<ul style="list-style-type: none"> <li>Community and social development</li> </ul>	<ul style="list-style-type: none"> <li>Promoted the development for a better quality of life and economy in the communities and society</li> <li>Promoted and provided opportunities for people in the surrounding communities to access education and skill development</li> <li>Built local collaborative networks with stakeholders for community and social development</li> </ul>
		<ul style="list-style-type: none"> <li>Community engagement</li> </ul>	<ul style="list-style-type: none"> <li>Responded to community complaints effectively</li> </ul>
		<ul style="list-style-type: none"> <li>Safety</li> </ul>	<ul style="list-style-type: none"> <li>Disclosed the Company's emergency and crisis management and safety measures</li> <li>Educated and supported communities to be able to cope with emergency situations</li> </ul>

Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
<p><b>Supplier/ Contractor</b></p> 	<ul style="list-style-type: none"> <li>● Face to face meetings</li> <li>● Supplier assessment</li> <li>● Online / Email Communication</li> <li>● Channels for suggestion and complaint</li> </ul>	<ul style="list-style-type: none"> <li>● Good Corporate Governance</li> <li>● Fair business</li> <li>● Fair and transparent procurement process</li> </ul>	<ul style="list-style-type: none"> <li>● Complied with laws and regulations</li> <li>● Conducted transparent and fair procurement</li> <li>● Developed procurement policy and best practices to create sustainable supply chain management</li> </ul>
<p><b>Shareholder/ investor</b></p> 	<ul style="list-style-type: none"> <li>● Annual Shareholder Meeting</li> <li>● Directors' meetings in subsidiaries and associated companies</li> <li>● Opportunity Investment Roadshow</li> <li>● Opportunity Day at SET</li> <li>● Quarterly Investor Meetings</li> <li>● Analyst meetings</li> <li>● Online / Email Communication</li> <li>● Channels for suggestion</li> </ul>	<ul style="list-style-type: none"> <li>● Good performance and continued business growth which creates a sustainable profit</li> <li>● Good Corporate Governance</li> <li>● Risk Management</li> </ul>	<ul style="list-style-type: none"> <li>● Continuously developed new business</li> <li>● Promoted innovations and applied technology in cost reduction</li> <li>● Complied with laws and regulations</li> <li>● Carried out business in a transparent and fair manner</li> <li>● Conducted sustainability risk management process covering economic, social and environmental aspect</li> </ul>
<p><b>Business Partner</b></p> 	<ul style="list-style-type: none"> <li>● Directors' meetings in subsidiaries and associated companies</li> <li>● Face to face meetings</li> <li>● Online / Email Communication</li> <li>● Response to requests for information disclosure or report</li> </ul>	<ul style="list-style-type: none"> <li>● Doing business with integrity and fairness</li> <li>● Collaboration in business development and growing together</li> </ul>	<ul style="list-style-type: none"> <li>● Followed code of business ethics</li> <li>● Developed fair joint venture agreements</li> <li>● Kept confidential information of business partners</li> </ul>
<p><b>Creditor</b></p> 	<ul style="list-style-type: none"> <li>● Analyst Meetings</li> <li>● Face to face meetings</li> <li>● Site visits</li> <li>● Online / Email Communication</li> </ul>	<ul style="list-style-type: none"> <li>● Honoring terms and agreements on loan and debenture contracts</li> <li>● Risk Management</li> </ul>	<ul style="list-style-type: none"> <li>● Strictly followed contract's terms and conditions</li> <li>● Disclosed accurate and complete financial information</li> <li>● Conducted sustainability risk management process covering economic, social and environmental aspect</li> </ul>

Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
<p><b>Agency and State enterprise</b></p> 	<ul style="list-style-type: none"> <li>● Face to face meetings</li> <li>● Participation in and support projects run by the government</li> <li>● Participations in government lead committee as requested</li> <li>● Site visits</li> <li>● Online / Email Communication</li> <li>● Response to requests for information disclosure or report</li> </ul>	<ul style="list-style-type: none"> <li>● Compliance with laws and regulations</li> <li>● Management of social and environmental impacts occurred from the operation of the Company</li> <li>● Good Corporate Governance</li> <li>● Creating value for the economy and society</li> </ul>	<ul style="list-style-type: none"> <li>● Complied with laws and regulations and transparent</li> <li>● Disclosed accurate and complete information</li> <li>● Carried out business in a transparent and fair manner</li> <li>● Engaged with local communities and authorities and supported social and environmental development</li> </ul>
<p><b>Competitor</b></p> 	<ul style="list-style-type: none"> <li>● Meetings with industry's association or organizations</li> <li>● Participate in working team that are relevant to competitors as requested by the government</li> </ul>	<ul style="list-style-type: none"> <li>● Fair and legal competition</li> </ul>	<ul style="list-style-type: none"> <li>● Followed code of business ethics</li> <li>● Collaborated with competitors in activities that benefit customers</li> </ul>
<p><b>Media</b></p> 	<ul style="list-style-type: none"> <li>● Press release</li> <li>● Special interviews as requested</li> <li>● Site visits / Press tours</li> <li>● Response to requests for information disclosure or report</li> </ul>	<ul style="list-style-type: none"> <li>● To receive an accurate and timely information</li> </ul>	<ul style="list-style-type: none"> <li>● Disclosed accurate information based on facts</li> <li>● Maintained long-term relationship with media</li> </ul>

# Materiality

The Company has adopted Global Reporting Initiative standards (GRI standards) as a reference in the process of materiality assessment which covers economic, social and environmental issues affecting the Company and the stakeholders. The assessment is conducted using the information on the tendency of global changes, regional changes and challenges, needs and expectations of the Company's stakeholders, corporate risk management and results from other assessments.

## Process of Materiality Assessment



### 1. Identification of sustainability topics of the Company and stakeholders

The Company collected sustainability topics from the stakeholders both in and outside the organization through various channels and methods appropriate to each group of stakeholders, e.g. meeting, formal and informal interview, questionnaire and engagement survey. Additionally, the Company also summarized the topics material to business operation from the opinions obtained from its management workshops, e.g. organizational risks and other external factors both positively and negatively affecting the Company's business such as the tendency of global and regional changes.



### 2. Material topics prioritization

There were 25 sustainability topics arisen by stakeholders. The Sustainable Development Working Committee jointly categorized to 14 topics and prioritized them by considering the scoring according to the criteria of vertical and horizontal axis with reference to the Global Reporting Initiative (GRI standards) guidelines. Material topics were then identified and put into the Materiality Matrix.

- 1) The vertical axis (Y axis) represents the level of influence on stakeholders' assessment and decisions.
- 2) The horizontal axis (X axis) represents the level of the Company's operational impact on economy, society and environment or the level of importance to the Company.

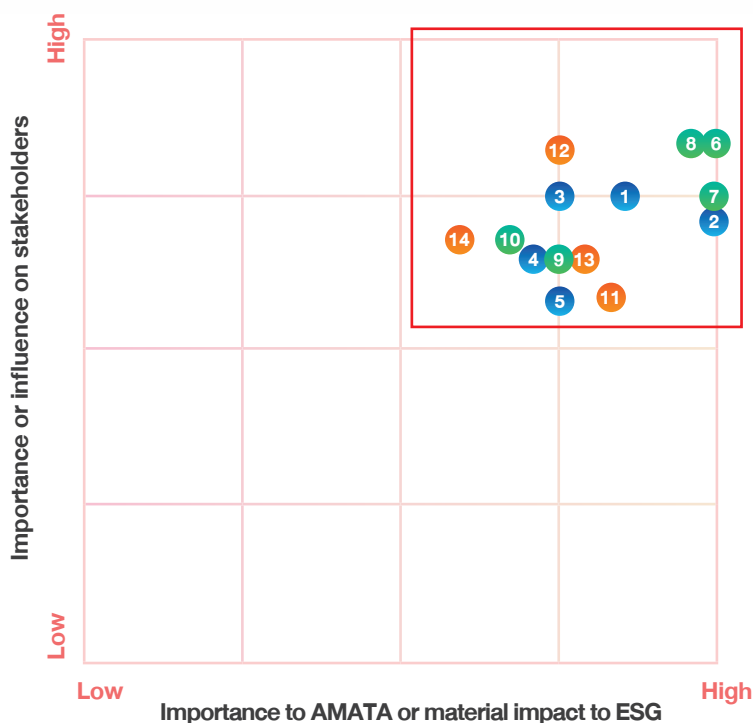
In 2019 the Company had reidentified and reprioritized the material topics to derive the more accurate and clearer material topics. There were totally 14 material topics. Two of them were new topics which are climate change and protection and restoration of ecosystem and Biodiversity.



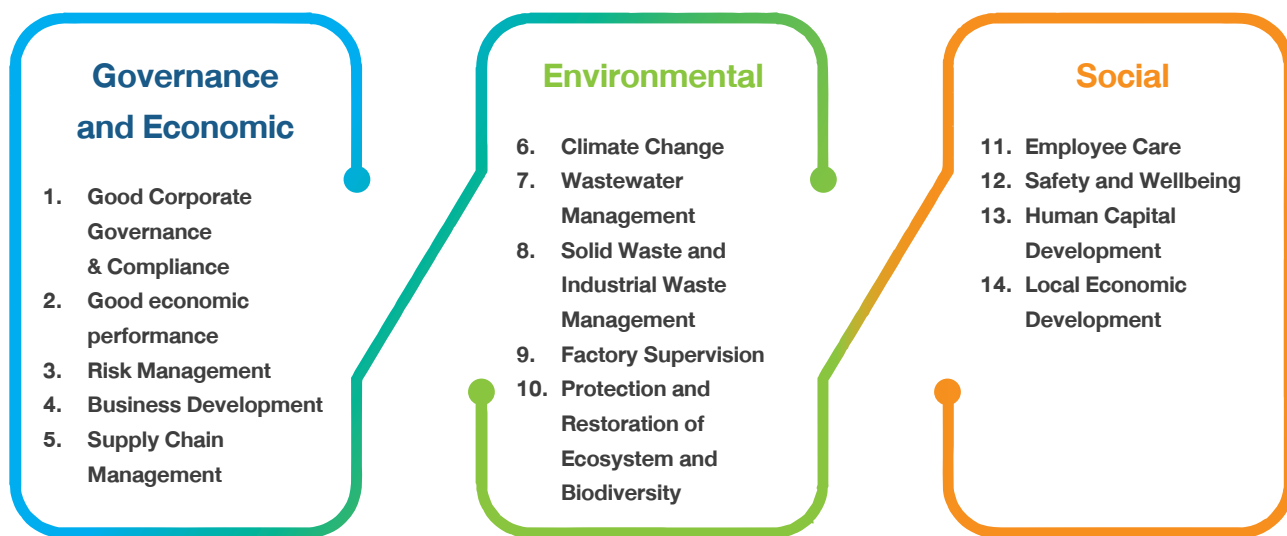
### 3. Material topics validation

The Sustainable Development Committee has approved the material topics and the prioritization of the material topics (Disclosure 102-32), and set out guidelines on feedback provision to the stakeholders on the topics and assigned related management to proceed accordingly. Indicators are also defined to assess the results of the organization, department and project level operations, and are connected with the performance appraisal of related management and employees.

# Materiality Matrix



- Governance and Economic
  - Environmental
  - Social
1. Good Corporate Governance & Compliance
  2. Good economic performance
  3. Risk Management
  4. Business Development
  5. Supply Chain Management
  6. Climate Change
  7. Wastewater Management
  8. Solid Waste and Industrial Waste Management
  9. Factory Supervision
  10. Protection and Restoration of Ecosystem and Biodiversity
  11. Employee Care
  12. Safety and Wellbeing
  13. Human Capital Development
  14. Local Economic Development



The Company has disclosed the management approaches, indicators and operating results of all 14 material topics in this report according to GRI Standards.

# Material Topics and Actions

	Material Topics	Impact Boundary		Report Content
		Internal	External	
Governance and Economic	Good corporate governance and Compliance	Employee	Shareholders	Corporate Governance
			Customer	Business Ethics
			Business partners Supplier/Contractor Government Agencies	Environmental Impact Management
	Risk Management	Employee	Shareholders Customer Business partners Community	Risk Management
	Good Economic Performance	Employee	Shareholders Business partners	Business Growth <ul style="list-style-type: none"> <li>Economic Performance</li> </ul>
Business Development	Employee	Shareholders Business partners Customer Community	Business Growth <ul style="list-style-type: none"> <li>Product and Service Development</li> </ul>	
Supply Chain Management	Employee	Supplier/Contractor Customer Business partners	Sustainable Supply Chain Management <ul style="list-style-type: none"> <li>Supplier and Contractor Management</li> <li>Customer Management</li> </ul>	



GRI topic	GRI Disclosures	SDGs	SDG Targets	Page
GRI 205 Anti-corruption	205-2 Communication and training about anti-corruption policies		16.3, 16.5	49
	205-3 Confirmed incidents of corruption and actions taken			53
GRI 307 Environmental Compliance	307-1 Non-compliance with environmental laws and regulations			80
GRI 102 General Disclosure	102-11 Precautionary Principle or approach 102-29 Identifying and managing economic, environmental, and social impacts		8.2	56
			16.7	
GRI 201 Economic Performance	201-1 Direct economic value generated and distributed		8.2	61
GRI 201 Economic Performance	201-1 Direct economic value generated and distributed		7.b	63
			8.2	
			9.4, 9.5	
			17.16	
GRI 204 Procurement Practices  GRI 308 Supplier Environmental Assessment  GRI 414 Supplier Social Assessment	204-1 Proportion of spending on local suppliers		8.3, 8.8	70
	308-2 Negative environmental impacts in the supply chain and actions taken  414-2 Negative social impacts in the supply chain and actions taken		16.1	

	Material Topics	Impact Boundary		Report Content
		Internal	External	
Environmental	Climate Change	Employee	Shareholders Customer Community Government Agency	Climate Change <ul style="list-style-type: none"> <li>● GHG Emission</li> </ul>
				Water Management
	Wastewater Management	Employee	Community Government Agency Customer	Water Management <ul style="list-style-type: none"> <li>● Wastewater Management</li> </ul>
	Solid Waste and Industrial Waste Management	Employee	Community Government Agency Customer Business Partner	Solid Waste and Industrial Waste Management <ul style="list-style-type: none"> <li>● Solid waste management in AMATA Industrial Estates</li> <li>● Innovation in waste recycling</li> </ul>
	Factory Supervision	Employee	Community Customer Government Agency	Environmental Impact Management <ul style="list-style-type: none"> <li>● Implementation according to measures specified in the EIA report</li> <li>● Implementation according to the government policy</li> <li>● Implementation according to the Company's environment standards</li> </ul>
Protection and Restoration of Ecosystem and Biodiversity	Employee	Community Government Agency	Biodiversity	

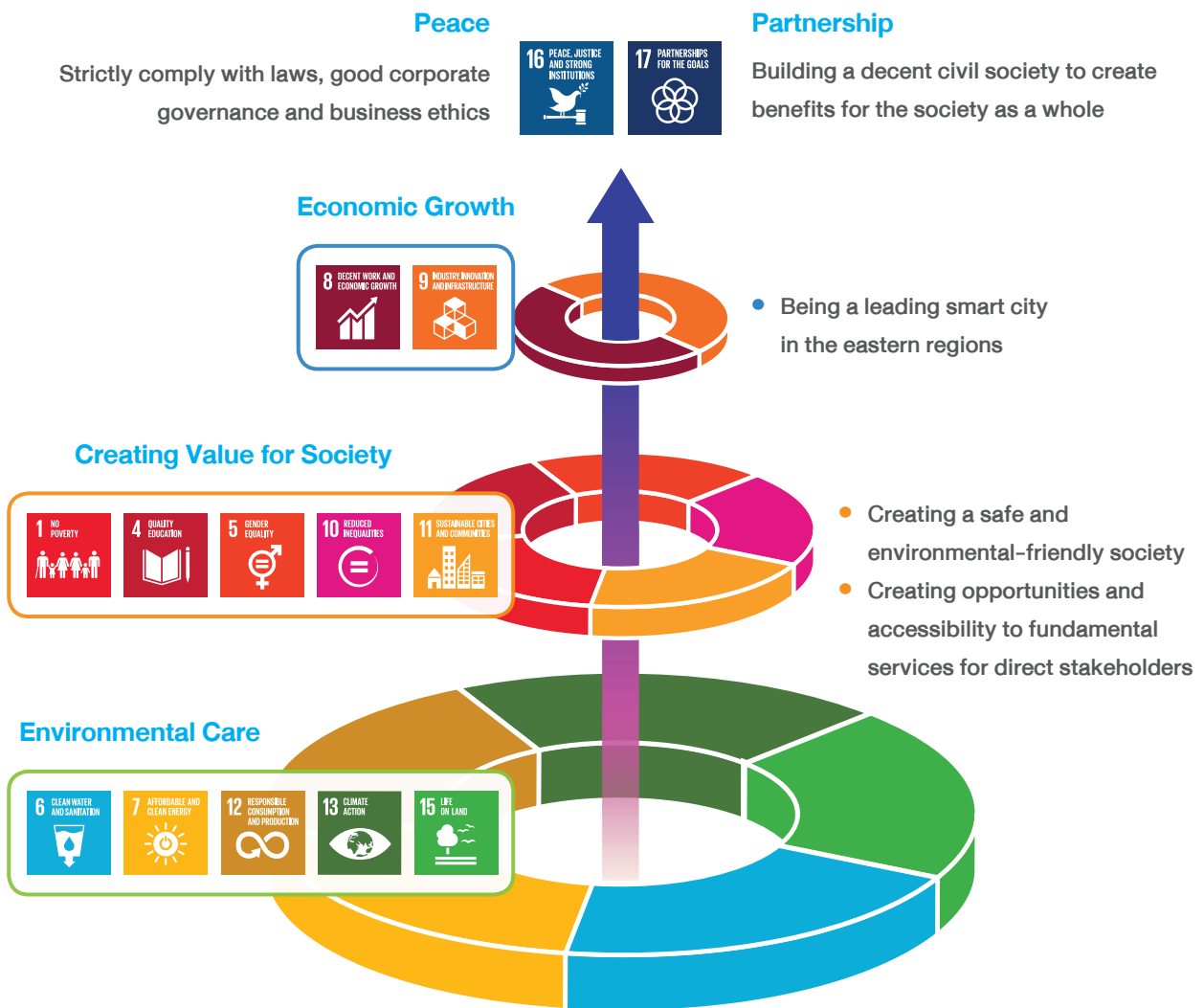
GRI topic	GRI Disclosures	SDGs	SDG Targets	Page
<p>GRI 302 Energy</p> <p>GRI 305 Emission</p>	<p>302-1 Energy consumption within the organization</p> <p>302-4 Reduction of energy consumption</p> <p>305-1 Direct (Scope 1) GHG Emissions</p> <p>305-2 Energy indirect (Scope 2) GHG Emissions</p> <p>305-3 Other indirect (Scope 3) GHG Emissions</p> <p>305-7 Nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), and other significant air emissions</p>	<p></p> <p></p> <p></p>	<p>7.2, 7.3</p> <p>12.2, 12.4</p> <p>13.1</p>	87
<p>GRI 303 Water and Effluents</p>	<p>303-1 Interactions with water as shared resource</p>	<p></p>	6.3, 6.4	95
<p>GRI 303 Water and Effluents</p> <p>GRI 306 Effluents and Waste</p>	<p>303-2 Management of water discharge-related impacts</p> <p>306-1 Water discharge by quality and destination</p>	<p></p> <p></p>	6.3, 6.4 <p>12.2, 12.4</p>	99
<p>GRI 306 Effluents and Waste</p>	<p>306-2 Waste by type and disposal method</p>	<p></p> <p></p>	12.2, 12.4, 12.5 <p>13.1</p>	102
<p>GRI 305 Emissions</p> <p>GRI 307 Environmental Compliance</p>	<p>305-7 Nitrogen Oxide, Sulfur Oxide and other significant air emissions</p> <p>307-1 Non-compliance with environmental laws and regulations</p>	<p></p> <p></p>	12.4 <p>16.3</p>	80
<p>GRI 304 Biodiversity</p>	<p>304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas</p>	<p></p>	15.1	108

	Material Topics	Impact Boundary		Report Content
		Internal	External	
Social	Employee Care	Employee		<b>Human Resource Management</b> <ul style="list-style-type: none"> <li>Human Resource Management</li> <li>Human Resource Development</li> </ul>
	Safety and Wellbeing	Employee	Community Government Agency Customer Supplier/Contractor	<b>Safety</b> <ul style="list-style-type: none"> <li>Employee Safety and Occupational Health</li> <li>Safety in AMATA Industrial Estates</li> <li>Safety in surrounding area</li> </ul>
	Human Capital Development	Employee	Community Customer	<b>Human Resource Management</b> <ul style="list-style-type: none"> <li>Human Resource Development</li> </ul>
				<b>Community Development</b> <ul style="list-style-type: none"> <li>Community Educational Development</li> </ul>
Local Economic Development	Employee	Community Government Agency Customer Business Partner Supplier/Contractor	<b>Community Development</b>	

GRI topic	GRI Disclosures	SDGs	SDG Targets	Page
GRI 401 Employment	<p>401-1 New employee hires and employee turnover</p> <p>401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees</p> <p>401-3 Parental leave</p>	  	<p>5.1</p> <p>8.5</p> <p>10.3</p>	115
GRI 403 Occupational Health & Safety	<p>403-1 Occupational health and safety management system</p> <p>403-9 Work-related injuries</p>	 	<p>8.8</p> <p>11.2</p>	127
GRI 404 Training and Education	404-1 Average hours of training per year per employee		4.3, 4.5	125
		 	<p>5.1</p> <p>10.3</p>	152
<p>GRI 204 Procurement Practices</p> <p>GRI 413 Local Communities</p>	<p>204-1 Proportion of spending on local suppliers</p> <p>413-1 Operations with local community engagement, impact assessment, and development programs</p> <p>413-2 Operations with significant actual and potential negative impacts on local communities</p>	   	<p>1.4</p> <p>8.3, 8.8</p> <p>9.1</p> <p>17.17</p>	133

# AMATA and Sustainable Development Goals (SDGs)

The Company has placed importance to be a part in driving the United Nations Sustainable Development Goals (SDGs) by developing strategies and business goals in creating the perfect smart city to align with the United Nations Sustainable Development Goals in Various areas.



- Efficient Water Consumption according to Zero Discharge principle
- Reducing raw water consumption from natural sources
- Increasing proportion of recycled water usage
- Solid waste and industrial waste Management in accordance with Zero Waste to Landfill principle
- Greenhouse gas emissions reduction by the Smart City Project
- Toward becoming a low-carbon city by 2040

## Actions to support the United Nations Sustainable Development Goals (UN SDGs)

Report Content	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELLBEING	4 QUALITY EDUCATION	5 GENDER EQUITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
<b>Governance and Economic</b>																	
Corporate Governance and Business Ethics																16.3 16.5	
Risk Management								8.2								16.7	
Business Growth							7.b	8.2	9.4 9.5								17.16
Sustainable Supply Chain Management								8.3 8.8								16.1	
<b>Environmental</b>																	
Environmental Impact Management												12.4				16.3	
Climate Change							7.2 7.3					12.2 12.4	13.1				
Water Management						6.3 6.4						12.2 12.4					
Solid Waste and Industrial Waste Management												12.2 12.4 12.5	13.1				
Biodiversity															15.1		
<b>Social</b>																	
Human Resource Management				4.3 4.5	5.1			8.5		10.3							
Safety								8.8			11.2						
Community Development	1.4							8.3 8.8	9.1								17.17

# Governance and Economic Development



Received  
**Excellent  
CG**  
Scoring by Thai IOD

Total revenue  
THB

**6,232**  
million



**24.68%**

of Critical Suppliers  
were assessed for  
sustainability risks





# Corporate Governance

## 2019 Highlight



Received

**“Excellent Corporate CG Scoring”**

in Corporate Governance Report



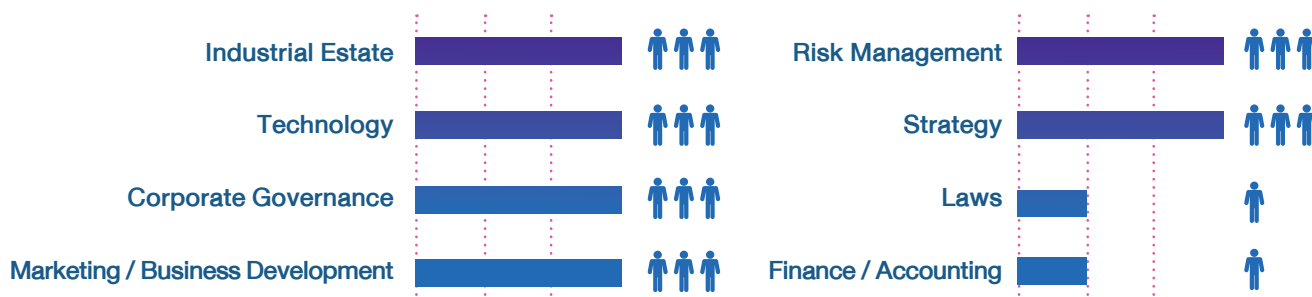
Good corporate governance is the main foundation of a sustainable growth of the business in a long run. It also has an impact on the Company’s credibility and stakeholders’ confidence in the Company. The Board of Directors, therefore, has an important duty to oversee the Company to operate ethically and responsibly for the society and environment as well as supporting business sustainability and taking care of all groups of stakeholders by giving them an opportunity to express their opinions on business operation to be pragmatically used as mechanism and procedures to bring about the organization with genuinely good corporate governance (Disclosure 103-1).

## Corporate Governance Structure (Disclosure 103-2)

In 2019 the Company’s Board of Directors consists of seven members, three of which being executive directors, four of which being non-executive directors and also being independent directors representing 57.14%. Each director is procured through the selection process whereby legal qualification and criteria stipulated by the Securities and Exchange Commission (SEC) are taken

into consideration. The Nomination and Remuneration Committee has set the rules and procedures for the Board’s nomination, taking into account the diversity of qualifications such as knowledge, capability, expertise and experience according to the Skill Matrix so that the Company can be efficiently supervised for the maximum benefit to the organization and all groups of stakeholders.

### Board Skill Matrix (persons)



The Company has appointed four sub-committees, namely Executive Committee, Audit Committee, Nomination and Remuneration Committee and Corporate Governance Committee to consider all dimensions of major operation including the Company's sustainable development.

The Company has clearly separated duties and responsibilities of the Board of Directors from the Chief Executive Officer. The Board of Directors has a duty to

supervise the Company's operation to comply with the law and the Company's objectives and articles of association, to make a decision with due care and morality for the maximum benefit to the organization and stakeholders as well as appropriately supervising internal control system and risk management in order for the Company to grow sustainably.

## 2019 Performance

The Board of Directors has monitored the operations and developed the good corporate governance of the Company by considering and approving the revised policies and guidelines and also additional policies to suit to the current regulations and the changing business situation in order to be able to supervise the business operations efficiently.

### Policies revised and announced in 2019



#### Corporate Governance

1. Corporate Governance Policy
2. Board Diversity Policy
3. CEO's Performance and Remuneration Management Policy
4. Matters Reserved for the Board Policy
5. Preparation of Agendas of Board of Directors' Meeting Policy
6. Timetable and Agendas of Board of Directors and Committees Meeting Policy
7. Policy on Documents and Material for Board of Director's Meeting and Sub-Committees' Meeting
8. Director Nomination and Remuneration Policy
9. Chairman, Directors, Board, and Committees' Self-assessment Policy
10. Board and Director Continuing Development Policy
11. Access, Indemnity and Insurance for Directors' Liability Policy
12. Dividend Payment Policy



#### Code of Ethics

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| 1. Anti-Corruption Policy            | 4. Conflict of Interests Policy |
| 2. Insider Trading Prevention Policy | 5. Intellectual Property Policy |
| 3. Whistleblowing Policy             | 6. Confidentiality Policy       |



### Business Aspect

1. Sustainable Development Policy
2. Risks Management Policy
3. Procurement Policy
4. Construction Policy
5. Occupational Health and Safety Policy
6. Innovation Management Policy
7. IT Security Policy
8. Human Resource Management Policy



### Environmental Aspect

1. Climate Change Policy
2. Environmental Management Policy
3. Sustainable Water Management Policy
4. Waste Management Policy
5. Biodiversity Policy



### Social Aspect

1. Human Right Policy
2. Stakeholders Engagement Policy

The Company has announced the Policies and Code of Ethics Manual (Disclosure 102-16) and disclosed them on the website and intranet to be used as operational guidelines of the Board of Directors, management and employees. Such policy covers the operation of the Company and subsidiaries.

To build confidence to stakeholders that the Company conducts business with good corporate governance, it has participated in the assessment of Corporate Governance Report of the Thai Listed Companies (CGR) organized by the Thai Institute of Directors (IOD) annually since 2005. In the 2019 assessment, the Company was rated **"Excellent"**.



## Performance Assessment

Thriving for good corporate governance efficiency, the Board of Directors conducts an annual performance assessment every year by using the self-assessment form of the Stock Exchange of Thailand. The assessment consists of the evaluation of the Board of Directors'

performance as a group, by sub-committee and individual directors. The results and suggestions obtained from the evaluation will be used for improving the operation in corporate governance in order to maximize benefits of the Company and its stakeholders.

### Results of the Board of Directors' Annual Performance Assessment in 2019



## Building Board Capability

The Company supports capability development of the Board of Directors by encouraging them to participate in both national and regional training and activities in order to utilize knowledge and experience earned for the benefit of the Company. In 2019, Mr. Noppun Muangkote, independent director and Chairman of Nomination and Remuneration Committee, attended the training on

Business Sustainability in Digital Era held by EY Group on 25 November 2019 and Mr. Viboon Kromadit, executive director, attended a workshop training on the Strategic Planning and Corporate Risk Management on 19-20 October 2019. In addition, all directors keep updated on the news of changes that will affect the business and corporate governance.





# Business Ethics

## 2019 Highlight

Number of Significant  
Corporate Governance Complaints

Target **0**      Result **0**



The Company places great importance on business ethics and anti-corruption because it is an important issue and may directly affect the Company and the confidence of the stakeholders if the Company has any action contrary to good governance, non-compliance with laws and regulations, violation of business ethics or corruption. The Company is well aware of the consequence, besides affecting its business, reputation and image, it also obstructs to the Company's sustainable growth and the development of the nation as well. (Disclosure 103-1)

## Management Approach (Disclosure 103-2, 103-3)

The Company intends to operate its businesses with accountability to its stakeholders, transparency, honesty and in full compliance with laws and regulations and the Company's principles of good corporate governance and business code of ethics which sets the scope and standards of behaviors that all employees of the Company including the Board of Directors, executives and employees should act and work in the same direction under the framework of morality.

All executives and employees have a duty to comply with the Company's corporate governance policy and Code of Ethics Manual as well as the anti-corruption policy under supervision of the Corporate Governance Committee to promote morality and accountability values to organizational culture. Each executives and employees must conduct business transparently, ethically

and equitably, adhere to civility and conscious behavior, impartially and fairly consider benefit and effect of the operation to the Company's stakeholders, conduct business with responsibility and establish strong work system to prevent corruption through internal audit system.

The Company has announced the revised policies and guidelines which were more suitable to current business environment and comply with generally accepted criteria and regulations, and also promote and support ethical business operations. The Company has disclosed them on the website and intranet so that all employees can learn by themselves and use as a guideline for the operations of the Board of Directors, executives and employees of the Company and its subsidiaries.

In 2019, the Company has promoted knowledge and understanding through various activities and communication channels as follows:

1. The Company has prepared the Supplier Code of Conduct in order to encourage its suppliers including contractors to comply with the AMATA Group code of business ethics for growing sustainably together. The Company arranged the critical supplier meeting for the first time aiming to inform the critical partner the Company's intention and code of business ethics. There were 44 critical suppliers attended this event. On this occasion, the Company introduced and provided knowledge about the AMATA Supplier Code of Conduct to them and requested the cooperation from the critical suppliers in complying with the said Supplier Code of Conduct.
2. The Company communicated the NO Gift policy and guideline for accepting and giving gifts during festivals and other occasions to executives, employees, subsidiaries and external parties to be widely acknowledged aiming to behave correctly

in accepting and giving gifts, to avoid conflicts of interest and to establish norms in conducting business fairly and transparently with all relevant parties.

3. The Company organized a training course on corporate governance and anti-corruption to 44 new employees in order to have correct knowledge about policies, measures and procedures. (Disclosure 205-2)
4. The Company arranged the annual CG online test on knowledge and understanding about corporate governance and code of business ethics for all employees. All employees (100%) must pass the evaluation at 80% score as the Company's target set.
5. As the Company is a part of society and aims for Thailand to be free from corruption, on 25 September 2019, the Company then submitted the documents for certification to the Thai Private Sector Collective Action Against Corruption (CAC) to show its intention to join the Collective Action Coalition Against Corruption in Private Sector.



## Complaint handling process (Disclosure 102-17)

The Company has set the whistle-blower policy and safe communication channels for its employees and stakeholders to report clues, send any advices or grievances or complaints concerning any wrong doing that violates the law, rules, regulations, corporate governance principles, code of ethics and anti-corruption

policy. The measures to protect the rights of such person were established. The information from petitioners will be kept confidential and accessible only to those responsible for an investigation of the complaint. Such complaint will be proceeded according to the process stipulated in the code of ethics.

### Channels to Receive Complaints

**Mr. Vikrom Kromadit**  
Chairman & Acting CEO  
vikrom.k@amata.com

**Mr. Anucha Sihanatkathakul**  
Chairman of the Audit Committee  
anucha.s@amata.com

**Mrs. Varaporn Vatcharanukroh**  
Company Secretary  
(ended on 30 September 2019)  
varaporn@amata.com

**Mrs. Rewadee Jantamaneechote**  
Company Secretary  
(From 1 October 2019 onwards)  
rewadee@amata.com



**AMATA Corporation Public Company Limited**  
2126 Kromadit Building, New Petchburi Road,  
Huaykwang, Bangkok 10310 Thailand



P.O.Box no.7 Monterey Tower  
Huai Khwang, Bangkok 10323  
Thailand



+66 (0) 2 792 0004

In 2019, the Company found that there was an employee violated the Company's regulations. Then the Company has already conducted according to the procedures specified in the Company's regulations. There was no clues or significant complaints regarding corporate governance and corruption sent to the Company. (Disclosure 205-3)

# Risk Management



## 2019 Highlight

Proportion of Business Units that have been trained on risk management	Target <b>100%</b>	Result <b>100%</b>
--	--------------------	--------------------

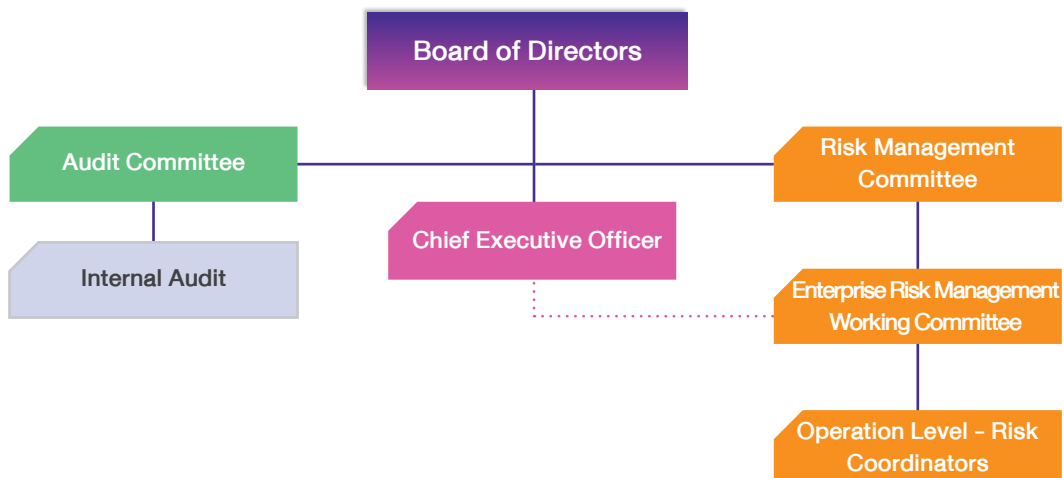


Effective risk management is a key mechanism that helps the Company grow sustainably and cope with the current rapid changing environment. The Company and its subsidiaries therefore place importance on strengthening and increasing risk management efficiency to reduce the likelihood of its risk factors or mitigate their associated consequences in order to achieve its business goals and gain business opportunities toward the creation of sustainable value for the Company and its stakeholders. The Company is determined to engage employees more actively in risk management, therefore, the Company has provided training programs and workshops to create risk awareness and risk culture of all level employees. (Disclosure 103-1).

## Risk Management Structure (Disclosure 102-30, 103-2)

The Company's risk management is under the supervision of the Board of Directors. The Board of Directors has assigned **the Risk Management Committee** to set up the risk management policy and guidelines and supervise risk management performance to conduct effectively. The Risk Management Committee consists of the

Chairman of Audit Committee, Chief Executive Officer, Chief Marketing Officer, Chief Investment Officer and Senior Vice President - Accounting & Tax, Finance & Treasury, Investor Relations and Information Technology.





In order to enable the Company to drive effective risk management throughout the organization and respond to the Company's risk management and crisis management policy, the Risk Management Committee has appointed the **Enterprise Risk Management Working Committee** consist of management, representatives from various departments and Managing Directors of subsidiary companies totally 20 persons. The Chairperson of the Committee is the Senior Vice President of Accounting, Tax and Finance, Investor Relation, and Information Technology. The roles and responsibilities are as follows:

1. Assessing key corporate risks aligned with the Company's business direction and risks in business value chain such as strategic risk, risks from investment and business development in Thailand and other countries, operational risk covering health, safety, social and environmental aspects, financial risks, compliance risks, and other risks that may impact the Company. Providing suggestions on risk prevention and mitigation to an acceptable level.
2. Monitoring, evaluating and continuously improving risk mitigation plans to reduce risks and suit to business conditions. Regularly reporting the risk assessment and risk management performance to the Risk Management Committee.

3. Setting up a business continuity plan at the corporate level to address key risks.
4. Promoting learning, providing training and sharing knowledge of risk and risk management to personnel at all levels in the Company and creating corporate culture in risk management.

As the Risk management is the responsibility of employees at all levels. The employees must be aware of the existence of risks in the business value chain and their working process and provide the appropriate and sufficient risk management measures. Therefore, all departments in the Company and its subsidiaries have appointed their risk coordinators in operational level working together with the Enterprise Risk Management Working Committee in risk identification and assessment, risk mitigation plan preparation and evaluation, and also promoting risk awareness, risk culture and participation of employees in their own departments.

## Risk Management Approach

The Company has set the corporate risk management process which is in line with the international standard in order to manage all risks effectively. The risk management must be implemented in the same direction across the organization, including being part of the decision making, strategic planning and business operation. It must also support the achievement of business objectives and goals.

The Company conducts corporate risk management using the guidelines of the Committee of Sponsoring Organization (COSO). (Disclosure 102-11) The Company

conducts corporate risk assessment annually by considering the current risks, emerging risks, economic conditions, business competition, innovations and technology development, government policies, social and environmental changes that may affect the Company's business operations. After risk identification and assessment, the Company has prepared the appropriate risk mitigation plans and determined key risk indicators (KRI) to monitor risk management performance and also considered business opportunities arisen from these risks.



The Enterprise Risk Management Working Committee keeps monitoring the result of risk treatment measures and the situations which cause the risks and reports the findings to the Strategic Management Meeting which consist of the Chairman of the Audit Committee, all Chief level, and Managing Directors of subsidiary companies and to the Board of Directors respectively.

## Performance

In 2019, the Company has revised the Risk Management Policy in order to align with the strategic plan and corporate culture. The Enterprise Risk Management Working Committee has divided corporate risks into 5 categories, namely strategic risk, operational risk, IT risk, financial risk and emerging risk. The Company

has reviewed the corporate risk management plans and key risk indicators and revised to suit to current situation. The Company has planned to further apply risk management approach into all business units in the Company.

Risk Categories	Risks
Strategic Risk	<ul style="list-style-type: none"> <li>Country Risk</li> <li>Foreign Investment Risk</li> <li>New business Risks</li> </ul>
Operational Risk	<ul style="list-style-type: none"> <li>Sales and Market Risk</li> <li>People Risk</li> <li>Risk in Water Management</li> <li>Risk of Emergency Management in industrial estates</li> <li>Environmental, Legal and compliance risks</li> <li>Supplier/contractor Risk</li> </ul>

Risk Categories	Risks
IT Risk	<ul style="list-style-type: none"> <li>● Risk in Information Security</li> </ul>
Financial Risk	<ul style="list-style-type: none"> <li>● Liquidity Risk</li> <li>● Foreign Exchange Risk</li> <li>● Tax Risk</li> <li>● Interest rate risk</li> </ul>
Emerging Risk	<ul style="list-style-type: none"> <li>● Risk from Climate Change</li> <li>● Risk from rapid changes in technology</li> </ul>

## Supplier/Contractor Risk

In 2019, the Company has identified risks from critical suppliers in economic, social and environmental aspects. In this report, supplier is an entity who are providing products and services in supply chain to the Company. The Company has categorized the critical suppliers and contractors by using spending analysis approach and considering of being the main business activity and the ability to substitute. The Company has identified and assessed the supplier risks which are crucial to the Company's sustainability by considering risk factors in governance, social and environmental (ESG) aspects. So that the Company can manage each group of suppliers and contractors efficiently through various processes such as supplier audit and evaluation, supplier development.

## Emerging Risk

Emerging risks found in the risk assessment are risk from climate change and risk from rapid change in technology. These emerging risks are greatly involved with sustainability of the Company.

## Risks from climate change

1. **Water** Water is an important resource for the industrial estate business. The Company is responsible for providing sufficient clean and standardized water to the factories in the industrial estates. The increasing climate variability causes the drought, water shortage in some areas and unusual heavy rain led to floods in some years. The Company therefore places importance on the sustainable water management especially raw water, wastewater and flood by continuously operating the water management projects such as maximizing utilization of recycled water, provision of raw water resources, preparation for flooding situations, increasing green area and check dams.
2. **Greenhouse Gas (GHG)** Greenhouse gas is a significant global issue that is expected to be less greenhouse gas emission. The Company is committed to help reduce greenhouse gas emissions, then the Company has been transforming itself from the industrial production base to a Smart City where the energy will be used efficiently and renewable energy

businesses in various forms will be developed. The Company has encouraged all business units in the AMATA Group and its stakeholders to be aware of the impact of climate change and to participate in reducing greenhouse gas emissions under the campaign “SAVE EARTH, SAFE US” by building a network among factories in industrial estates, local authorities, and surrounding communities to jointly protect the environment and society by efficient waste management and resource utilization.

### Risk from rapid changes in technology

The new industrial and digital technology are replacing old technologies in industrial sector and daily life such as the utilization of big data and Internet of Thing (IOT) which creates the borderless world, moving forward to the era of

artificial intelligence (AI) and advanced robotics industry. These rapid changes in technology have increased the risks in the industrial estate business because of the changing needs of customers in land and utilities requirement. In response to such risks, the Company has been developing new businesses and facilities in the smart city that meet the needs of customers in the targeted industries such as smart manufacturing that uses digital technology to facilitate the industrial manufacturers, smart education to respond to the needs of qualified personnel in the targeted industries. In addition, the Company has also adopted these digital technologies to enhance industrial estate management efficiency, create competitive advantage and add value to the current business of the Company.

### Risk Culture Promotion

The Company places importance to the participation of executives and employees in the Company’s risk management, especially the risks in their duties and responsibilities. The Company requires the risk management system to be a part of the daily operation and eventually turn it to become a corporate culture. Besides the executives of each department and subsidiary, there are risk coordinators jointly drive the risk management by attending the meeting with the Enterprise Risk Management Working Committee and transmitting the message to other employees in operation level.

In 2019, the Company provided a workshop on Business Opportunity and Risk Analysis and Risk Management Plan Review to 34 executives from all departments and subsidiary companies, a workshop on Risk Management for 35 employees in operation level and section manager level. The Company is currently in the process of creating a corporate risk management guideline and manual for all departments to study and apply the same standards in reporting system and risk control.



# Business Growth



## 2019 Highlight

Return on Equity

Target **9%**

Result **12.89%**



The economic performance and business growth are important to the Company and its major stakeholders. It has influences to major stakeholders which are employees, shareholders and business partners. Therefore, the Company aims to develop products and services to keep business growing and meet the needs and expectations of its stakeholders on good economic returns.

The Company is committed to continuous improvement in operational efficiency through the cooperation of employees at all levels. Maximizing resources utilization, effective cost management, increasing the competitiveness with innovation, and growing together with customers and business partners enable the Company to grow sustainably. As the principles of sustainable development of the Company to create economic growth along with the development of community and society, the Company has created value distribution to its stakeholders to help develop the economy as a whole. (Disclosure 103-1)

## Economic Performance (Disclosure 201-1)

For the year 2019, the Company has total revenues of Baht 6,232.81 million, increase for the year 2018 by Baht 1,656.48 million or 36.2% and reported the net profit of Baht 1,742.06 million.

The main source of revenues can be classified into 3 parts:

- The revenue from real estate sales was posted Baht 3,209.84 million contributed 51.6% of total revenues, increase from 2018 by Baht 1,374.10 million or 74.9% increase. The gross profit margin from real estate sales posted 56.2% decrease compare to the previous year 63.5% gross profit margin. The main reason came from the amount land transfer of industrial estate in Vietnam with good margin decrease compare to 2018.
- The revenue from utility services was posted Baht 1,941.38 million contributed 31.2% of total revenues, increase from 2018 by Baht 104.3 million or 5.7% increase. The gross profit margin from utility services posted 32.7% decrease compare to the previous year 33.3% gross profit margin, the main reason came from costs of raw water slightly increase.
- The revenue from rental was posted Baht 763.05 million contributed 12.3% of total revenues, increase from 2018 by Baht 82.06 million or 12.1% increase. The gross profit margin from rental posted 73.4%, increase compare to the previous year 69.7% gross profit margin. The main reason came from increase of number customer in AMATA Group.

In Y2019 Selling expenses amount Baht 258.4 million increase Baht 50.5 million or 24.3% compared to last year due to the increase of Land transfer expenses. In Y2019 amount of administrative expenses decrease Baht 175.3 million or decrease 15.7% compared to last year,

due to in Y2018 we have 2 significant transaction which no more in Y2019 : 1. additional charges to Vietnamese government agency Baht 222.42 million and 2. Loss from impairment of investment properties Baht 38.5 million.

## Value distribution to stakeholders

(Unit: Million Baht)

	Year 2019
<b>Value distribution to stakeholders</b>	
Dividend per share (Baht)	0.37
Dividend to shareholders	394.78
<b>Personnel investment</b>	
Employee compensation*	308.65
Directors' remuneration	34.41
<b>Social and community investment</b>	
Social activities	11.03
Social investment (Baht) excl. donation	32.97
Donation	3.70
<b>Sharing to business partners</b>	
Domestic procurement	2,482.00
<b>Other economic values</b>	
Financial cost	329.90
Tax paid to the state	314.19

\* Salary, bonus, wages, welfare, provident fund, social security, personnel development expenses  
Source : Consolidated Financial Statements of the Year 2019 and Annual Report 2019

## Tax policy and implementation

AMATA Corporation Public Company Limited and its subsidiaries emphasize on the implementation on tax policy to be transparent, complying with relevant tax laws and regulations, including disclosure of public information to maximize benefits to all stakeholders. The Company has established policies and procedures regarding risk management of the policies to ensure that tax management is accurate and appropriate. With regards

to taxation, the Company complies with the revenue code and tax laws that are related to the Company's business operations.

In terms of tax implementation, the Company strictly follows the policies and adequately provides related document within the time period required by laws. The Company separately considers each complicated

transaction before entering the transaction and regularly assesses investment structure. The Company has assigned executives responsible for each country to closely monitor changes in regulations and tax policies of each country at both the federal and local levels including hiring local legal advisor to provide advice and

guidance in compliance with the tax laws of that country. The Company will provide accurate tax information based on the facts of business operations to government agencies that have disputes or arrange to hire an experienced tax advisor to express their opinions and proceed to dispute resolution.

## Building sustainable financial confidence and investment

The Company has established guidelines to build sustainable financial confidence and investment by strictly controlling and managing various risks. The Company has continuously planned and provided appropriate financial tools for each business operation to effectively manage both working capital, short-term and long-term liabilities. Investment plans are also managed to match with company's financial plan in order to reduce financial costs and to create long-term sustainable growth for the Company.

The Company has strictly controlled financial and investment risk factors. The Company also undertook a credit rating assessment with reputable credit rating institution in order to evaluate the Company's financial position and to determine the performance of the Company before issuing debentures. The Company still received **rating of A "Stable"** for the third year which

reflects that the Company has high reliability and low risk causing financial institutions, partners or other relevant agencies to have more confidence and a good reputation for the Company.

In 2019, the Company had debentures outstanding in total of Baht 6,000 million. The debentures help reducing company finance cost and align with company's investment plan bringing about high financial flexibility and the Company can effectively control in other areas.

As mentioned above, the Company is supported by financial institutions for working capital loan, short-term and long-term loan in order to enhance company's financial liquidity and to invest in various business operations sufficiently. The Company is also offered loan with competitive interest rate by financial institutions which reflects the financial confidence and financial strength of the Company.

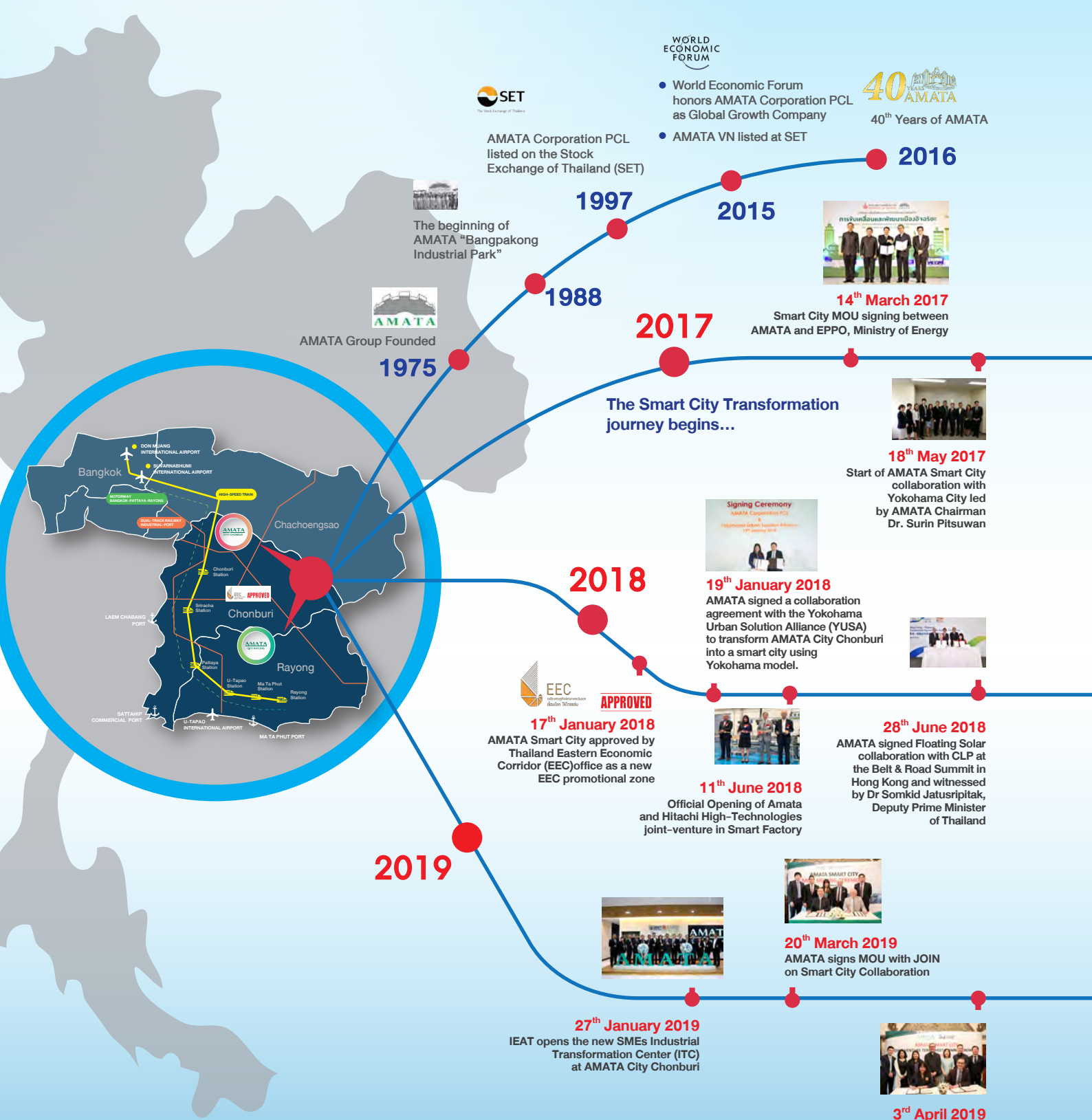
## Product and Service Development

### AMATA Smart City

After the Company has changed its vision, mission and business strategy to become a Smart City developer since 2017 in order to be more efficiently in response to the trend of significant global changes and the emerging risks including business development that supports economic, social and environmental challenges, the Company has set up a 5-year operation plan (2017-2021) heading towards becoming a smart city leader by developing the investment areas, society and

environment, as well as quality labor force so that AMATA Smart City will be the ideal investment area in the Eastern Economic Corridor or EEC and the learning center in this region, enhancing the economic growth in the region and the economic value for Thailand. The concept of AMATA Smart City will start from the development and upgrading the Company's current industrial estates, i.e. AMATA City Chonburi Industrial Estate, then further expanding into other industrial estates of the Company in the future.

# AMATA SMART CITY JOURNEY



AMATA Corporation PCL listed on the Stock Exchange of Thailand (SET)



The beginning of AMATA "Bangpakong Industrial Park"



AMATA Group Founded

1975



- World Economic Forum honors AMATA Corporation PCL as Global Growth Company
- AMATA VN listed at SET



40<sup>th</sup> Years of AMATA

2016

1997

2015



14<sup>th</sup> March 2017

Smart City MOU signing between AMATA and EPPO, Ministry of Energy

2017

The Smart City Transformation journey begins...



18<sup>th</sup> May 2017

Start of AMATA Smart City collaboration with Yokohama City led by AMATA Chairman Dr. Surin Pitsuwan



19<sup>th</sup> January 2018

AMATA signed a collaboration agreement with the Yokohama Urban Solution Alliance (YUSA) to transform AMATA City Chonburi into a smart city using Yokohama model.



2018



APPROVED

17<sup>th</sup> January 2018

AMATA Smart City approved by Thailand Eastern Economic Corridor (EEC) office as a new EEC promotional zone



11<sup>th</sup> June 2018

Official Opening of Amata and Hitachi High-Technologies joint-venture in Smart Factory

28<sup>th</sup> June 2018

AMATA signed Floating Solar collaboration with CLP at the Belt & Road Summit in Hong Kong and witnessed by Dr Somkid Jatusripitak, Deputy Prime Minister of Thailand

2019



27<sup>th</sup> January 2019

IEAT opens the new SMEs Industrial Transformation Center (ITC) at AMATA City Chonburi



20<sup>th</sup> March 2019

AMATA signs MOU with JOIN on Smart City Collaboration



3<sup>rd</sup> April 2019

Signing of Joint-Venture Term Sheet between AMATA and Surbana Jurong Singapore







**2<sup>nd</sup> June 2017**  
Start of AMATA Smart City collaboration with Sweden Smart City "HammarbySjöstad"



**21<sup>st</sup> September 2017**  
AMATA Smart City Collaboration with Digital Economy Promotion Agency (DEPA)



**16<sup>th</sup> November 2017**  
AMATA Smart City collaboration with Korea Incheon Smart City



**14<sup>th</sup> June 2017**  
AMATA Network, a joint-venture company with AIS subsidiary "Advanced Broadband Network" is the 1<sup>st</sup> fiber optic network provider in EEC



**5<sup>th</sup> October 2017**  
AMATA Smart City collaboration with SAAB Sweden



**12<sup>th</sup> July 2018**  
MOU signing between AMATA and GGGI on Green & Smart Environment



**12<sup>th</sup> September 2018**  
China-ASEAN Expo 2018 Top 10 Projects - Official MOU signing by AMATA and JSCC to jointly develop Amata-Nanjing Smart City in Thailand



**4<sup>th</sup> October 2018**  
MOU signing between AMATA, SCG and DOW on Recycled Plastics road



**7<sup>th</sup> December 2018**  
Official announcement of "Hotel Nikko Amata City Chonburi", a joint-venture hotel investment by AMATA, JOIN and Fujita Corporation



**8<sup>th</sup> July 2018**  
AMATA Smart City officially joined the ASEAN Smart Cities Network in Singapore



**6<sup>th</sup> August 2018**  
1<sup>st</sup> University License awarded to AMATA University under Thailand Ministry of Education new initiative in EEC zone



**19<sup>th</sup> September 2018**  
Hitachi 1<sup>st</sup> Global Lumada Center in Southeast Asia Grand Opening ceremony at AMATA City Chonburi Thailand



**26<sup>th</sup> October 2018**  
AMATA Smart City is the 1<sup>st</sup> Smart City project endorsed under Japan-China 3<sup>rd</sup> Country Cooperation initiative



TOKYO -- Japan and China are set to agree on promoting roughly 50 private-sector, third-country infrastructure projects this week, setting in motion the first joint deal of building a smart city in Thailand as early as this year. Japanese Prime Minister Shinzo Abe and Chinese Premier Li Keqiang will affirm both governments' commitment to the joint projects when they meet in Beijing on Friday. The two countries see third-country infrastructure as a cornerstone of their growing economic cooperation.



**7<sup>th</sup> May 2019**  
IFC and AMATA join hands to advance sustainability solutions for Smart Cities



**7<sup>th</sup> June 2019**  
AMATA Chief Investment Officer Ms. Lena Ng presentation at the ASEAN Smart Cities Network event at BITEC



**24<sup>th</sup> August 2019**  
Opening Ceremony of AMATA Smart City Showcase & DEPA-AMATA Smart Classroom



**8<sup>th</sup> May 2019**  
AMATA and the Association of Thai Software Industry (ATSI) explore new business opportunities and strengthen Thai software industry



**23<sup>th</sup> July 2019**  
AMATA & Mahidol University sign MOU on collaboration of MEDITOWN to create the World Best Medical Hub in EEC, Thailand



**29<sup>th</sup> August 2019**  
Groundbreaking Ceremony Hotel Nikko Amata City Chonburi



**12<sup>th</sup> December 2019**  
MOU with Surbana Jurong Infrastructure Pte. Ltd.

The Company has set its strategy to develop AMATA smart city and sub-projects through strategic business partners to achieve the rapid and high-quality business development. The Company therefore has cooperated with the leading Thai and foreign companies and organizations who are the leaders in various businesses to develop new business projects under the framework of AMATA Smart City concept.

In addition to driving a smart city concretely under several projects, a cooperation with these leading companies and organizations also benefits Thai entrepreneurs of the relevant industries in learning the new concepts and technologies from foreign experts in order to enhance the technology transfer process and expand to the research and development of their own technologies which will become an important mechanism in helping to drive Thailand forward sustainably.

In 2019, the progress of AMATA Smart City development is as follows:

- On 8 May 2019 AMATA Corporation Public Company Limited and the Association of Thai Software Industry (ATSI) signed an MOU on educational cooperation and searched for new business potentials to help strengthen Thai software industry, adjusting the country's software business to suit factories situated in AMATA's industrial estates and to support AMATA Smart City project.



- On 7 June 2019 AMATA Corporation Public Company Limited by Miss Ng Choon Soon, Chief Investment Officer, was a guest speaker in ASEAN Smart City Network (ASCN) Roundtable Meeting and Conference on Smart and Sustainable Cities. The Company also participated in ASCN Exhibition 2019 which is a smart city showcase by member countries both from governmental and private sectors, from 22 - 24 August 2019.



- On 23 July 2019 Mahidol University and AMATA Corporation Public Company Limited signed an MOU to develop an Edu-town and Medi-town project in the Eastern Economic Corridor. Such cooperation between the university and the industrial sector will bring about human capital development and increase occupational skills of Thai citizens pursuant to the governmental policy.



- On 24 August 2019 the Company, in collaboration with the Digital Economy Promotion Agency (DEPA), launched DEPA AMATA Smart Classroom and AMATA SMART City Showcase in AMATA City Chonburi Industrial Estate aiming to develop future workforce to support the targeted industries in the future as well as to share the knowledge of smart city development. This approach also supports the AMATA City Chonburi Industrial Estate development plan to be the country's first smart city in the Eastern Special Development Zone (EEC). On that day, the ASEAN Smart Cities Network comprising delegates from various cities in ASEAN also visited AMATA SMART City Showcase as well.



- On 29 August 2019 AMATA Corporation Public Company Limited, together with Fujita Corporation Co., Ltd. (a company whose 100% shares were held by Daiwa House group) and Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN), a Japanese governmental entity, held a groundbreaking and foundation stone laying ceremony for Hotel Nikko AMATA City Chonburi to construct a four-star environmental friendly hotel and facilities to support both Thai and foreign operators and investors in the eastern region as a residence close to workplaces, and also to create local employment and economy.



- On 12 December 2019 AMATA Corporation Public Company Limited signed a joint venture agreement with Surbana Jurong Infrastructure Pte. Ltd. to establish a company called Great Mekong Consultancy Pte. Ltd. to provide engineering consultancy services to AMATA Smart City project and other projects of AMATA group.



## Business Development in Foreign Countries

Since the Company has foreseen the growth opportunities in CLMV countries, it has expanded its business development of environmental-friendly industrial cities into CLMV countries by bringing its expertise and experiences in urban development and AMATA Smart City model to open new business opportunities in CLMV countries.

### Project in Myanmar

The Company commenced the development of Yangon AMATA Smart and Eco City project situated in Dagon (East and South) Township in Yangon Region, Myanmar. The first phase of the project covers the area of 5,508 rais or 8.09 km<sup>2</sup>. The shareholders of Yangon AMATA Smart and Eco City are AMATA Asia (Myanmar) Limited, a 100% owned subsidiary of AMATA Corporation Public Company Limited, and the Department of Urban and Housing Development, Union Ministry of Construction of the Republic of the Union of Myanmar.

The project will be driven by sustainable, optimization and environmental management framework in order to develop “Livable City” where economic activities and life are envisaged by Smart City Design and technology. Also, the project will be developed and contribute to Myanmar Sustainable Development, Pillar 2 - Goal 3: “Job Creation & Private Sector led growth”.

## Innovation

Innovation in the Company’s view means not only creating the differences and value added to the products and services of the Company, but also the development and improvement of work performances to be more efficient to reduce the operating expenses and the negative impacts towards the society and the environment. Innovation is, therefore, a key factor to drive the Company towards the sustainable growth. Hence, the Company has emphasized on the significance of innovation starting

AMATA Corporation PCL. has been entered to the Framework Agreement with Department of Urban and Housing Development on 22 August 2019 and the project company, named Yangon AMATA Smart and Eco City Limited, has been granted Myanmar Investment Permit on 21 October 2019. The next milestone will be finalization of Joint Venture Agreement and Land Lease Agreement and plan to be signed by beginning of 2020. The construction shall start in the first half of 2020.

### Projects in Vietnam

In August 2019 two subsidiaries, namely AMATA Service City Long Thanh 1 Company Limited (ASCLT1) and AMATA Service City Long Thanh 2 Company Limited (ASCLT2), were established. AMATA City Long Thanh Joint Stock Company (ACLT) is a wholly owned subsidiary of AMATA VN Public Company Limited to separate residential development business and investment certificate (IC) to ASCLT 1 and ASCLT 2.



from the qualifications of the Company’s human resources as defined in AMATA DNA code of being innovative, thinking creatively and trying new challenges for development. These qualifications are used as key performance indicators for an evaluation of the employees of all levels.

The Company always encourages and gives opportunities to the employees of all levels to demonstrate their potentials and innovations for the business and

society, and to participate in an improvement of the Company's work procedures. In 2019, the Company had initiated "AMATA INNO Awards 2019" Contest by having a committee consisting of Chief Executive Officer and the senior management team to consider granting the awards. This year, the employees had sent 27 innovative projects to the contest. Awards will be given in February 2019. If these projects are actually implemented, they are estimated to create the value of 21.8 million Baht to the Company.



### Online Approval System for Purchase Requisition and Expense Project

In 2019 the Company developed a web-based online approval system for its purchase requisition and expense approval aiming to shorten process period from approximately 5 days per approval under the traditional document-based system to 2.5 days per approval, to decrease executives' time spent traveling between work sites to approve the document, and also to reduce paper use in the offices.

- Users (requesters and approvers) can access the system from any place where internet is available via computer, mobile phone or tablet, and are able to amend the contents of approval through the system without having to print the document and deliver it to the approvers for reapproval.
- A full system test run was conducted with three pilot units, i.e. Human Resources Department, General Affairs Department, and IT Department.
- Period of the operation commenced from January to December 2019.
- Results from the project were as follows:



The process period was reduced from **5** days to only **2** days per approval.



Travel between the work sites of the authorized executives to approve the document decreased from an average of **10** times to **7** times per week <sup>1</sup>



For three pilot units, paper use declined by **263** sheets, reducing the Company's cost by **526** Baht per year <sup>2</sup>



Time consumed for documentation work was reduced by **63** hours, representing **14,375** Baht.

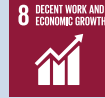


The Company plans to fully implement the online approval system for purchase requisition and expense approval for AMATA Corporation Public Company Limited and its subsidiaries in 2020.

<sup>1</sup> Representing a reduction of greenhouse gas emission by 2,792 kg of CO<sub>2</sub> equivalent per year (commuting distance between work sites is 180 km per trip resulting in a reduction by 12,480 km per year).

<sup>2</sup> Representing the reduction of greenhouse gas emission by 1.5 kg of CO<sub>2</sub> equivalent per year.

# Sustainable Supply Chain Management



## 2019 Highlights

Proportion of critical suppliers with sustainability risk assessed	Target <b>20%</b>	Result <b>24.68 %</b>
Number of complaints from customers and communities regarding social and environmental impacts from contractors' operation	Target <b>0</b>	Result <b>3</b>



Supply chain management is an important component that contributes to sustainable business success. Besides delivering good quality products and services, the Company also focuses on fair and transparent business operations, especially for suppliers, contractors and customers, which are considered as business partners. The Company is well aware of its responsibilities towards the operation of its suppliers, contractors and customers that may affect society and the environment. Therefore, the Company has assessed the sustainability risks within its supply chain which included its suppliers and contractors covering environmental, social and governance aspects and designated the management guidelines and strategies appropriate to each group of business partners. The Company has also arranged activities to enhance their potential and capability aiming to reduce the sustainability risks and impacts from their business operations in both short-term and long-term. In addition, the relationship management with suppliers, contractors and customers is necessary to create sustainability in the supply chain and promote the trustworthiness for long-term mutual growth. (Disclosure 103-1).

## Supplier and Contractor Management (Disclosure 103-2)

For the business operations of the Company, procurement of goods and services from the suppliers and contractors is necessary for the main activities of the industrial estate operations and the works that support the industrial estate management. Since the operations of Company's suppliers and contractors may cause the impacts on the society and environment, and also on its reputation, so that the supplier and contractor management is a material topic in building the sustainable value chain especially the fair, transparent and verifiable procurement including the accountability of suppliers and contractors towards the society and the environment and in line with AMATA's sustainable development policy.

The Company had appointed **AMATA Procurement Working Committee** chaired by the Senior Vice President – Accounting & Tax, Finance & Treasury, Investor Relations and Information Technology. The Working Committee, consisting of the senior executives of the Company and its subsidiary companies, has the duty and responsibility in developing the procurement best practices in compliance with the international and ethical standards in order to set the procurement standards of AMATA Group, as well as, preparing and disseminating the Supplier Code of Conduct to communicate the intent of the Company in doing the business ethically with responsibility by taking economic, social and environmental impacts into consideration.

Hence, the Company had established the guidelines of sustainable supply chain management as follows:



## Performance

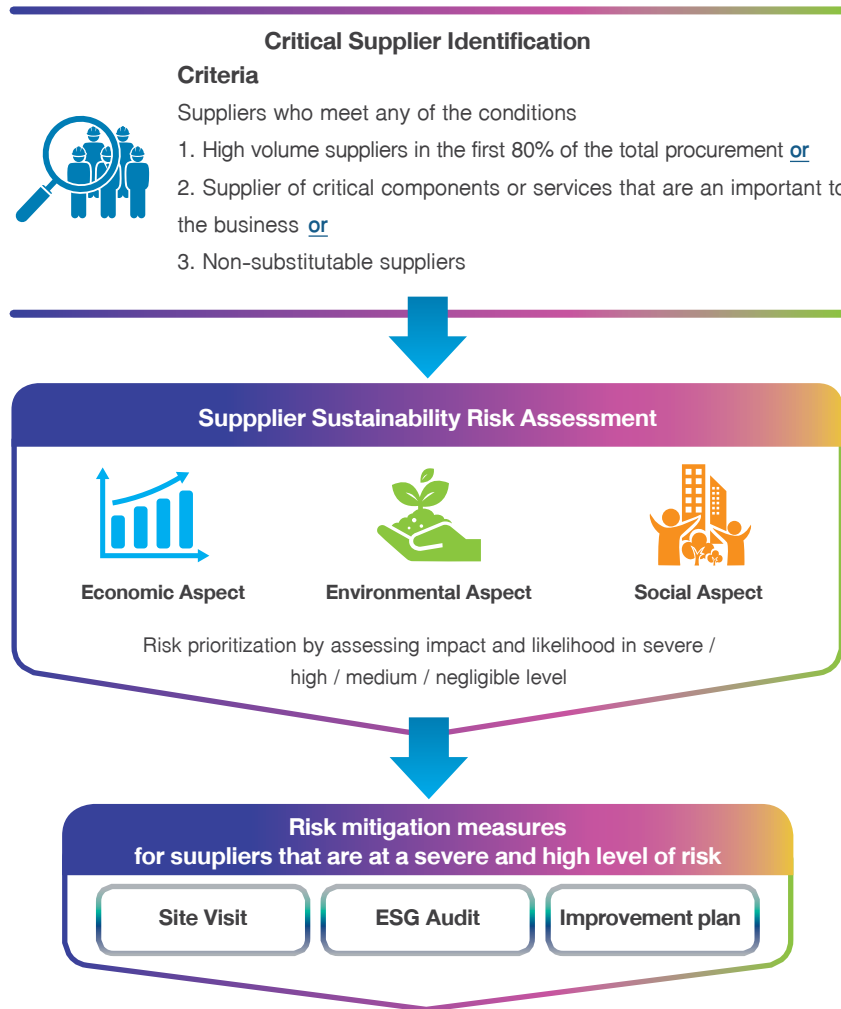
In 2019, the Company has established the AMATA Supplier Code of Conduct which is in line with the business ethics of the AMATA Group in compliance with the regulations, laws and international practices regarding environment, society and corporate governance. The Company held a meeting with its critical suppliers on 25 November 2019 to introduce and explain details in the AMATA Supplier Code of Conduct which is divided into 5 categories as follows:

1. Business ethics
2. Human rights
3. Safety and occupational health
4. Social Responsibility
5. Environmental responsibility

In addition, the Company has prepared a Self-Assessment Questionnaire (SAQ) based on AMATA Supplier Code of Conduct for suppliers and contractors to self-evaluate and provide information regarding their business operations and started applying the self-assessment to the critical supplier group as the first group in 2019. 20 out of 77 critical suppliers have done the self-assessment questionnaire representing 26%.

The Company aims to have all critical suppliers (100%) officially accepted AMATA Supplier Code of Conduct and passed the sustainability risk assessment by 2020.

## Supply Chain Risk Assessment (Disclosure 308-2, 414-2)



### Identifying critical suppliers/contractors

In 2019, the Company had totally 501 suppliers and contractors in its supply chain and has identified the critical suppliers and contractors who have been continuously doing business with the Company by using the criteria of being the main activity of the business, procurement value and the ability of substitution. The Company found that there were 77 critical suppliers and contractors, with procurement value accounting for 89% of the total procurement value.

### Supplier Sustainability Risk Assessment

The Company has improved the supplier sustainability risk assessment process by identifying critical suppliers and assessing potential risks and its effects to the

Company on economic, social and environmental aspects, and also managing risks by arranging site visits and ESG audits by the procurement department and those who use products or services. For suppliers who have risks at severe and high level, the Company will give advice on how to improve and prepare a development plan, resulting in good relationships with suppliers.

The Company had done risk assessment of the critical supplier group consist of 77 suppliers and contractors. One critical contractor was found having social and environmental risks, which are environmental impacts from its operation and safety issue, accounting for 1.3 % of the total number of critical suppliers and contractors. No critical suppliers and contractors were found having risks in corporate governance or economy. The Company



has developed risk management measures for each critical suppliers and contractors, and also arrange supplier development initiatives for them in order to mitigate risks and reduce the impact of such risks. However, the Company has not yet terminated its business relations with any suppliers after conducted the risk assessment in any way (0 % relationship termination). (Disclosure 308-2, 414-2)

## Supplier/Contractor Assessment and Audit

The Company had designated the guidelines for checking and assessment of the future suppliers and contractors consisting of the procedure to check the basic qualifications of the suppliers and contractors whether their qualifications meet the standards set herein while the existing suppliers and contractors will obtain the additional assessments such as the sustainability risk assessment, past performance assessment, workplace audit including assessment of relationship between the sellers of such product/service and the Company in accordance with the requirements and checklist defined by the Company and the standard of environmental management system (ISO14001).

In 2019, the Company had audited and assessed 19 critical suppliers and contractors which equivalent to 24.68% of total critical suppliers, higher than 2019 target at 15 critical suppliers or 20%. The Company has targeted

## Customer Management

The Company always places importance on customers according to the business philosophy of "ALL WIN". The success of customers or operators in the industrial estates is a part that supports the long-term economic growth of the Company, so the Company is committed to the effective customer management in order to build the engagement and confidence as business partners in achieving and growing the success together.

Therefore, the Company has focused on customer engagement and listening to the problems, opinions, expectations and suggestions for the improvement through various communication channels that encourage the customers to communicate more conveniently including organizing various activities that allow customers to participate in community development both inside and outside the industrial estates. In 2019, the Company had implemented the activities to build the good relationships with customers as follows:

to assess and audit 50% of total existing critical suppliers and contractors by 2020 and 100% in 2021. In addition, the Company will start screening and assessing of new suppliers and contractors by using ESG criteria including the performance evaluation of suppliers and contractors in 2020 onwards.

As for new supplier/contractor registration by using newly revised criteria and guidelines covering economic, social and environmental aspects will be implemented in 2020.

## Revision of policy and best practices of transparent and fair procurement

The Company had improved its existing procurement policy and best practice by focusing on transparency and fairness covering the risks of good corporate governance, economic, social and environmental issues such as compliance with relevant regulations and laws, financial risk, business ethics, human rights, occupational health and safety of the employees and environmental management, etc. Whereas the procurement policy has already been announced to be implemented by AMATA Group, its procurement best practices is still under the adjustment process to be applicable to all subsidiary companies of AMATA Group and scheduled to be accomplished in the first quarter of 2020.

Activity	Objective	Result of Implementation
<b>CSR Club</b>	To create a strong synergy in driving CSR activities on behalf of all operators in AMATA City Chonburi Industrial Estate to the communities, and to be able to distribute aid and development to the wider local communities.	In 2019, the CSR Club had the total of 135 factory members in AMATA City Chonburi Industrial Estate which was increased by 15 factory members from 2018. In 2019 The CSR Club organized 4 meetings and 11 activities for environmental preservation and community care. There were 4,100 CSR club members participated in these activities throughout the year.
<b>AMATA CSR Volunteer Club</b>	To build partnership and network among the factory club members at AMATA City Rayong Industrial Estate to provide helpful CSR activities to local communities and to create coexistence among all parties for mutual benefits and living together in a sustainable way.	In 2019, the AMATA CSR Volunteer Club had the total of 83 factory members in AMATA City Rayong Industrial Estate which was increased by 20 factory members from 2018. AMATA CSR Volunteer Club organized 3 meetings and 16 activities and there were 3,156 club members participated in the activities throughout the year.
<b>AMATA Japanese Society</b>	To be a center in business communication with Japanese customers in AMATA City Chonburi and AMATA City Rayong Industrial Estate because 63% and 30% of the customers respectively are Japanese.	In 2019, the AMATA Japanese Society had the total of 237 consists of 190 and 47 factory members in AMATA City Chonburi and Rayong, respectively, which was increased by 9 factory members from 2018. The Society held 16 meetings and organized 10 golf tournaments in 2019.
<b>AMATA City Management Group (ACMG)</b>	To be a center for sharing useful information especially human resources management information and providing consultation and guidance about the operating business in accordance with legal requirements among the factories in the AMATA City Rayong Industrial Estate.	In 2019, there were 110 factory members, which was increased by 5 factory members from 2018. ACMG organized 10 monthly meetings. There were 80 factories participated in the meetings.

Activity	Objective	Result of Implementation
<b>HR Association of AMATA City Chonburi (HRA)</b>	To be a center for coordinating the activities in human resource management in order to promote study and research and share of the useful academic knowledge in human resource management among factory members in AMATA City Chonburi and other organizations including government entities.	In 2019, there were 325 factory members, increased by 3 factories from 2018. HRA organized 12 monthly meetings on professional human resource management. There were about 170 factories joined each meeting, totally 2,050 participants.
<b>AMATA City Chonburi Safety and Environment Group (ASEG)</b>	To advise and provide support and coordination to the members, employers, employees, government agencies and other organizations. This will lead to success in handling problems in safety, occupational health and working environment. ASEG aims to ensure that all workplace have safety, occupational health and working environment standards in accordance with the law.	In 2019, there were 215 members, is equal to 2018. ASEG held one meeting on arrangement of the 2019 Safety Week event by cooperation among 35 companies. There were 140 participants at the meeting.

## Customer Complaint Handling Process

This year, the Company had opened additional communication channels via LINE Application @amatacity to facilitate communication and accessibility to the population in AMATA Industrial Estate and established a 24-hour call center to receive the complaints and report the emergency incidents in the industrial estates. The Company had improved the system and procedure of receiving and monitoring the customer complaints to be more efficient. The complaints will be classified according to their related types such as environment, society and corporate governance. The Company has set a process to manage and monitor the resolution since the recording until the correction is completed in accordance with the guidelines specified in the environmental management system ISO14001: 2015. The responsible working unit has to respond and solve the complaints within the specified period of time along

with reporting the management for acknowledgment of the results and further consideration of preventive guidelines.

In 2019, the Company received 365 complaints from its customers which 59% of total complaints were about infrastructure and utilities, 37% were about services, and 4% were about the environmental impact. Three complaints regarding the environmental impacts from the operation of the Company's suppliers and contractors were found. All complaints or 100% were resolved within the due date in 2019.

## Customer satisfaction survey

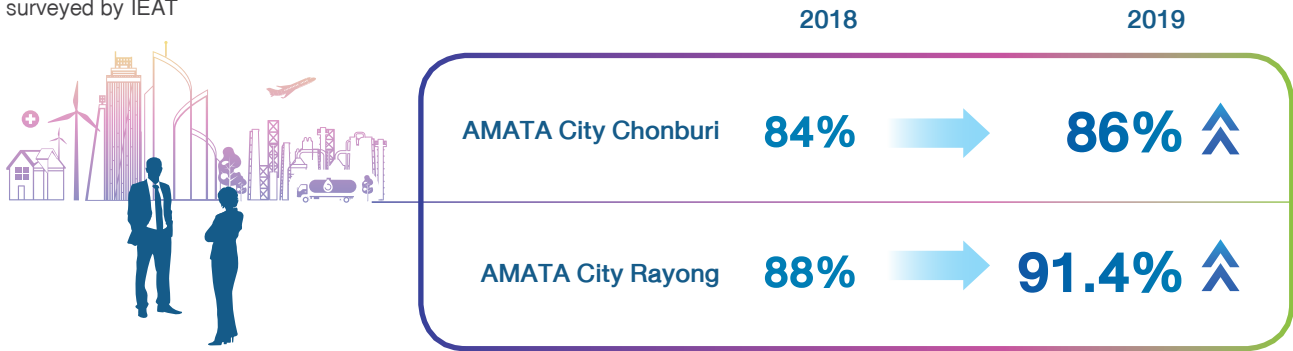
The Company had conducted the customer satisfaction surveys directly by sending the questionnaires to the customers and having the marketing staff for direct contact with the Company in order to get to know the real causes of problems and the needs of the customers

including building the good relationship with the customers. Customer satisfaction scores, problems and suggestions were also presented to the management meeting in order to consider improving the products, services and work process of the Company. The Company had targeted to receive at least 90% customer satisfaction scores in 2019, and conducted the customer satisfaction survey itself. The average customer satisfaction scores obtained was 70%, increased from 2018 (68.2%).

In addition, the Industrial Estate Authority of Thailand (IEAT) had also conducted the annual customer satisfaction survey in 33 industrial estates. In 2019, AMATA City Chonburi Industrial Estate obtained the average scores of 86%, and AMATA City Rayong Industrial Estate obtained the average scores of 91.4%, both industrial estates had higher scores compared to 2018.

**Level of Customer Satisfaction**

surveyed by IEAT



**Customer Information Protection**

The Company has a policy and guidelines for customer information protection of both existing companies in the industrial estates and future customers by neither disclosing nor utilizing the information without customer’s permission in order to build the confidence for its customers and prevent the damage to be incurred. In 2019, the Company did not receive any complaints on this issue.

**Development of suppliers, contractors and customers**

The Company has emphasized on the development of business partners in the value chain which includes the suppliers, contractors and customers in its industrial estates in order to reduce the social and environmental risks and impacts and build the confidence to all stakeholders of all sectors that the Company has properly managed the entrepreneurs in the industrial estate, the suppliers and the contractors of the Company, as well as, has supported the performance development of the suppliers, contractors and customers to be in accordance with the Company’s standards; for example, encouraging the suppliers and contractors who deliver the key products

and services to the Company to develop their business operation procedures and to obtain the management system certification in accordance with the international standards such as ISO 9001, ISO 14001, ISO 17025, OSHA 18000, etc.

In 2019, the Company has arranged 2 supplier and customer development projects which are a workshop on Industrial Waste Management by using 3Rs Principle for customers in the industrial estates and a training on Occupational Health, Safety and Environmental Management for waste transporters and waste separation staffs of waste separation plant.



## Workshop on the Industrial Waste Management using 3Rs Principle for customers in the industrial estates

The Company is well aware of the risk of industrial waste management by an individual customer who is the operators in its industrial estates which is not consistent to the practice of industrial waste management laws of which procedure is so complicated that may cause both short-term and long-term impacts on the environment and communities such as illegal industrial waste dumping, soil contamination and ground water contamination, etc. resulting to the damage of its reputation and its future administration management.

In 2019, the Company focused on promoting customers to have more knowledge in managing waste from its inception. Therefore, the Company has organized a workshop on industrial waste management in accordance with 3Rs principle (Reduce, Reused, Recycle) for customers in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate. The workshop focused on how to do waste separation correctly to reduce waste management costs and knowledge transfer from training to their colleagues or apply to work.





## Training on Occupational Health, Safety and Environmental Management for waste transporters and waste separation staffs of waste separation plant

The Company has provided the solid waste management services to its customers in industrial estates and has hired the contractors to collect, transport and sort the waste. Each step of the operations may have an impact on the environment and the surrounding communities if the contractor's employees lack of the knowledge and skills in waste and environmental management including the safety in operations such as waste water spills, stench of solid waste, the impact on the safety of the contractor's employees themselves, the Company's reputation and the confidence of the Company's stakeholders. Realizing well the risks of such cases, the Company had provided the training to educate the practical knowledge to the contractors in order to improve their work performance.

In 2019, the Company had provided totally 8 training courses to the contractors such as Safety and Working Environment for Solid Waste Collection, Basic Fire Extinguishing Course, Fire Extinguishing and Evacuation Drill Course, Solid Waste Spillage Recovery Drill Course, Work Analysis for Safety Course, First Aid Course, 5S Management Course, and Ergonomics for Safe Working Course. The Company had set the 2019 targets which were zero environmental complaints on waste management and no serious occupational accidents till stop working.

At present, the contractor company has 110 waste collectors and sorters working at the waste sorting plants for the Company and 85% of total employees had passed the above-mentioned training courses enabling the Company to achieve this year's targets as set.



# Environmental Care

Factories in AMATA City Rayong participating in AMATA Best waste management Awards increased by

**15.79%**

compared to 2018



Solid waste to landfill

reduced to **0.13%**

of total solid waste

**100%**

of recycled water was utilized within industrial estates

**100%**

of environmental complaints were resolved

AMATA City Chonburi and AMATA City Rayong received awards of Eco-industrial Town level

**Eco-Excellence:E2**



# Environmental Impact Management



## 2019 Highlights

Proportion of Environmental Complaints being resolved within 2019

Target **100%**

Result **100%**

AMATA City Chonburi and Rayong Industrial Estate have been certified as Eco-Industrial Towns at level Eco-Excellence by the Industrial Estate Authority of Thailand

Target **Both AMATA Industrial Estates being certified**

Result **Both AMATA Industrial Estates being certified at level Eco-Excellence: E2**



Industrial estate development is a business that can directly cause negative environmental impact if operating without good management. The Company, therefore, places importance on the environmental impact management as it is one of the Company's material topics. The Company has assessed the risks and impacts from business activities throughout the supply chain and keeps overseeing the activities of factory operators in both AMATA Industrial Estates that may cause a negative impact on the Company's stakeholders. The environmental risk assessment shows that the concerned environmental impacts are air pollution and water pollution. Therefore, the Company focuses on good and efficient pollution management by using appropriate technologies and strictly complying with the laws prescribed under the Environmental Laws related to business operations in the industrial estates, measures from EIA report, and environmental standards. In addition, the development of the Company's Smart City at the AMATA City Chonburi Industrial Estate, which focuses on the Smart Environment, has applied leading-edge efficient innovation and technology to ensure that the environment will be closely monitored and to give stakeholders more confidence in the Company's business operation. (Disclosure 103-1).

## Performance (Disclosure 103-2, 103-3)

### Implementation according to measures specified in the EIA report

The Company cooperates with the Industrial Estate Authority of Thailand to regulate AMATA's two Industrial Estates so that they conform with the relevant laws and regulations in economic, social and environmental dimensions as well as with the policies of both entities to minimize negative social and environmental impact. In 2019, the Company continuously monitored and controlled the environmental quality in its industrial estates area in order to build confidence in neighboring communities in

the Company's environmental management of its industrial estates, and to promote its industrial estates' environmental management guidelines with environmental governance principles.

#### 1. Environmental Monitoring and Control Center: EMCC (Disclosure 305-7)

The Environmental Monitoring and Control Centers (EMCC) were established since 2013 and have

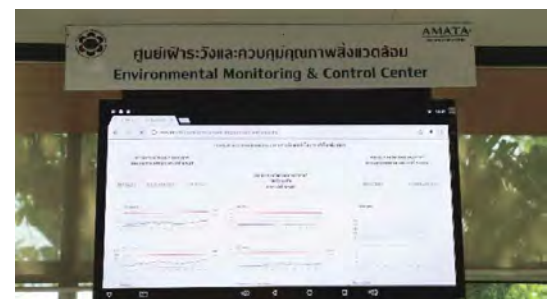


been operating to continuously monitor and control environmental quality in AMATA's two Industrial estates areas. There are 4 environmental quality monitoring stations at AMATA City Chonburi Industrial Estate and 2 environmental quality monitoring stations at AMATA City Rayong Industrial Estate. The real-time data from all stations are synced and shown on a 24-hour online display system. The structure of the Environmental Monitoring and Control Center consists of 5 systems:

- **The central industrial estate database system** is working as an information center by collecting environmental data from the entire industrial estates and the factories operating in the industrial estates, such as water consumption, wastewater volume, wastewater quality, industrial waste volume and air quality, etc.
- **The monitoring and controlling system of the effluent quality after being treated in the central wastewater treatment plant.** The wastewater treatment effluent quality from the central wastewater treatment plant, is monitored BOD values and online linked to EMCC. If the BOD online shows that the effluent quality exceeds the standards as specified in the Notification of the Ministry of Natural Resources and Environment standards for wastewater quality from industrial plants, industrial estates and industrial zones dated 29 March 2016 and the Notification of Ministry of Industry regarding Industrial Effluent Standards B.E. 2560 dated 30 May 2017, the EMCC will notify the central wastewater control center to analyze, identify the causes and solve the problems immediately.
- **The Air Quality Monitoring Station (AQMS).** Air quality is monitored by Air Quality Monitoring Station (AQMS). There are four AQMS at the AMATA City Chonburi Industrial Estate area covering the surrounding community areas of U Tapao Temple, Mab Sam Kleow Temple, Panthong Ratchanupatham School and Omkaew Temple. There are two AQMS at

AMATA City Rayong Industrial Estate covering the surrounding community areas of Health Promotion Hospital, Tumbon Mabyangporn and Pananikom Temple. The AQMSs measure air pollutants which are the total suspended particulates (TSP), particulate matter up to 10 microns (PM10), particulate matter up to 2.5 microns (PM2.5), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and wind speed/ wind direction. The AQMSs also measure wind speed and direction to analyze the trend of spreading pollution and the source of any air pollution. The AQMSs, also, continuously measure the rainfall and temperature to precisely predict the precipitation and lowest-highest temperature in the area.

- **The monitoring and controlling system of air quality emitted from factory smokestacks.** This online system monitors and controls environmental impact by linking the emission inventory of each factory to EMCC. If the factory is found that its air emission quality exceeds the standards, the system will notify the factory to inspect, report the causes, and immediately make corrections and improvement.
- **The security surveillance camera system (CCTV)** to process information used for safety planning and traffic management within the industrial estates.



The continuous environmental quality monitoring by EMCC will ensure all stakeholders that AMATA Industrial estates actively respond and immediately address the environmental problems.

**2. Disclosure of the actions and performance according to Preventive & Corrective Measures for Environmental Impacts (EIA Monitoring Report)**

The Company discloses the environmental performance in the Environmental Impact Assessment (EIA) Monitoring Report which is submitted to the Office of National Resources and Environmental Policy Planning (ONEP), Industrial Estate Authority of Thailand (IEAT), Regional Environment Office 13 (Chonburi), and Provincial Offices of Natural Resources and Environment every 6 months.

The report discloses the performance after the implementation of preventive and corrective measures stated in the Environmental Impact Assessment report in both AMATA City Chonburi and Rayong Industrial Estate. The Company also presents the EIA Monitoring reports to the Environmental Quality Audit Committee of the industrial estate in both operation areas for their acknowledgement every 6 months.

In 2019, the Company presented the EIA Monitoring Reports to the Environmental Quality Audit Committees in 4 meetings to report its actions and performance to the Committees. No suggestion regarding the direct environmental impact from the Company operations was given but the Environmental Quality Audit Committees suggested the Company to increase its efficiency in area management for both industrial estates the following year as follow:

**Suggestions from Environmental Quality Audit Committees**

AMATA City Chonburi	AMATA City Rayong
<ul style="list-style-type: none"> <li>• To educate and promote understanding on water management to the people in the communities in order to mitigate the wastewater problems in the communities which may affect to surface and ground water and expand to help other communities as well.</li> <li>• To solve the traffic problems especially at the connecting areas between industrial estate and community to enhance the efficient traffic draining. The committee also suggest in using technology for real-time monitoring with CCTV.</li> </ul>	<ul style="list-style-type: none"> <li>• To educate foreign factory operators on laws and regulations regarding the operation in the industrial estate in order to reduce chance of pollutant emission without precautions.</li> </ul>



## Implementation according to the government policy

### 1. Eco-Industrial Town Development

The Company has collaborated with the Industrial Estate Authority of Thailand (IEAT) in developing AMATA Industrial Estates to be Eco-industrial Town according to the government policy. The guideline of development plan is in line with the development framework laid out by the IEAT, which consists of 5 dimensions and 22 aspects. The 5 dimensions, which are physical, economic, environmental, social, and management, are related to the Company's stakeholders: local communities, customers, employees, factories' employees and local government authorities. There are 3 levels of Eco-industrial Town development, namely Eco-Champion, Eco-Excellence and Eco-World class.

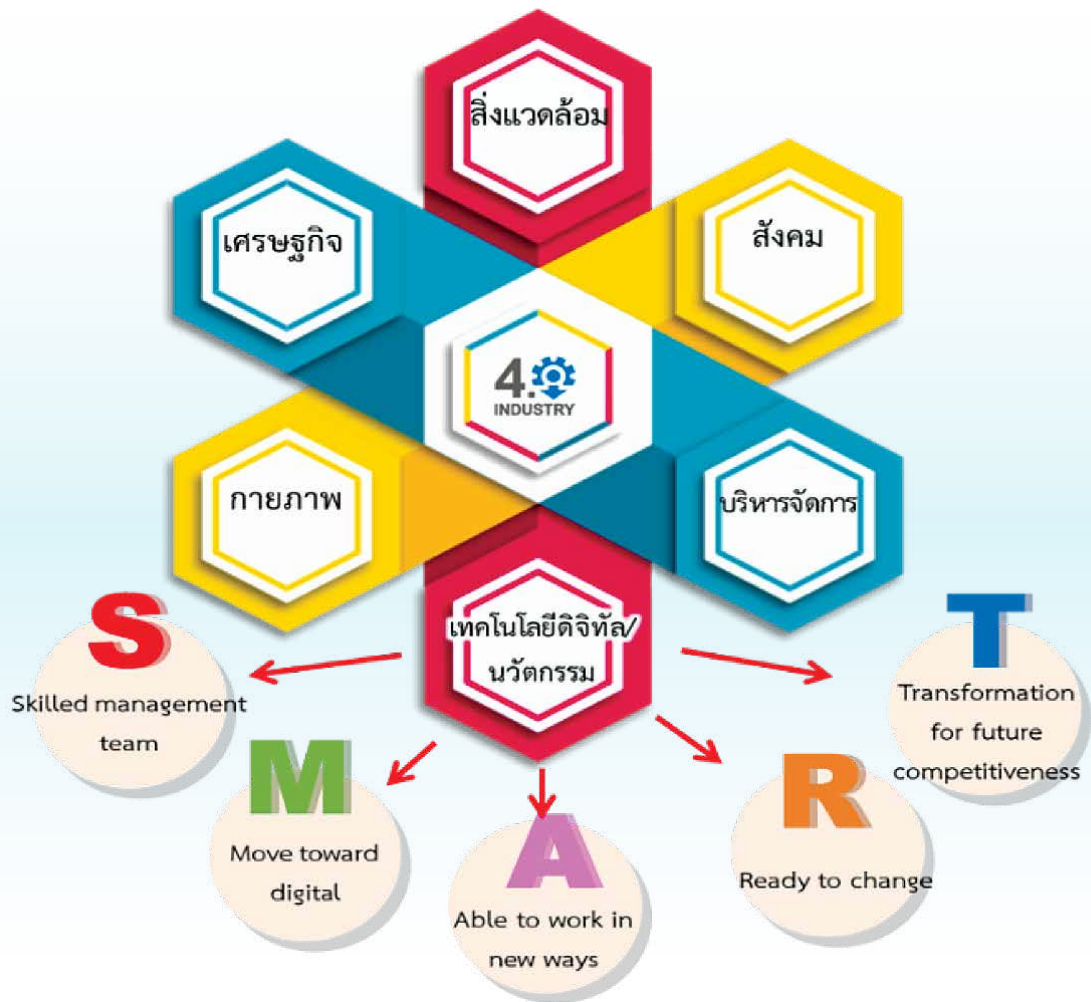
The Company has targeted to upgrade its two AMATA Industrial Estates to achieve Eco-World class levels in 2022.

The Company has carried out activities and projects to develop Eco-industrial Town at AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate such as setting up traffic management and industrial waste management committees, creating jobs in the communities, conducting complete and integrated environmental management, improving the well-being of people in communities and factories, and improving its internal information management system.



In 2019, the Company was certified "Eco-Industrial Town level: Eco-Excellence: E2" for both AMATA City Chonburi and AMATA City Rayong Industrial Estate, according to the target. Nevertheless, the Company intentionally improves its operations according to Eco-industrial concepts for upgrading itself to higher level of Eco-industrial Town for all stakeholders' benefits and to move towards a Perfect Smart City in the future.





In addition, AMATA City Chonburi Industrial Estate was granted the Smart Eco-Industrial Estate 4.0 Awards in Smart Water category from the Industrial Estate Authority of Thailand in 2019. This award was given to the companies who used technology and innovation for effective monitoring, controlling, and managing water supply, wastewater management, and drainage system. The Company uses SCADA (Supervisory Control and Data Acquisition) system in controlling water supply production process and wastewater treatment system, and also installed the reclamation system to recycle the treated wastewater according to a principle of Zero Wastewater Discharge.

The Company intends to further develop and continually improve its operation in other aspects of Smart Eco Industrial Estate 4.0 such as Smart Energy, Smart Environment Surveillance, Smart Logistic, Smart IT, and Smart Building.

## 2. Environmental Governance Assessment

The Environmental Governance Assessment Program (White Flag Green Star or Thong Khao Dao Kheow) is organized by the Industrial Estate Authority of Thailand to continuously enhance factories' capabilities in their environmental management and be able to disclose their performance to the public according to the principle of good governance. The criteria of assessment are as following

- Providing complete information in all aspects, disseminating such information in a transparent manner open to scrutiny.
- Creating community participation to reduce conflicts and sharing benefits in a fair and equitable manner among industries.
- Developing the environmental monitoring and control center to build confidence in environmental quality monitoring

In 2019, the Company joined the project as project committees, and they inspected 8 factories in AMATA City Chonburi Industrial Estate and 6 factories in AMATA City Rayong Industrial Estate. The inspected factories passed the criteria at score more than 80% which is in a good to excellent level according to the Environmental Governance Assessment.



## Implementation according to the Company's Environmental Standards

### Complaints handling system regarding social and environmental impacts according to ISO 14001: 2015

The Company gives priority to the impacts caused by business operations to all groups of stakeholders. The Company therefore provides a channel to receive complaints, problems, and suggestions according to ISO 14001: 2015 to allow stakeholders to express their opinions or propose recommendations for the Company's business operations through the telephone numbers 038-213-191 and 038-213-009, email, online media and various committees' meetings.

In 2019, the Company opens the new communication channel via LINE @amatacity account. The Company has set the standard compliant management process and problem-solving monitoring system to oversee the

complaints until the problems are completely solved according to the guidelines specified in both the ISO 14001:2015 environmental management system and the Industrial Estate Authority of Thailand complaint management system. The various complaints were analyzed to identify the causes in order to further determine the preventive approach.

In 2019, there were a total of 368 complaints, 18 of which were about the social and environmental impact, or 5%. The number of these are, 3 complaints between factories and the Company, 12 complaints between factories, and 3 complaints between communities and factories.

The Company completely solved all 368 complaints (100%) including the complaints related to social and environment impact and others in 2019.

# Climate Change



## 2019 Highlights

### Disclose Corporate Greenhouse Gas Emissions

#### Target

Carbon Footprint for Organization

#### Result

In certification process of Carbon Footprint for Organization

### Reduce Greenhouse Gas Emissions through Energy Management Activities

- Reduce the average electricity consumption per employee

**Target** Less than 17.04

kWh per person

**Result** Equal to 16.57

kWh per person, 2.85%

decrease compared to that of 2018

- Reduce the fossil fuel consumption and greenhouse gas emissions per meeting

**Target** Less than

111 Kg CO<sub>2</sub>e per meeting

**Result** Equal to 102 Kg CO<sub>2</sub>e per meeting,

8% decrease compared to that of 2018



Climate change is a global challenge that leads to the risks of disaster and the impacts to the economy, the well-being and sustainability of the global society. The current impacts have eminently become tremendously severe. Thus, the Company is well aware of the importance of collaboration of all sectors in order to jointly reduce the effects of climate change and to support the Paris Agreement reached in December 2015 which Thailand had also expressed its intent to reduce the greenhouse gas emissions by 20-25%, compared to the base year 2015, within 2030 in order to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels, including achieving the UN Sustainable Development Goal 13.

Climate change is a main challenge towards the Company's business operations. The rainfall patterns and the volume of rainfall in the Eastern region are different from the past causing the drought or flooding in some years. As a result, the Company does not only have the higher operating costs and the risk of water management, which is a key factor of the industrial estate business that has to provide the standardized clean water to the factories of the entrepreneurs in the industrial estate continuously, but also affect many groups of stakeholders in the value chain such as the operations of the factories in the industrial estates and the living and well-being of the factory workers and the surrounding local communities which may lead to the conflicts among them (Disclosure 103-1)

## Management Approach (Disclosure 103-2, 103-3)

Climate change is a topic that the Company considers material and is committed to taking part in reducing the climate change effects. In 2019, the Company had officially announced the intention of AMATA Group to reduce the greenhouse gas emissions and had

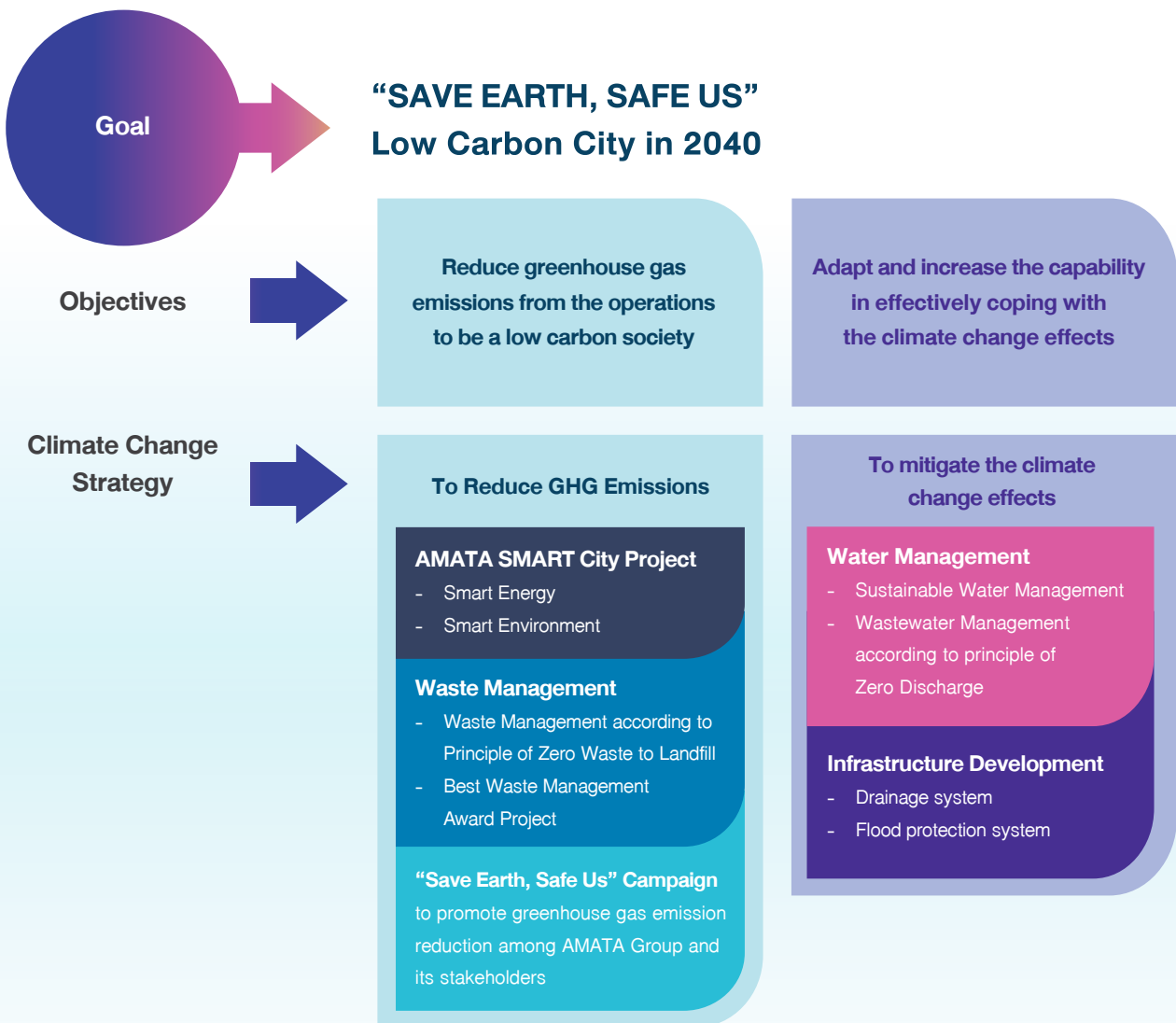
formulated the policies and the management approaches to reduce the greenhouse gas emissions from the operations and to tackle the climate change problem under "Save Earth, Safe Us" campaign.

In this connection, the Company has set the strategies and management approaches to deal with the climate change by dividing into 2 areas, which are:

1. **To mitigate the climate change effects.** The Company has considered the management of all types of water to be sustainable as a very significant issue, such as raw water, consumption water, wastewater and flood, by continuously developing the water management project for each type of water including the provision of raw water reserves to be at least 150% more than the demand for consumption in the industrial estates, the reuse of treated wastewater for the utmost use in order to reduce the reliance on the raw water from natural water resources, the development of public utility system for the preparation and prevention of flood and encouraging all stakeholder groups to

realize the sustainable water management through AMATA Learning Center of Water Management and the Development of Model Community in Water Management Project.

2. **To reduce the greenhouse gas emissions.** The Company is well aware of the importance of the collaboration of all sectors in jointly reduce the greenhouse gas emissions. The Company, therefore, has integrated the climate change management policy into the Company’s business development plan aiming to be a low carbon city by driving AMATA Smart City Project that focuses on energy efficiency through the adoption of technology and low carbon energy resources, as well as, application of the principles of circular economy to the work process and business development of AMATA Group and its related stakeholders.

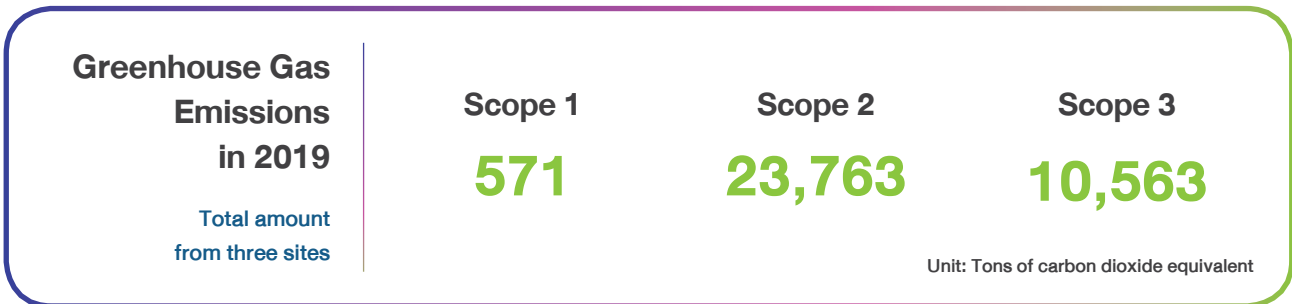




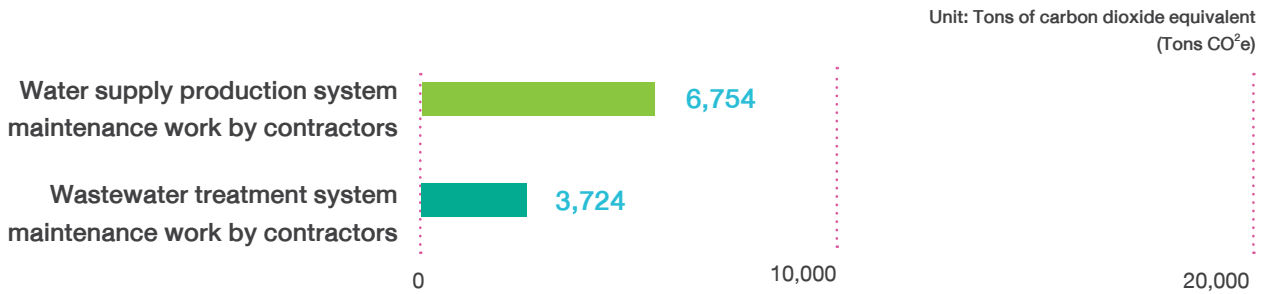
## Performance

Year 2019 was the first year that the Company disclosed the information of direct greenhouse gas emissions (scope 1), indirect greenhouse gas emissions from purchased energy (scope 2) and other indirect emissions (scope 3) in the Sustainability Report by referring to the Approved Consolidated Methodology from the Carbon Footprint for Organization of Thailand Greenhouse Gas Management Organization (Public Organization). In this regard, the greenhouse gas in each scope that the Company had used in the calculation including Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O) and Hydrofluorocarbon (HFC<sub>6</sub>), but excluding Perfluorocarbon (PFCs), Sulfur hexafluoride (SF<sub>6</sub>) and Nitrogen fluoride (NF<sub>3</sub>) due to being out of business processes.

The Company has prepared a Carbon Footprint for Organization in order to apply for the certification and registration from Thailand Greenhouse Gas Management Organization. (Public Organization), which is expected to be certified in the second quarter of 2020. The Company has designated the scope of consolidated methodology only for the activities in the areas of three offices of the Company and in the common areas of AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate which are under the responsibility of the Company. The activities of Company's operations had been found the scope 1 greenhouse gas emissions and scope 2 greenhouse gas emissions totally 24,334 tons of carbon dioxide equivalent, and other scope 3 greenhouse gas emissions had been found equal to 10,563 tons of carbon dioxide equivalent.



According to the evaluation of Company’s activities related to other indirect greenhouse gas emissions (Scope 3), two activities were found the highest greenhouse gas emissions which are:



### Results of Greenhouse Gas Emission Reduction

The Company has regularly performed the machinery inspection, maintenance and repair in order to ensure that the machineries of all systems work efficiently and has required its contractors to do the same. Besides, the Company has promoted the adoption of innovation and technology to reduce the use of fossil fuel energy, the use of renewable energy in the Company’s public utility systems and the energy conservation activities such as reducing energy consumption in the building and implementing Smart Energy Project under AMATA Smart City Project which focuses on energy efficiency through the adoption of technology and low carbon energy sources.

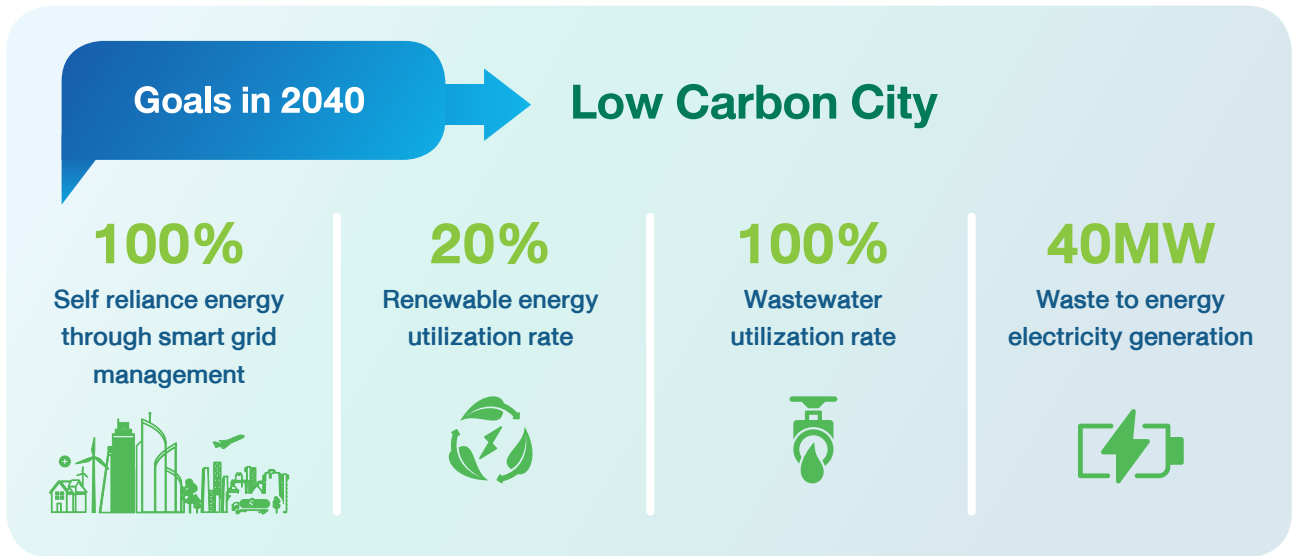
### Smart Energy Project

The goal of AMATA Smart City is aiming to become a Low Carbon City with “NET Zero Emission” in 2040 and self-reliance energy city having the efficient energy management by using various forms of renewable energy, having the investment and development of clean energy sources and high technology that reduce the pollution and promoting services for sustainable environmental management so that the Company will have the energy stability.

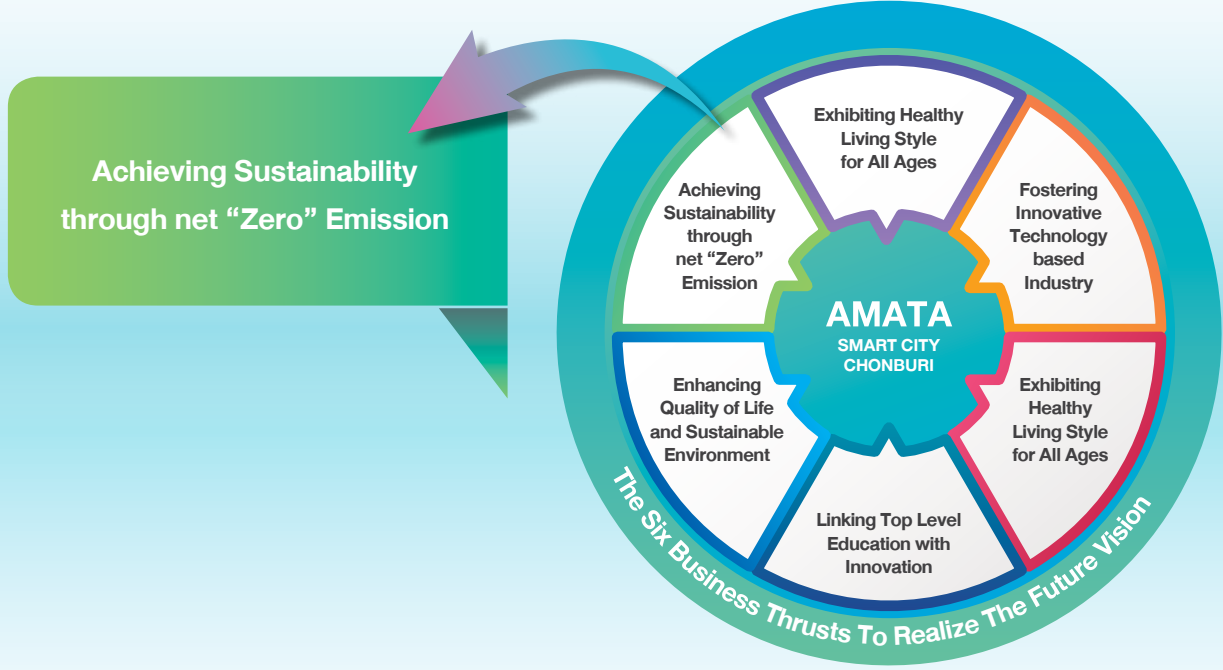
The Company had signed a Memorandum of Understanding with the Energy Policy and Planning Office (EPPO), Ministry of Energy, on 14 March 2017 to jointly drive the various projects under AMATA Smart City,

especially the Smart Energy Project related to renewable energy, both solar energy and waste to energy, including Smart Grid Project in order to use energy efficiently and stably, and promote the use of clean energy that helps environmental protection, pollution reduction due to electricity production from fossil fuels and the greenhouse gas emission reduction.

The Company is committed to increase the proportion of the renewable energy consumption from various sources to 20% of the total energy consumption in AMATA Smart City in 2040 and to increase the energy efficiency by using the innovation of the smart grid management system for the entire areas.



**Goals of “AMATA Smart City”**



In 2019, the Company has started to develop the clean energy sources in the Smart City by planning to install the floating solar panels in the Company’s reservoirs in 2020. The Company also is studying the feasibility of developing a Solar Rooftop Project by installation on the rooftop of the factories in the industrial estate, and a Waste to Energy Project.

For designing the areas of AMATA Smart City (AMATA City Chonburi Industrial Estate, project 2), it will be based on mixed use development concept

consisting of the buildings of entrepreneurs of industrial technology and innovation, office buildings, residential buildings and commercial buildings by applying the smart building principles equipped with IoT technology to connect the building equipment in controlling the lighting, temperature, weather, etc. through the Building Management System resulting to the efficient energy management and the reduction of unnecessary energy consumption.

## Energy Conservation

The Company has established the operational guidelines for business processes that help saving energy and reducing the greenhouse gas emissions by starting a pilot project in the Company's office building and the common areas in AMATA City Chonburi Industrial Estate.

### Energy saving in office building

In 2018, the Company's office building in Amata City Chonburi Industrial Estate had a total electricity consumption of 1,129,367 kWh. When calculation of the electricity consumption per employee, it was found that in the year 2018, an average electricity consumption was 17.04 kWh per person. Therefore, the Company still requires to reduce the energy consumption despite the Company has several implemented activities increased from the business expansion. Consequently, the Company has set a goal to reduce the average electricity consumption per employee to be less than that of 2018.

In this connection, the Company has organized the activities continuously to promote the Company's employees and the tenants in the office building to obtain more knowledge about the energy consumption reduction in the building by focusing on building every employee's awareness to participate in energy conservation and the appropriate consumption of natural resources and the environment to achieve sustainability; e.g., campaign to turn off air conditioners and unnecessary lights, campaign to use the stairs instead of elevators and adjustment of the temperature of air conditioning system in the offices not to be lower than 24 degrees Celsius including turn-off the screen of computer's monitor every time when not in use, etc. Due to such activities, saving electricity consumption in the building could achieve the goal because the average electricity consumption in the building per employee was found 16.57 kWh per person, 2.85% decreased when comparing with that of 2018 and equivalent to the reduction of the volume of greenhouse gas emissions of 2,429.91 tons of carbon dioxide equivalent per person per year.

### Energy saving in common areas

The Company is responsible for managing the common areas of the industrial estates in respect of maintaining the lighting systems on all roads within the industrial estates requiring the Company to change to use LED lighting sets for all lamps of the same areas and in 2019, additional 142 LED lighting sets were installed on the main roads in the expansion areas of both two industrial estates becoming the total installation of 3,253 LED lighting sets in the common areas. Additionally, the Company has adjusted the time setting at the main distribution board for the automatic on-off of street lighting system of each point according to how soon the brightness turning into darkness which depends on the seasons. Moreover, the solar cell panels for flashing light signal and warning light signal had been installed at the intersections of the common areas of AMATA City Rayong Industrial Estate to help saving more energy in the common areas while they work efficiently and environmentally friendly.



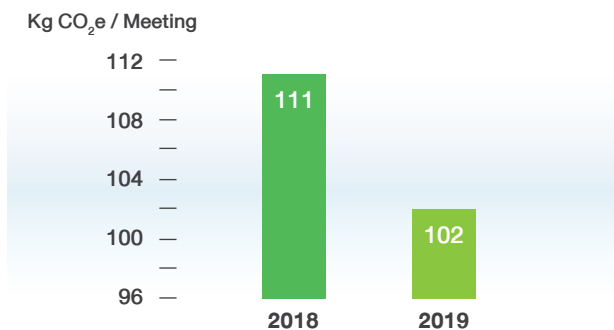
## Adoption of Innovation and Technology to Reduce the Use of Fossil Fuel Energy

Since the Company has many investments in various areas both domestically and internationally causing the Company to have considerably high travelling expenses for the Company's management and staff to attend the meetings at the offices in those areas including wasting time and fuel in traveling. The Company, therefore, has adopted the technology of teleconference system and the remote online meeting application to be used in every office of the Company including its subsidiaries.

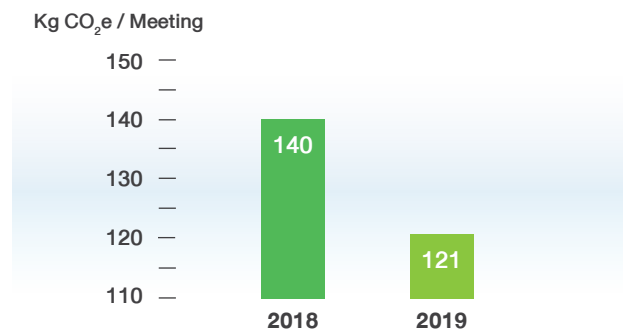
Although the number of Company's meetings in Thailand offices and in international offices in 2019 was

14.4% and 38.5% respectively more than those of 2018, the Company has promoted to use more teleconference technology and the remote online meeting application enabling the Company to reduce the use of fossil fuel energy and the volume of greenhouse gas emissions by 8% per 1 domestic meeting comparing to that of 2018, and to reduce the volume of greenhouse gas emissions by 13.3% per 1 international meeting, as well as, to save time and to reduce the risk of accident during the travel as well.

### GHG Emissions per Domestic Meeting



### GHG Emissions per International Meeting



## Promotion of the Use of Renewable Energy in the Company's Public Utility System

The Company has encouraged its subsidiaries within supply chain to increase the efficiency of energy management and to reduce electricity consumption. AMATA Water Co., Ltd. Is in charge of water and wastewater management in AMATA Industrial Estates has conducted a study on how to adopt solar energy to replace the electricity power in the operational process. It has commenced the installation of solar roof system at the water supply production plant with water reclamation system since 2017

In 2019, AMATA Water Co., Ltd. had installed solar rooftop panels on the roof of additional water production with water reclamation system building in AMATA City Rayong Industrial Estate enabling to produce 311,240 kWh of electricity from solar energy to replace the electricity consumption in the whole system, accounting for 6.97% of total electricity consumption of treated water production system for water supply production with reclamation system and to reduce the greenhouse gas emissions by 181 tons of carbon dioxide equivalent per year.



## Result of Carbon offset performance

In 2019, the Company had planted approximately 37,800 trees inside and outside AMATA Industrial Estates to offset the greenhouse gases emissions from the operations and the Company has a plan to continue planting about 30,000 trees per year in the future. In this regard, the Company plans to further integrate tree planting activity and other activities into the Low Emission Support Scheme and Thailand Voluntary Emission Reduction Program (T-VER) of Thailand Greenhouse Gas Management Organization (Public Organization) in the year 2020.

## Result of performance of GHG emission reduction promotion among group of companies and stakeholders

The Company would like to promote the knowledge and understanding of its business partners and customers who are the factory operators in AMATA Industrial Estates in order to be aware of the importance and to cooperate in reducing the greenhouse gas emissions from their operation processes. The Company, therefore, had jointly arranged three training and seminar programs on the problems of climate change and calculation of greenhouse gas emissions for its affiliates, its business partners and the factory operators in AMATA Industrial Estates in 2019.

**17 May 2019**

Seminar on “Development Approach of Low Carbon Industry Project in EEC Areas to Support City of Eco-Industrial Town and Market Mechanism to Promote Reduction of GHG emissions in Industrial Sector” for the factory operators in AMATA Industrial Estates organized by the Industrial Estate Authority of Thailand

**13 August 2019**

Mr. Vikrom Kromadit, Chairman and Acting CEO, had announced his intention and given the AMATA Group’s policy to cope with climate crisis problems and the seminar on “CLIMATE EMERGENCY: CALLING FOR CLIMATE ACTIONS” to cope with the increasing global warming problem by Asst. Prof. Dr. Rattanawan Mungkung, Director, Centre of Excellence on enVironmental strategy for GREEN business (VGREEN), Faculty of Science, Kasetsart University, and Mr. Chuchat Saitin, Managing Director, AMATA Water Co., Ltd.



**16 August 2019**

Training on “Greenhouse Gas Reporting for Sustainable Business Development” for AMATA Group of companies and its business partners



# Water Management



## 2019 Highlights

Proportion of recycled water utilized within the industrial estates



Target **100%**      Result **100%**

Proportion of raw water used in water supply production process



Target **62%**      Result **61%**



Water is a major resource for industrial sector and all lives on earth for living. Therefore, increasing demand of future water consumption due to the industrial growth in the eastern region together with rapid growth of population and climate change which leads to water crisis cause the risks and challenges in the Company's business operation. Besides water supply, the Company and its stakeholders also place importance to wastewater management because it would negatively affect the environment if there is mismanagement. Therefore, the wastewater management is always a material sustainability topic to the Company and stakeholders. The Company has planned the sustainable natural resources consumption by using water resources with the highest efficiency and set the Company's goal of wastewater management not to discharge wastewater outside the industrial estates, or "Zero Discharge", since the commencement of business and to regularly monitor quality of water sources used as raw water in the industry and wastewater to ensure that the Company's water management is efficient and does not affect the stakeholders both in a short and long run. (Disclosure 103-1)

## Management Approach (Disclosure 103-2)

The Company realizes the importance of efficient water management prevention and correction by establishing the **Water Management Committee** comprising the Chief Executive Officer and the working group of engineering department and subsidiary companies, i.e. AMATA Water Co., Ltd. and AMATA Facility Services Co., Ltd. to be responsible for water management within AMATA Industrial Estates and reporting directly to the Chief Executive Officer.

The Company strictly complies with relevant laws under the Industrial Estate Authority of Thailand Act, B.E.2522 (1979), Factory Act, B.E. 2535 (1992) and ISO 14001:2015 environmental standards. Water quality is regularly monitored by laboratories registered with the Department of Industrial Works and the operating results on water and wastewater management are

disclosed in the Environmental Impact Assessment (EIA) reports. The EIA Monitoring Report is regularly presented to the Environmental Quality Audit Committees of both AMATA Industrial Estates every 6 months. Business operators in the industrial estates are also supervised to ensure their compliance with the regulations of the Industrial Estate Authority of Thailand to prevent problems and mitigate the social and environmental impacts.

In addition, the Company encourages the communities surrounding the industrial estates to have a better understanding of the Company's business operations and sustainable water management. Also, the Company provides the expertise to help improve the water management of the community by integrating the cooperation amongst the Company, government agencies and communities to work together.

## Coping with Climate Change

The Company focused on countermeasures against the global climate change which directly affects the amount of rainfall in the industrial estates, causing direct impacts on the Company and the stakeholders within and around the industrial estates. The Company has assigned AMATA Water Company Limited, its subsidiary, to hold meetings with the factory operators in AMATA City Chonburi and AMATA City Rayong Industrial Estate on a regular basis to report the water situation in the eastern region including water management plans within AMATA Industrial Estates and also communicate through various channels in order for the factory operators to be able to assess and prepare for the water situation effectively.

The Company, therefore, has analyzed and implemented the preventive management to mitigate the impacts from climate change in each area as follows:

### AMATA City Chonburi Industrial Estate

Currently the global climate has changed, causing a difference in the pattern and amount of rainfall in this area from that in the past. A long-time heavy rain causes water drainage problem and flooding on the road surface, resulting in heavy traffic during the rush hours in the morning and evening. In addition, the growth of local communities around the industrial estate without appropriate city planning to accommodate the urbanization causes faster drainage rate of the flowing water from the communities in the upstream areas to AMATA City Chonburi Industrial Estate.

In 2019, Chonburi province had a total rainfall of 1,064 millimeters, less than that of 2018 which had a total rainfall of 1,356 millimeters. However, the Company still focused on the development, maintenance and improvement of various systems on a regular basis to

prevent flooding in this area and negative effect to the surrounding community.

The Company has assigned internal departments to keep working on water management continuously. The Company has improved the drainage system to be more efficient in 2019 such as dredging canals to prepare for receiving rainwater and to help streamline the drainage during heavy rain both in the industrial estate area and the surrounding community area. There were four permanent automatic electric pumps installed to help drain water in the front zone of the industrial estate, approximately 700 rai of catchment area, at total pumping rate of 4,000 cubic meters per hour. In Phase 10 of the industrial estate, Map Pong Subdistrict, Phan Thong District, there were additional two permanent automatic electric pumps installed, with a



total pumping rate of 3,600 cubic meters per hour (there were 3 pumps in 2018).

The Company has communicated flood prevention plans and progress of public utility improvements in the area as well as preparations for coping with climate change in order to build confidence for the factory

operators in AMATA City Chonburi Industrial Estate. The Company has assigned AMATA Facility Services Company Limited, its subsidiary, to hold a meeting on “**Flood Prevention Plan of AMATA City Chonburi Industrial Estate**” every year in order to give information and clarify any concerns of factory operators in AMATA City Chonburi.



## AMATA City Rayong Industrial Estate

Due to hilly geographical feature of AMATA City Rayong Industrial Estate, heavy rain on the hill causes heavy runoff to flow down, causing the soil to collapse and flooding on the road surface of AMATA City Rayong Industrial Estate in some areas. The Company therefore improved the drainage system in 2019 by increasing the green area to absorb and reduce the strength of the surface runoff, dredging canals and drainage ditches in the area to flow water easier, setting the additional drainage opening points to release flooding on the road surface as well as maintaining and improving various systems on a regular basis.

## Water Supply Management (Disclosure 303-1, 303-2)

Water is greatly required for the Company's supply chain to support the production process of factories in the industrial estates. The Company had completed the studies of the social and environmental impacts occurred from the industrial estates' water consumption prior to the commencement of business operation in order to assess the opportunities and risks from sharing water resources with the communities.

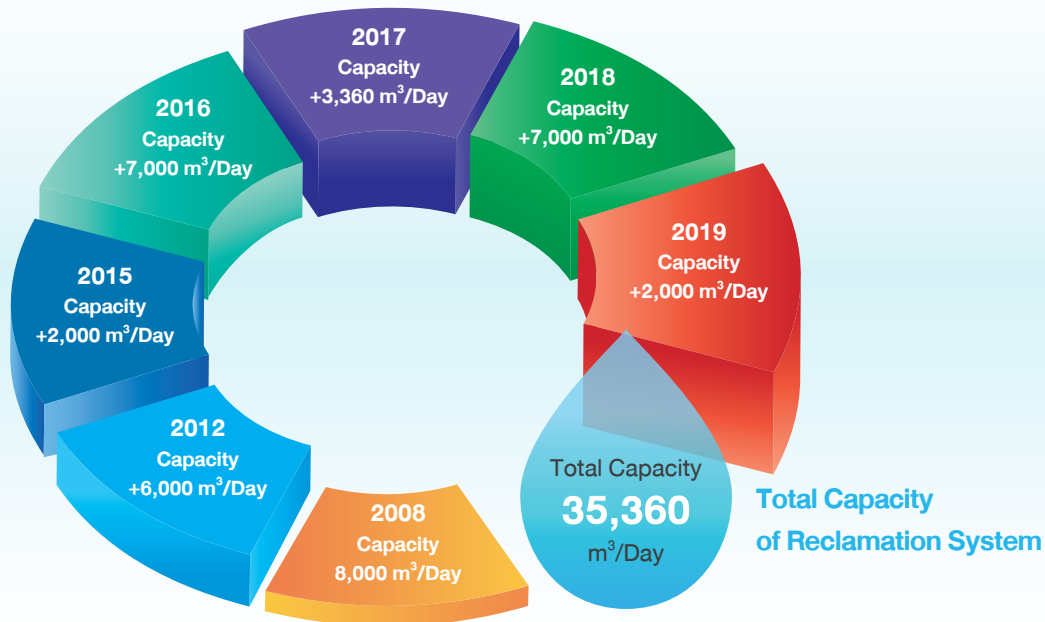
The Company sets a policy to reserve raw water in the reservoirs both inside and outside AMATA Industrial

Estates at least 150% of raw water consumption demand in the industrial estates. As such, the Company has never experienced water supply shortage in AMATA Industrial Estates in the past 30 years in spite of major drought in the eastern part of Thailand which affected several operators in the Eastern Seaboard. Currently, the demand of raw water consumption in AMATA Industrial Estates is over 33.8 million cubic meters per year. The Company has 18 reservoirs supplying raw water for both AMATA Industrial Estates with the total water reservoir capacity of 55.4 million cubic meters.

The Company is aware of the importance of using water resources efficiently and worthwhile, therefore, has established a project named **“Project to expand production capacity of high-quality water from recycle water by using reclamation system according to zero discharge concept”** aiming to reduce dependence on raw water from natural sources as much as possible and to have no wastewater discharged from the industrial estates by recycling wastewater as much as possible. This conforms to the UN Sustainable Development Goal no.6 Ensure availability and sustainable management

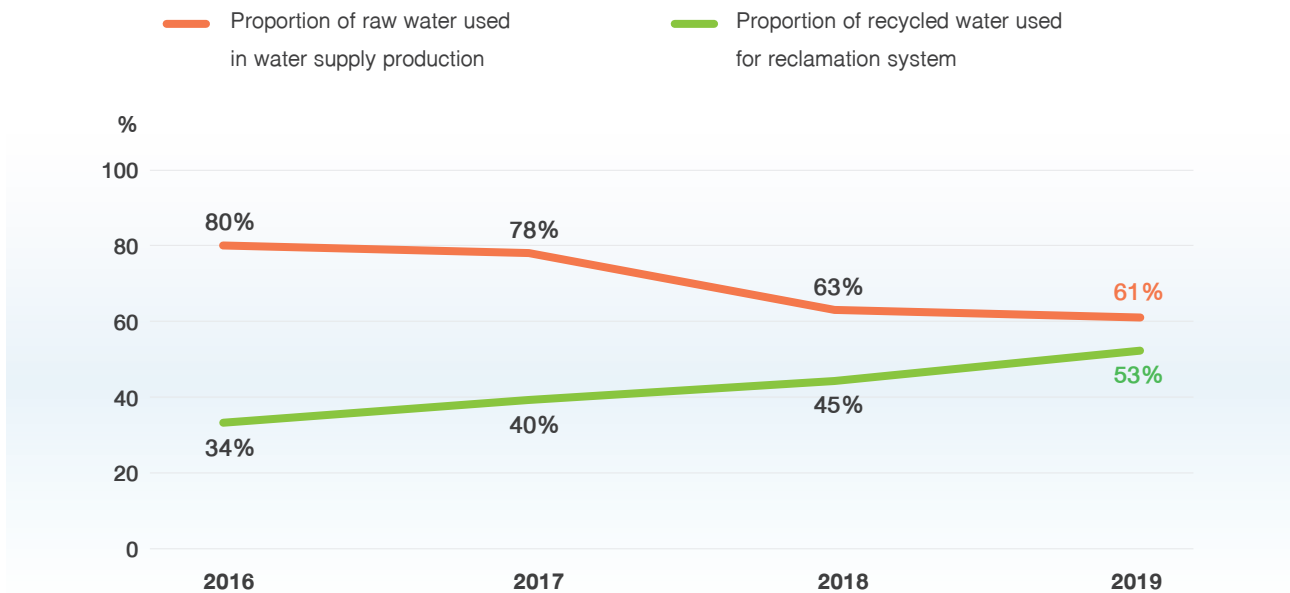
of water and sanitation for all (target 6.3 and 6.4) and Goal 12: Ensure sustainable production and consumption patterns (target 12.2, 12.4, 12.5).

The Company has invested in developing high-quality water production process by using the reclamation system with reverse osmosis technology since 2008 and continuously expanded the production capacity of high-quality water. The high-quality water produced was used to replace natural raw water in tap water production process which produced the tap water supplying the factories in the industrial estate.



In 2019, the Company targeted to reduce the proportion of raw water consumption to 62% of total water consumption. So that the Company has increased the capacity of reclamation system to 35,360 cubic meters per day in 2019, thereby increasing the proportion of recycled water sent to the reclamation system from 45% in 2018 to 53% of total recycled water. As a result, in 2019 the volume of raw water used in water supply production was reduced to 33.8 million cubic meters (Disclosure 303-1), or representing 61% of total water consumption in 2019, decreased from 63% in 2018. The Company also saved cost on raw water sourcing by Baht 73.6 million per year.

As a result, the Company’s raw water reserved for consumption could be extended by 5 more months. It also reduced the risk of water shortage and could help support local communities if needed in drought crisis. An expansion of reclamation system capacity also helped increase the confidence of the customers and local communities surrounding the industrial estates in water resources sufficiency and sustainable water management in the industrial estates including reduce the negative impacts and the possibility of contamination on public water sources and the environment.



## Wastewater Management (Disclosure 303-2)

The Company has applied a principle of Zero Discharge in the wastewater management of both AMATA Industrial Estates by setting the Company's goals in wastewater management without wastewater discharge to outside of the industrial estates to mitigate the impacts on public water sources and a dependence on raw water consumption from natural water sources, resulting in more efficient water consumption and reduced chance of any contamination from the industry to the environment.

### Factory Wastewater Management



In the wastewater management process of the industrial estate, the Company has supervised the factories in industrial estates by requiring factories to separate rainwater drainage tracks from the wastewater drainage in order to prevent the factory to release the wastewater into the central rainwater track of the Industrial

Estate. The factories must deliver the preliminary treated wastewater with acceptable quality according to the regulations set by the Industrial Estate Authority of Thailand to the central wastewater collection center of such industrial estate to perform the treatment according to the standard set under the announcement of the Ministry of Natural Resources and Environment, B.E. 2559 (2016) and the announcement of the Ministry of Industry, B.E. 2560 (2017). Treated water from the central wastewater treatment system of the industrial estate will be thoroughly inspected by a private laboratory registered with the Department of Industrial Works and must pass all standard criteria before being reused in any forms. The Company checked the quality of wastewater discharged from the factories on a monthly basis. When the Company found that the quality of wastewater released into the central system

did not meet the standards, a warning letter was sent to the factory to improve its system and to charge them the additional wastewater treatment service fee (fines).

AMATA Water Company Limited, its subsidiary, is responsible for central wastewater treatment system has set a preventive maintenance plan (PM) on a monthly basis to reduce the risk of unplanned wastewater treatment system shutting down from equipment breakdown.

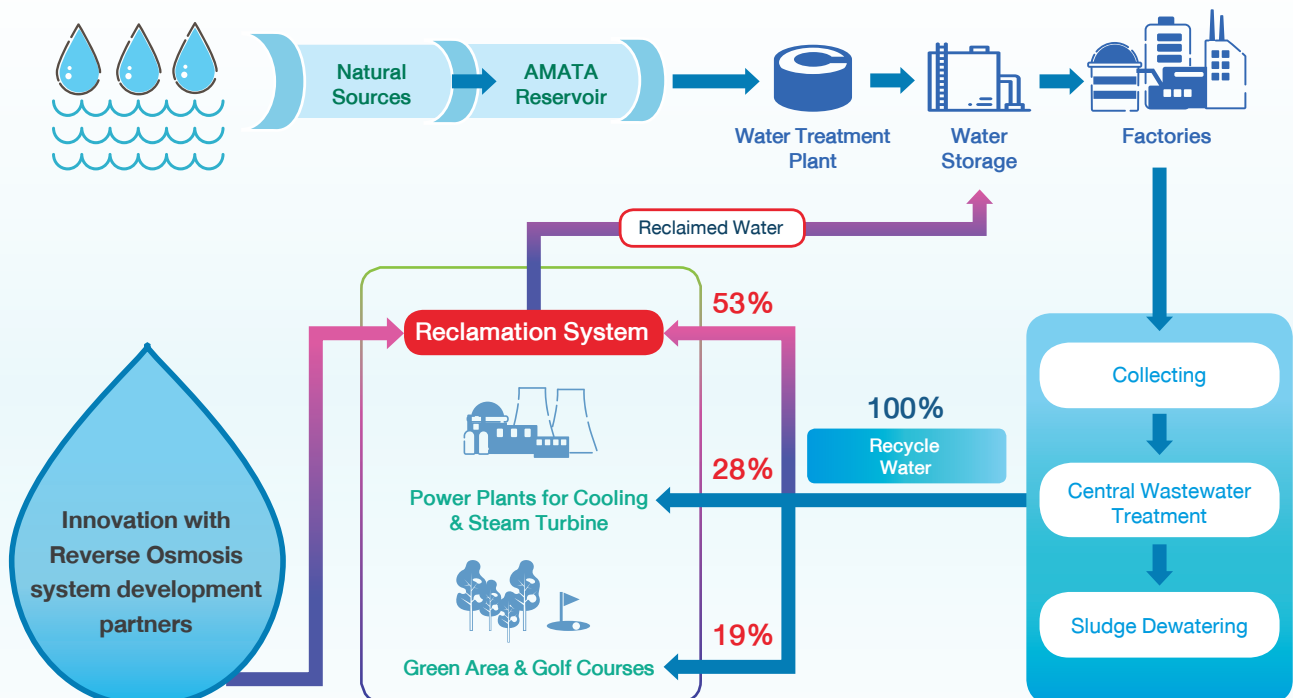
In addition, to control water quality, the Company has installed continuous and random water quality monitoring instruments at the central wastewater treatment system and wastewater flow measurement instruments before entering the treatment system as well as recording the amount of effluent used, and reported the results to the Office of Natural Resources and Environmental Policy and Planning and the Industrial Estate Authority of Thailand every 6 months.

### Recycled Water Usage



In 2019, 21.9 million cubic meters of wastewater were treated by the central wastewater treatment system and reused the recycle water in various forms, i.e. sent to the reclamation system to produce high-quality water (reclaimed water) by using Reverse Osmosis method, used in the power plants' cooling system in AMATA Industrial Estates, and used in common green areas. The Company also regularly monitored water quality in the canals around AMATA Industrial Estates to build confidence among all groups of stakeholders regarding water quality.

### Zero Discharge Concept



## Promotion of Water Management Outside the Industrial Estates

Water is one of the most important resources for all industries and communities. The Company, therefore, encouraged all stakeholders to be aware of sustainable water management. The Company thus has established a learning center for water management in AMATA City Chonburi Industrial Estate and opened to local communities and public to visit and learn the pattern of water management in the industrial estates to disseminate the knowledge of water management from the Company's business operations as well as instilling consciousness and cooperation of water resource conservation to all visitors for the benefits of government agencies, communities, schools and factories in both of the Company's industrial estates.

Since the commencement of the Water Management Learning Center in AMATA City Chonburi Industrial Estate in 2009, the center has welcomed 292 visiting groups with a total of 10,052 visitors.

In 2019, the Company targeted to welcome at least 500 visitors per year at the learning center and focused on major stakeholders such as customers and local communities to get a better understanding of the Company's water management. In addition, it gives an opportunity to the visitors who are interested in visiting the Water Management Learning Center by submitting their requests to AMATA Water Co., Ltd. or AMATA Corporation PCL.

In 2019, there were 934 visitors from 42 groups visiting the Water Management Learning Center in AMATA City Chonburi Industrial Estate, consisting of 10 groups from academic institutions, 12 groups from the government agencies and local authorities, 2 groups from the factory operators in the industrial estates and 18 groups from general visitors.



# Solid waste and Industrial waste management



## 2019 Highlights

Proportion of solid waste disposed by landfill method to total amount of solid waste



Target **0%**

Result **0.13%**

Number of factories at AMATA City Rayong participating in AMATA Best waste Management Award Project



Target **10 %**

Result **15.79%**

Proportion of plastic waste used in Asphalt Concrete production process



Target **8 %**

Result **8%**



Over 1,000 industrial plants are located in AMATA Industrial Estates in Thailand. Together, they are running their operations with a combined workforce of more than 270,000 employees and generating a large amount of solid waste and industrial waste each year. If the factories do not comply with the law on solid waste and industrial waste management, they will cause negative impacts on the environment and the surrounding communities both in the short and long term. This will hinder the Company's license to operate in the future as well.

Effective waste disposal from production process including solid waste management from offices and employees is very important which is why the Company and all stakeholders always pay attention. The Company is well aware of the responsibility for waste management as an industrial estate developer. The Company has therefore set a policy to minimize the environmental impact which may be caused by operations within its industrial estates by strictly complying with applicable laws related to waste management, environmental standards and academic principles as well as encouraging all factories in the industrial estates to recycle and reuse their waste and apply innovation and modern technology to reduce solid waste and industrial waste. (Disclosure 103-1).

## Management Approach (Disclosure 103-2, 306-2)

The Company has various waste management methods to handle different types of waste from industrial factories in accordance with the relevant laws under the Industrial Estate Authority of Thailand Act, B.E.2522 (1979), the Factory Act, B.E.2535 (1992), and the Public Health Act, B.E.2535 (1992), and according to the scope of responsibility in waste management.

Type	Scope of Responsibility	The Company's waste management approach (Disclosure 306-2)
<b>Solid waste</b>	769 factories in AMATA Industrial Estates which have hired the Company to manage their solid waste.	<ul style="list-style-type: none"> <li>Establishing a waste separation plant to provide solid waste management services to the factories in the AMATA City Chonburi Industrial Estate.</li> <li>Providing solid waste management services to the factories in the AMATA City Rayong Industrial Estate.</li> <li>Applying the Plastic Road innovation to manage the remaining plastic waste after the separation process from the waste separation plant.</li> </ul>
<b>Non-hazardous industrial waste</b>	All factories in AMATA Industrial Estates. 36 of them (4.68%) have hired the Company to manage their industrial waste.	<ul style="list-style-type: none"> <li>Providing training about compliance with the laws related to waste management for factories in both AMATA's Industrial Estates.</li> <li>Organizing a project named AMATA Best Waste Management Awards to promote waste management standard in the factory for factories in both AMATA Industrial Estates.</li> <li>Conducting a feasibility study for being a service provider to manage non-hazardous industrial waste from factories in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate.</li> <li>Conducting a feasibility study for power generation using industrial waste according to Waste to Energy principles.</li> </ul>

## Performance (Disclosure 103-3, 306-2)

### 1. Solid waste management in AMATA Industrial Estates

The Company gives importance to the factories' waste management in both AMATA Industrial Estates and has assigned AMATA Facility Services Company Limited (AFS), a subsidiary company, to be responsible for the factories' waste management in both industrial estates. The Company is aware of the impact of waste disposal by landfill method because it produces greenhouse gases which is the main cause of climate change. Then the Company has set its target to reduce solid waste to landfill as much as possible by using circular economy concept that aimed to achieve zero waste to landfill. The

Company has implemented this concept to its waste management services which are waste collecting, sorting, and disposing solid waste in AMATA City Chonburi Industrial Estate since 2011 and plans to expand its operations to AMATA City Rayong Industrial Estate in the year 2020.

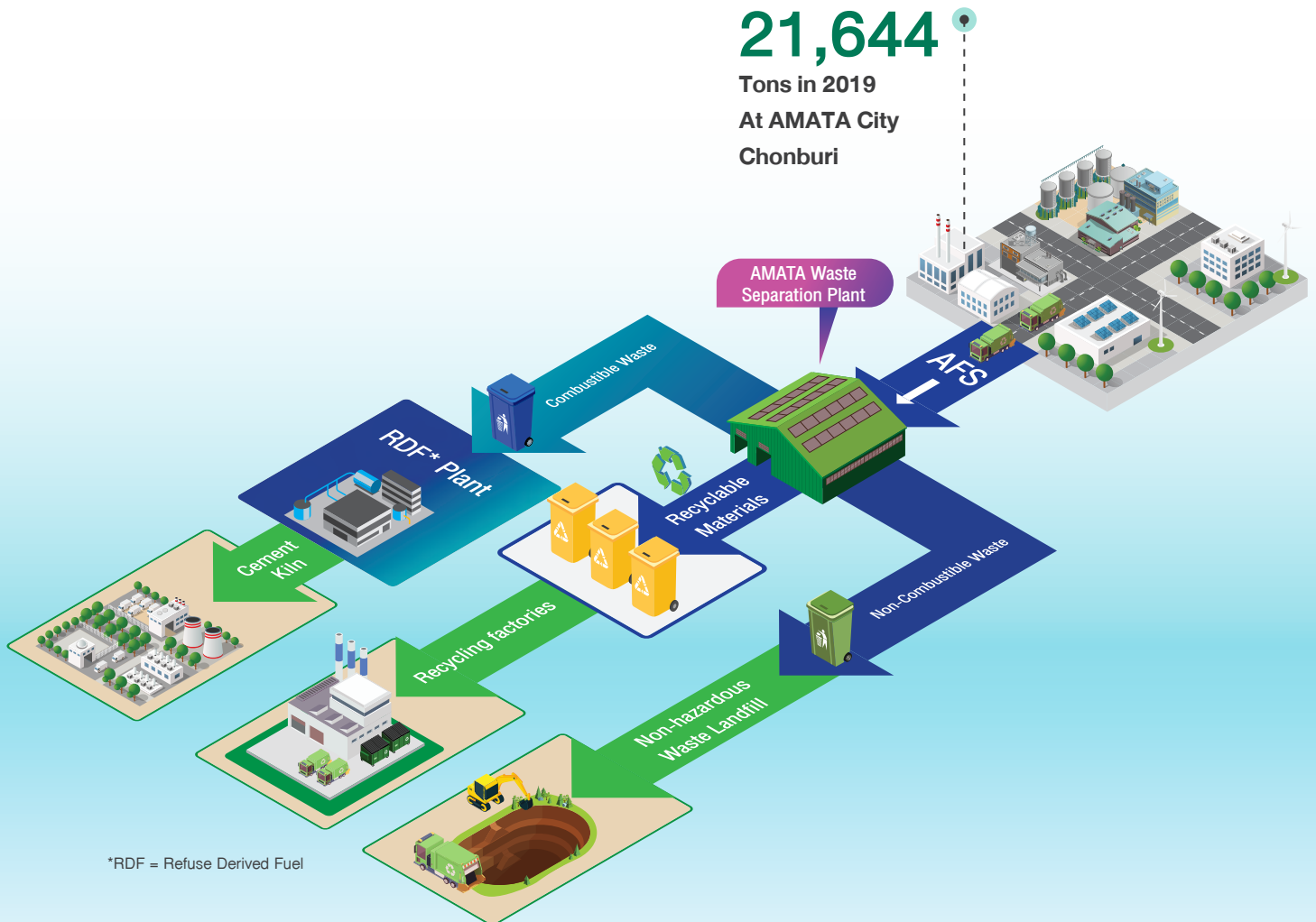
In 2019, the Company provided solid waste management services to factories in both industrial estates, totally 26,722.96 tons of waste. It was divided into 21,644.96 tons per year of solid waste generated by factories in AMATA City Chonburi Industrial Estate and 5,078.00 tons

per year generated by factories in AMATA City Rayong Industrial Estate. In order to achieve the Company’s goal of reducing waste disposal by landfill method, the Company therefore focused on increasing the efficiency of waste separation staff, improving the waste disposal methods from sending waste to landfill to turning waste to an alternative fuel in form of Refuse-derived fuel or RDF which will be sent to the cement plant kilns.

In 2019, the Company’s waste separation plant was able to separate recyclable waste from solid waste by 12% of the total amount of solid waste, and solid waste that could be recycled into alternative fuel or Refuse-derived fuel (RDF) accounted for 87.87%. This allowed the Company to reduce the amount of waste disposal by landfill method from 0.64% of the total amount of solid waste managed by the Company’s waste separation plant in 2018 to 0.13% in 2019. However, some types of

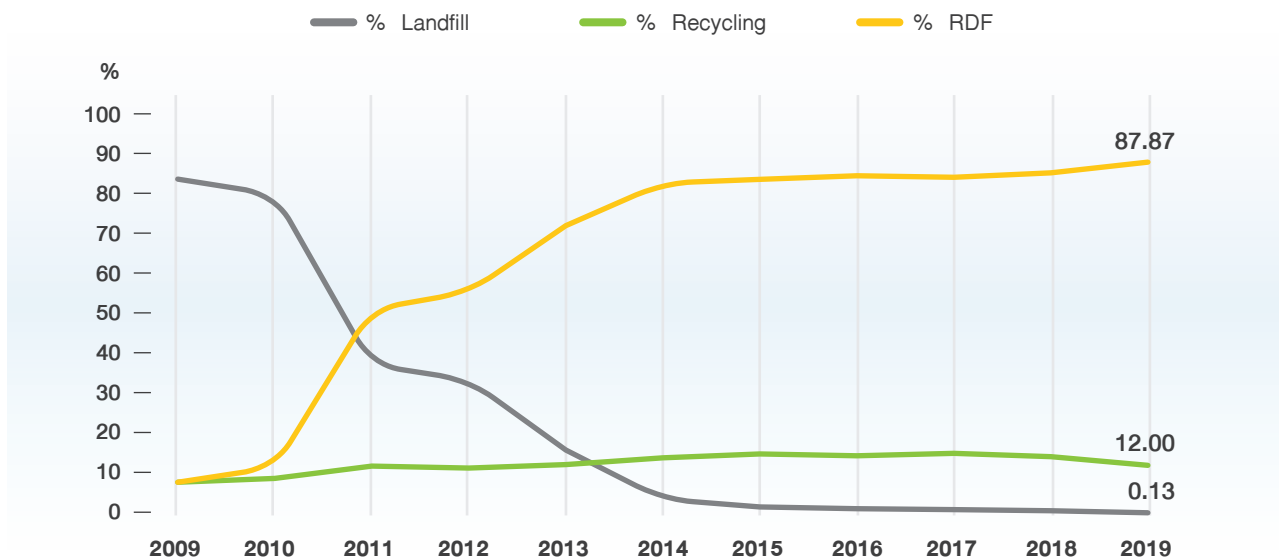
solid waste still required disposal by landfill method, viz. non-combustible waste such as bricks, stones, cement, sand, food waste, etc.

Waste management according to Zero Waste to Landfill concept allowed the Company to save waste management costs by 2.5 million baht in 2019 and 90% of factory operators who use Company’s waste management service expressed satisfaction in the Company’s waste management service and expressed confidence that the waste was properly handled according to laws and regulations. The communities surrounding AMATA City Chonburi Industrial Estate were more confident in the waste management of the factories located in industrial estates. In addition, using circular economy concepts aiming to achieve zero waste to landfill improves resource utilization on optimization and efficiency and helps reduce the greenhouse gas emissions from the landfill as well.





### Comparison between landfill and recycling method



## 2. Building customers’ awareness of industrial waste management

The Company realized that the participation of factories in its industrial estates can help reduce negative social and environmental impact. The Company therefore intends to promote knowledge and understanding inside factories in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate regarding solid waste management and industrial waste so its factories shall be in line with the law as set. The Company has organized the project **“AMATA Best Waste Management Awards”** for industrial waste and solid waste management which is an annual event starting from 2014 and continuing to the present. The project promotes and supports factories in increasing the efficiency of industrial waste management in the category of non-hazardous

solid waste and sewage in the factory by applying the 3Rs (Reduce-Reuse-Recycle) principle to waste management, which results in the factories’ being able to reduce their production cost. The Company has set the project target to have more factories participating in this project every year.

In 2019, there were totally 84 factories voluntarily joined the project. The number of factories from AMATA City Rayong Industrial Estate increased 3 factories representing 15.57% compared to 2018. This shows that factories are recognizing the importance of industrial waste management more and need to escalate their efficiency in waste management including being part of the social and environmental solution as a whole.

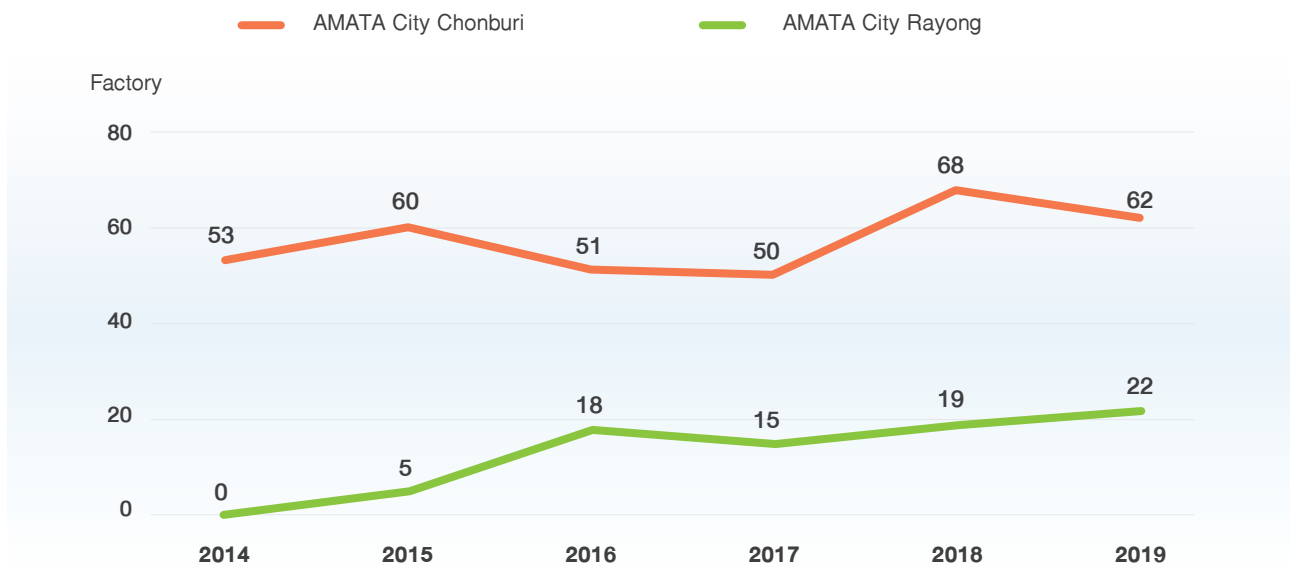
Type of Award	Total number of Award-winning factories in 2018 (company)	Award-winning factories in 2019 (company)		
		Total number of Award-winning factories in 2019	AMATA City Chonburi I.E.	AMATA City Rayong I.E.
Silver Level Awards	33	17	10	7
Gold Level Awards	23	29	23	6
Platinum Level Awards	31	38	29	9
<b>Total</b>	<b>87</b>	<b>84</b>	<b>62</b>	<b>22</b>

The voluntary applicants were audited their industrial waste management by a group of judges consists of experts in waste management, officials from the Industrial Estate Authority of Thailand and staff from AMATA Facility Services Co., Ltd. Regarding the results of the Internal Audit implementation, the experts gave advice to the factories to improve their industrial waste management according to the law as set, recommended the ways to increase efficiency on industrial waste management in accordance with the principles of 3Rs and Zero Waste to Landfill, which would also lead to a reduction in corporate costs.

Even though the total number of factories joining in AMATA Best Waste Management Awards 2019 were

below the set target, but the number of factories that received the gold and platinum awards has increased by more than 20 % from the year 2018, of which are the factories that use the 3Rs principle to reduce the occurrence of industrial waste, or utilize the industrial waste from the production process according to 3Rs principles to achieve a Zero Waste to Landfill goal, and adopt technology or research development in order to reduce production loss, or to treat the industrial waste, or to reduce the occurrence of industrial waste in the production process. This shows that the factories have intention to improve the efficiency of their industrial waste management and also the results achieved after receiving recommendations from the project judges.

**Number of factories joining AMATA Best Waste Management Awards**



### 3. Innovation in waste recycling

Due to the Company’s expertise in solid waste management, the Company sees the problem of plastic waste handling, which is currently affecting the global environment. The Company has therefore entered into a cooperative MOU with SCG Chemicals and a group company of Dow Thailand to develop the “**Recycled Plastic Road Project**” with the mutual goal of study, research and building highly efficient recycled plastics roads that are suitable for Thailand due to their capability,

durability and higher efficiency compared to general asphalt roads. This project is a collaboration between the organizations to promote and support plastic waste solutions concretely by applying the circular economy concept to add value to plastic waste. The project uses the plastic waste sorted by the Company as an alternative raw material for the purpose of building roads in the pilot area within AMATA City Chonburi Industrial Estate.

In 2018, the recycled plastic road project was continuously implemented, and the research results were as follows:

- Plastic waste can be crushed into small pieces of 3-5 centimeters in size to replace asphalt at a maximum of 8% in the process of preparing asphalt cement for covering road surfaces and able to reduce the cost of preparing asphalt cement by 36 baht per ton of Asphalt Cement.

- The Company has already built the recycled plastic road phase 2 within the area of AMATA City Industrial Estate, Chonburi, with an area of 1,500 square meters at connecting exit road to the motorway.

The Company plans to extend this project in the year 2020 by building additional recycled plastic road in AMATA City Chonburi Industrial Estate and continues to conduct research for this project through a feasibility study for increasing the amount of plastic waste used in the Asphalt Cement preparation process.



The plastic road phase 2 at the connecting exit road to the motorway with 250 meters length and 6 meters wide or 1,500 square meters.



# Biodiversity



## 2019 Highlight

Percentage of native tree species planted		
• AMATA City Chonburi	Target <b>100%</b>	Result <b>100%</b>
• AMATA City Rayong	Target <b>100%</b>	Result <b>100%</b>



In spite of its positive effect on the economic growth of the local community and the country as a whole, industrial estate development may also negatively affect biodiversity and ecosystem as a result of change in land use and urbanization to support growth of the industrial sector.

The Company, therefore, emphasizes on the protection and rehabilitation of ecosystem and biodiversity and has managed to mitigate the risk of negative impact on biodiversity to give confidence to all groups of stakeholders, as well as rehabilitating the ecosystem to help slow down climate change through the absorbance of carbon dioxide (Disclosure 103-1).

## Management Approach (Disclosure 103-2, 103-3)

The Company is determined to conduct its business simultaneously with preserving natural resources and environment rigorously. As a result, it sets out a policy on biodiversity with the objective of preventing damage and mitigating impact on biodiversity in AMATA Industrial Estate, as well as supporting and promoting the stakeholders in the area to jointly nurturing, rehabilitating and conserving biodiversity in both AMATA Industrial Estates.

The Company has continuously conserved and rehabilitated biodiversity in AMATA City Chonburi and AMATA City Rayong Industrial Estate through the environmental rehabilitation project, green area expansion and conservation of native freshwater species in the community to mitigate the risk of negative impact on biodiversity according to the concept of the International

Union for Conservation of Nature (IUCN) regarding biodiversity offset under IUCN's Biodiversity Mitigation Hierarchy, consists of four approaches, i.e. Avoidance, Minimization, Rehabilitation / Restoration and Compensation or Offset.



IUCN Mitigation Hierarchy Policy	Avoidance	Minimization	Rehabilitation / Restoration	Compensation or Offset
		Avoid business activities which negatively affect biodiversity.	Minimize time, severity and area of negative impact from inevitable business activities.	Rehabilitate deteriorating ecosystem as a result of business activities.
Activities / Projects Implemented	<ul style="list-style-type: none"> <li>Announce Environmental Management and Biodiversity policy to be used as guidelines for business activities by avoiding or minimizing potential negative effect.</li> <li>Encourage suppliers and contractors to be responsible for efficient waste management to protect biodiversity in the area by stipulating it in the Supplier Code of Conduct.</li> </ul>		<ul style="list-style-type: none"> <li>Rehabilitate and compensate native forest system and increase green area both inside and outside AMATA City Chonburi and AMATA City Rayong Industrial Estate by reforestation of native tree species.</li> <li>Conserve biodiversity of native freshwater species in freshwater resource of the community through a collaboration amongst Rayong Fisheries Provincial Office, community and the Company by releasing native freshwater species.</li> <li>Support and encourage stakeholders in the area to be involved in the nurturing, rehabilitation and conservation of biodiversity in AMATA industrial estates.</li> </ul>	

## Performance

The Company has operated two industrial estates in Thailand, i.e. AMATA City Chonburi and AMATA City Rayong Industrial Estate covering the area of 43.30 km<sup>2</sup> and 27.03 km<sup>2</sup>, respectively. Both areas are situated in the industrial estates pursuant to Town Planning Act B.E. 2562 without conservation and protection area according to the announcement of the natural resource governmental agencies, or ecologically critical area notified to be established both domestically and internationally within a 5-km radius (Disclosure 304-1).

However, the improvement of both of the Company's industrial estates may negatively affect biodiversity directly or indirectly, e.g. effect from a change in land use,

an urbanization around the industrial estates, pollution caused by activities within the industrial estates and the effect from the operation of the Company's suppliers and contractors, etc. Such impact could arise from the Company's land development process until the land is completely developed into industrial estate.

The Company has conducted following projects to avoid and minimize impact, as well as rehabilitating and offsetting negative impact which may arise from its business operation in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate.

## Announcement of the Environmental Management Policy and Business Code of Conduct

In 2019 the Company had announced the Environmental Management and Biodiversity Policy as guideline for its activities to avoid those which may negatively affect biodiversity and ecosystem, and had announced Supplier Code of Conduct to avoid and minimize impact from the operation of the suppliers and contractors by encouraging the suppliers and contractors to be aware of environmental responsibility, to implement measure to systematically protect and minimize operational impact on the environment, to establish efficient waste water, waste, chemical and air pollution treatment and to protect biodiversity. The Company met with the suppliers to declare its supplier code of conduct and policy, to explain guideline to be consistent with its operation and to create mutual understanding.

## Management of Green Area in AMATA Industrial Estates

The Company has prepared master plan and determined green area development within AMATA industrial estates annually to continuously restore green area in AMATA industrial estates. It defines types of plant based

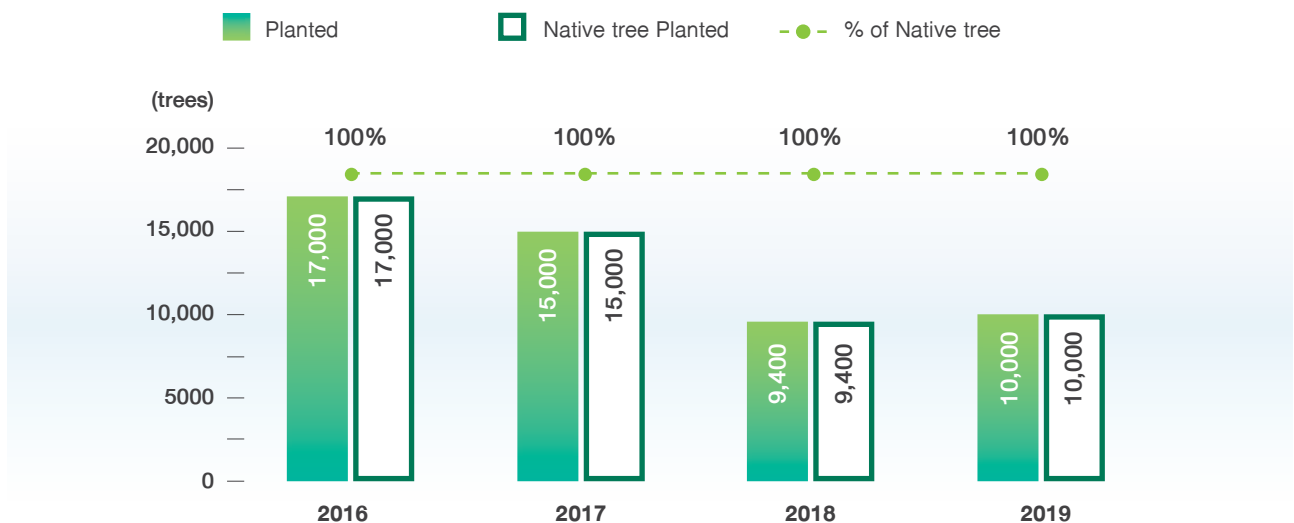
on forest types of Chonburi and Rayong provinces based on the Royal Forest Department<sup>1</sup>. Most terrestrial forest in Chonburi and Rayong is mixed - deciduous forest and dry evergreen forest.

### AMATA City Chonburi Industrial Estate



AMATA City Chonburi Industrial Estate covers the area of 17,317.49 rais, 11.17% of which or 1,933.49 rais being green area. In 2019 the Company planted 10,000 trees in AMATA City Chonburi Industrial Estate with a survival rate at 80%. 100% of trees planted were native tree species found in Chonburi categorized as mixed-deciduous and dry evergreen species, according to the report of the Royal Forest Department e.g. dalbergia cochinchinensis, dipterocarpus alatus, lagerstroemia calyculata, cassia grandis, cassia surattensis, peltophorum pterocarpum, lagerstroemia speciose, dolichandrone serrulate, swietenia macrophylla, pterocarpus macrocarpus, tamarindus indica, pithecellobium dulce, etc.

Number and Percentage of native trees planted in AMATA City Chonburi



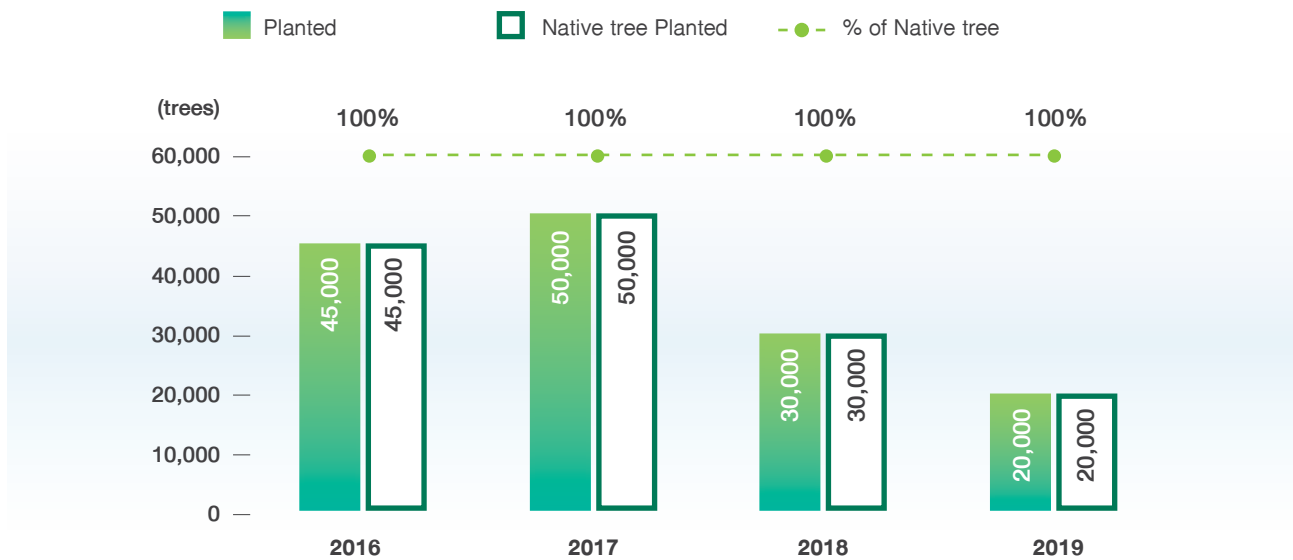
<sup>1</sup> Forest Land Management Bureau. B.E.2561. Final Report on Forest Area Condition Data Project B.E. 2560 - 2561, Royal Forest Department, Ministry of Natural Resources and Environment

### AMATA City Rayong Industrial Estate

AMATA City Rayong Industrial Estate covers the area of 14,210.73 rais, 10.35% of which or 1,471 rais being green area. In 2019 the Company planted 20,000 trees in AMATA City Rayong Industrial Estate with a survival rate of 85%. Dead and dying plant would be replaced

continually. 100% of trees planted were native tree species found in Rayong categorized as mixed-deciduous and dry evergreen species, according to the report of the Royal Forest Department, e.g. afzelia xylocarpa, eugenia cumini, dipterocarpus alatus, shorea roxburghii, lagerstroemia calyculata, senna siamea, etc.

#### Number and Percentage of native trees planted in AMATA City Rayong



### Restoration of a Public Area in AMATA Industrial Estates

In collaboration with factory operators in AMATA industrial estates, the Company has carried out reforestation projects in the public area in AMATA industrial estates owned by local government organizations, e.g. Forest for Life project in cooperation with Tokai Rika (Thailand) Co., Ltd.,

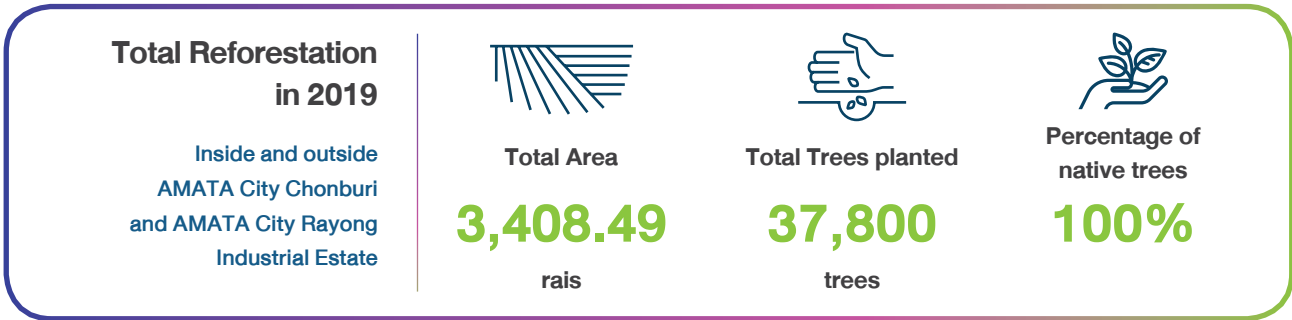
reforestation in degraded forest which is a 12-rai public area in AMATA City Rayong Industrial Estate. In 2019 it had planted 5,800 trees on the area of three rais with a target to cover the whole area by 2022.



## Restoration of a Public Area outside AMATA Industrial Estates

The Company has carried out plantation projects in the public area outside AMATA industrial estates to offset and encourage the stakeholders in the area to participate in the nurturing, rehabilitation and conservation of biodiversity by cooperating with local governmental entities, community

and other groups of alliance. In 2019 the Company had reforested 2,000 trees in one community forest located in Mabpong Subdistrict, Phan Thong District, Chonburi province with a total area of approximately one rai.





## Conservation of Local Aquatic Animals

AMATA City Rayong Industrial Estate is located at the mid-stream of watershed. Pusai Stream flows from Khao Mai Kao Watershed runs through the Industrial Estate before reaching Dok Krai Reservoir, a large reservoir with a capacity of more than 79 million cubic meters covering the area of over 32 km<sup>2</sup> in Rayong. Although Dok Krai Reservoir is located outside of a 5-km radius from AMATA City Rayong Industrial Estate, it is crucial in term of freshwater ecosystem and economic resource of the community as it is an aquatic animal nursery and local fishery area for more than 500 households in Nihkom Phatthana District. The local community is thus concerned with the potential impact on water quality and aquatic animals which is a major source of traditional occupation of the community.

Therefore, the Company, in cooperation with Rayong Fisheries Provincial Office, Dok Krai Reservoir Freshwater Resources Management Committee, community committee supervising and controlling the use of reservoir, and various groups of alliance such as local entities and factory operators in AMATA City Rayong Industrial Estate, has carried out **“Sustainable Watershed Management Project”**

to nurture and rehabilitate water resources and to conserve local aquatic animals which, in addition to occupational and food resources for community, they could effectively be water quality index.

In 2019 the Company had released 300,000 aquatic animals or 15 species found in the reservoir area by Rayong Fisheries Provincial Office such as common barb, spotted featherback, seven-stripped carp, striped catfish, carp, etc., worth THB 100,000.

As a result of the projects conducted, in addition to conserving local species and increasing the abundance of aquatic species in Dok Krai Reservoir. The local community can be ensured of water quality running through AMATA City Rayong Industrial Estate has carefully managed, controlled and monitored water quality. In the future it plans to conduct a survey on a diversity of freshwater species in Dok Krai Reservoir in collaboration with Rayong Fisheries Provincial Office and Dok Krai Reservoir Freshwater Resources Management Committee to be used as basis data for biodiversity conservation and water quality index in the future.



# Creating Value for Society



**345,371**

people people participated in AMATA CSR activities in Thailand



**76** projects developing quality of life in economic, social and environmental for local communities

Community satisfaction score on community development projects



Road accident statistics in AMATA City Chonburi decreased by

**18.7%**

AMATA City Chonburi

**90%**

and AMATA City Rayong

**88%**



# Human Resource Management



## 2019 Highlight

Employee Engagement score

Target **50%**

Result **52%**



Human resource plays an important role in driving business success towards sustainable development goals. Human resource management amidst current environment of change and intense competition poses a challenge to the Company. Hence, the Company emphasizes the importance of efficient human resource management that encompasses recruitment, caring and retention, and human resource development in order to respond to the employees' needs and expectations and also cultivate strong employee engagement. The Company has applied the principles of holistic care to the employees, both body and mind, for their good physical and mental health resulting in a better quality of life which will enhance their work efficiency and help them grow together with the Company, thereby increasing employees' engagement which leads to sustainable business achievement accordingly. (Disclosure 103-1).

## Human Resource Management (Disclosure 103-2)

The Company has well-established **the Human Resource Management Committee** as its strategic planning and monitoring mechanism, chaired by the Chief Executive Officer, consisting of 11 members, including Chief Marketing Officer, Chief Investment Officer, Acting Chief Financial Officer, Acting Chief Engineering Officer, and Managing Directors of subsidiary companies. The Committee set guidelines for employee caring according to the rules, regulation, local laws and international standards relating to business the Company operates, including the human rights principles. All employees are treated equally and fairly while their rights are protected and respected. Channels for complaints are provided to obtain opinions, suggestions, problems and expectations from all employees which will be considered to respond in the human resource management process accordingly.

In 2019, The Human Resource Management Committee has revised policies and operational frameworks such as the Delegation of Authority, Employee Reward and Annual Bonus Policy, Golf Membership Regulation at AMATA Spring Country Club, and improved KPIs Cascading system in order to make performance appraisal system more transparency and align with the business direction and goals of the Company. The Committee also placed importance on building employee engagement by creating a number of initiatives. So that the Company arranged the Focus Group Forums to explore employees' concerns and in-depth opinions, then improved employee welfare such as providing healthy lunch, additional health check program for vitamin D level and heavy metal test, and pillows to support a healthy sleep posture.

## Labor Practices and Human Rights

The Company supervises its employees in compliance with the human and labor rights principles according to the labor laws in the countries in which the Company engages in business as well as international principles of human rights, especially the equality and non-discrimination in age, gender, education, marital status, political opinions, race, religion, beliefs and disabilities. The Company promotes diversity in the organization and treats all employees equally and fairly from employment to termination with a clear written process.

The Company sets fair compensation policy without discrimination and provides equal opportunities for all employees by managing fair compensation based on the performances that have clear and concrete goals

and work results for the transparency and impartiality acceptable to employees.

The Company adheres to Human Rights Principles as follows:

- Shall not threaten to force or use punishment methods to get the job done.
- Shall not use of human trafficking labor.
- Shall not employ children who are in compulsory education age or under 15 years old. Do not hire children under 18 years old to work in a dangerous job that jeopardize their health, safety or harmful in terms of morality and ethics.
- Shall not hire illegal labor. All foreign workers must be legally hired under the laws of the Ministry of Labor in all respects and can be inspected.

## Recruitment and Employment (Disclosure 401-1)

The Company places importance on recruiting, selecting and hiring employees to join the Company in order to procure qualified persons matching its business strategy and have potential to develop. The recruitment and selection policy of the Company opens opportunities for both internal and external potential candidates through various channels as follows:

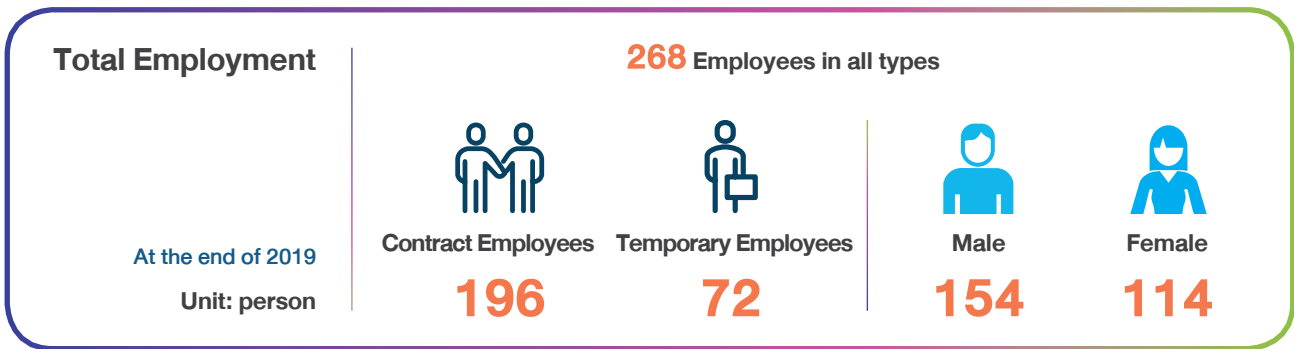
**Internal recruitment and selection** provide opportunity for employees within the Company to grow and advance in their career. The Company, therefore, has a policy to firstly announce job vacancy internally through intranet and email to allow any interested employee to apply for the selection process. The Company promotes job rotation within the group of companies to put the right man on the right job and to give opportunities for its employees to change their jobs according to their expertise or work location, resulting in a happier and more productive workforce.

**External recruitment and selection** are in line with the Company's business strategies and manpower plan to support business expansion in Thailand and abroad. Having identified the required positions according to annual plan and organization chart, the Company has set out recruitment and selection plan to fit its business expansion plan and has determined the qualifications and capabilities of the employees to meet job characteristics, including communication skills in English and other languages and other qualification that fits the corporate culture.

The Company is committed to recruiting qualified professionals to join the organization. External candidates can apply through various channels, such as the Company's website and other renown job posting websites, recruitment service agencies, encouraging employees to refer potential applicants and career fairs held in educational institutes to recruit candidates with

qualification that matches the Company’s requirement. The recruitment process allows interested candidates to apply equally. In addition, it provides the opportunities for people with disabilities to be able to work according to their competency without discrimination and to be employed in compliance with the law.

There are two types of employment in the Company, i.e. contract employment: permanent and yearly, and temporary employment (outsourcing).



**Employment proportion by region in 2019**



Employees from Eastern Region  
**31.3%**  
of total employees

**Recruitment in 2019**

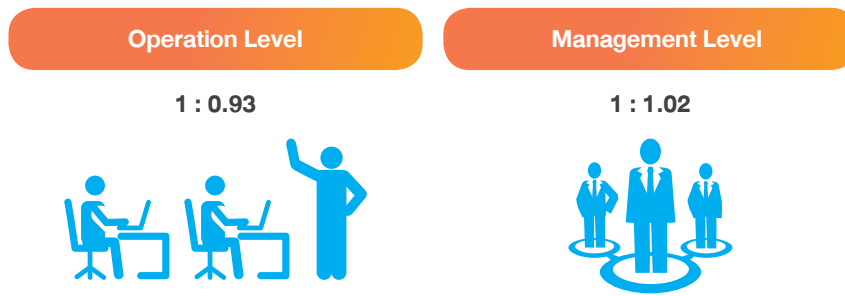
Target	Result
<b>57</b> Positions	<b>44</b> Persons or <b>77.2%</b>
1 applied through job posting websites 36 from the recruitment service agencies 7 referred by existing employees	

**Compensation Management and Employee Retention** (Disclosure 401-2)

The Company is well aware of retaining the talent who is the driving force to help the Company grow sustainably. The Company, therefore, provides fair compensation and proper welfare according to their performance and awards those outstanding performers to attract, retain and groom them to be future leaders. The Company has participated in the salary and welfare survey arranged by the credible institution in order to continuously benchmark among comparable industries and considered the compensation management in accordance with the needs of the new generation in order to be competitive

in the market and able to recruit more talents to join the Company. The compensation management is based on duty and responsibility or Pay for Position principle without any difference between genders. The Company also provides compensation and benefits based on Pay for Performance principles to retain and motivate capable and committed employees.

## Employee Compensation Proportion (Female : Male)



In addition, employees who are sent to work in foreign countries (expatriate staff) are given competitive salary and benefits by benchmarking with such local labor market and cost of living or price index of each city of the countries in which the Company operates.

### Welfare and Other Benefits

The Company provides welfare and benefits higher than that required by law to all employees without discrimination by considering the appropriateness of duties and responsibilities. In case of permanent and yearly contract employees, additional welfare, i.e. medical and dental treatment fees, loans and various types of financial supports, are given in accordance with the criteria set by the Company. However, the provident fund and retirement fund are given only to permanent employees. Moreover, the Company provides certain welfares to permanent and yearly contract employees that also cover family members of the employees such as educational scholarships for their children and family member death grant, etc.

The Company clearly informs the employees of the available welfare and benefits provided since the first day of employment. It allows the employees to participate in the welfare program to improve and create additional activities for the benefit of the public. The Company has appointed the Welfare Committee consisting of 18 employee representatives selected by the employees and 6 representatives of the Company. The Welfare Committee holds a meeting every two months and aims to promote better quality of life at work which would enhance the employees' performance accordingly as well as to be one of the channels for receiving opinion, suggestion and complaint from the employees.

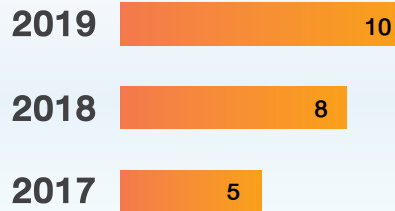
### Welfare and Other Benefits

The Company always supports long-term financial planning and retirement plan of the employees and takes the employee benefits into account, so that in 2019, the Company has selected two asset management companies in order to diversify investment risk and manage the provident fund in 2020. External financial experts were also invited to provide knowledges to the employees to ensure that all employee will be able to prepare appropriate financial plan for their retirement.

### Re-Employment Policy

The Company places importance on the caring of employees from the first day of their employment until after retirement. It is aware that retired but healthy employees are still able to work efficiently and provide benefit to the Company by sharing their experiences with the next generation. The Company thus has set out the policy to provide the opportunity to hire employees after their retirement since 2009 based on capabilities of the retired employees and their suitability for the job. There were three employees reaching their retirement age in 2019. All these three retired employees were hired to work for the Company in 2020. Compensation is given according to the rules and regulation as deemed appropriate while welfare given is similar to that of other employees.

## Number of retired employees re-employed by the Company



## Fair Performance Management

The Company provides the opportunities for each employee to involve in determining their work plans and performance indicators with their supervisors to be consistent with the goals of the department and the Company KPIs. The performance evaluation will be conducted twice a year: mid-year and year-end. The Company encourages two-way communication between supervisors and their employees in order to improve work efficiency and drive the Company towards achieving the set goals as well as to enhance good relations between supervisors and the employees which will bring about employee engagement. In 2019, all employees and executives within the organization (100%) were evaluated based on three categories:

- 1) Key performance indicators (KPI), which is a driving mechanism in the performance management process by applying Balanced Scorecard principles for the operational level staff and above. Targets are jointly determined by the employees and their supervisors.
- 2) Behavioral assessment through AMATA DNA which is the core competency of the Company and the behavior that the Company expects with a belief that vision, mission and strategy will be achievable if the organization has the employees that express common characteristics.

- 3) Career development assessment which identifies both strengths and weakness of the employees. A 1-3-year employee development plan is also jointly established by the employees and their supervisors in order to link between past performance and the advancement expectation of each employee and individual goal, as well as to clarify roles, duties and responsibilities and future opportunity for the employees and the Company to jointly move forward.

The employees in levels 1 - 11 will have different proportion of assessment in 1) and 2) according to the level.

## Performance Evaluation and Remuneration for Senior Executives

The Company sets the performance evaluation for senior executives twice a year. The result of individual performance evaluation is used for an annual salary adjustment. The senior executives will be assessed on their achievement of their KPIs that are consistent with the Company KPIs covering the sustainable development goals in economic, social and environmental aspects. 75% allocation is given to the indicators that the executives in each field can achieve the Company's goal and relay it to the subordinates to achieve sustainable goals accordingly. 25% allocation is given to the behavioral assessment through AMATA DNA.

## Performance Evaluation and Remuneration for Chief Executive Officer

The Nomination & Remuneration Committee evaluates performance and the remuneration of the Chief Executive Officer (CEO). KPIs are based on a shared opinion between the Board of Directors and the CEO, which cover the operations to achieve business goals as

well as goals in social and environmental aspects. As for the remuneration and compensation rates of executives from other companies in the same industry were surveyed. The remuneration proposal will then be endorsed by the Nomination and Remuneration Committee who will submit to the Board of Directors for approval.

## Holistic Caring of Employee



The Company had set a policy to holistically care for employees by promoting a healthy body and mind of the employees. The Company has created the office to be a **“HAPPY WORKPLACE”** for employees by adopting 8 concepts of happiness that help the employees balance their working and personal life, have better health and quality of life and work happily which will drive the Company towards sustainable growth and be ready to cope with all changes in future situations.

### Happy Organization

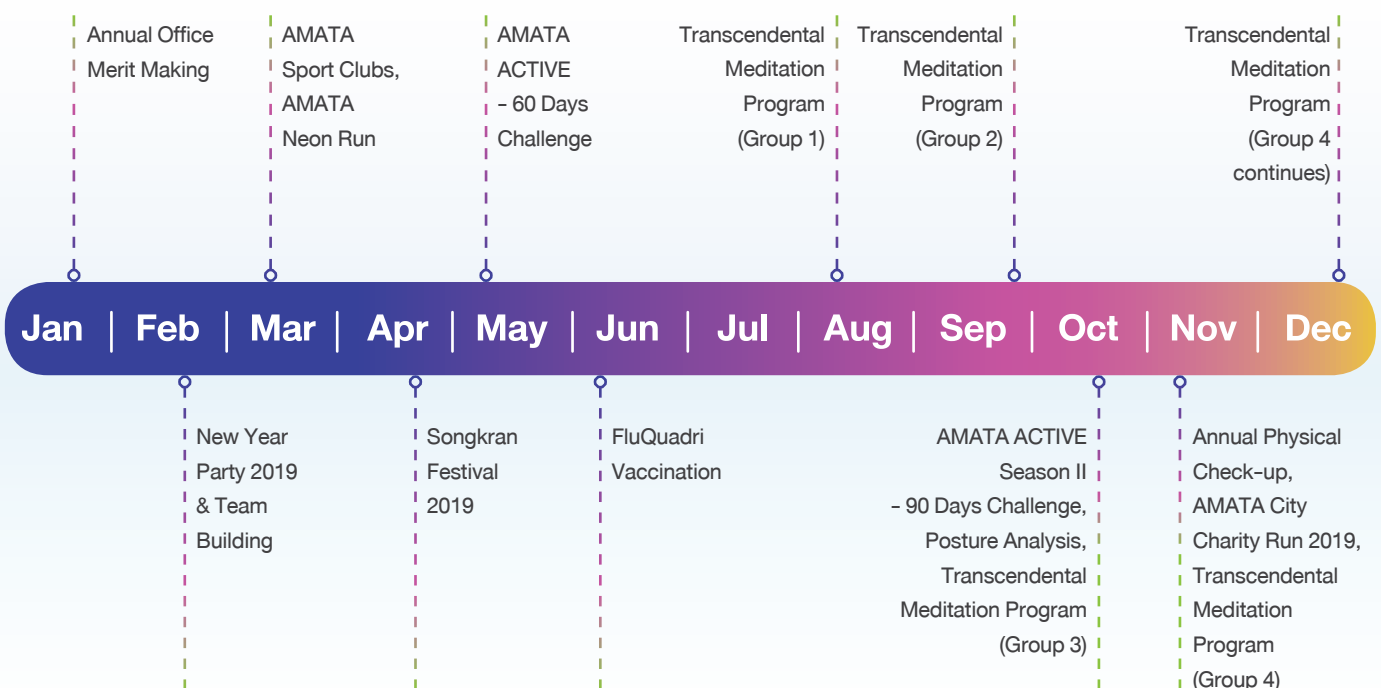


The AMATA Wellness Program activities are consistent with the concept of Happy Organization which make an office to be a **“HAPPY WORKPLACE”** for all employees by giving importance to the 8 happiness as follows:



- Happy Body** To provide health benefits to the employees such as annual health check-up, medical expense, pharmaceuticals, as well as promoting mini-exercise every day at 3:00 p.m. to relieve fatigue.
- Happy Heart** To encourage employees to return to society such as blood donation, and to make happiness happen in the office such as Happy Birthday surprise for the employees.
- Happy Relax** To create happiness and entertainment for the employees to relax both body and mind such as AMATA Staff Party (New Year Party), team building activities, sports day.
- Happy Brain** To encourage employees' life-long learning and self-development, to develop knowledge and skills, and to prepare the employees for reaching their highest potential at work in the future.
- Happy Soul** To encourage employees to follow religious principles and ethics, to be a good person with good soul and good actions.
- Happy Money** To educate employees to save money in a long run through a provision of the provident fund by arranging smart money management seminars by a financial expert to advise how to spend money wisely.
- Happy Family** To encourage employees to spend quality time with their beloved family.
- Happy Society** To encourage employees to give back to society by arranging some volunteering activities such as painting school building and playground and hosting lunches for children, donating blood.

In the year 2019, the Company organized activities for employees under the AMATA Wellness Program as follows:





## Employee Engagement

The Company realizes that human resources are the core element of business growth and increase in the competitiveness of the organization. The Company, therefore, gives importance to employees' care and development to grow the employees steadily along with the Company. Moreover, the Company provides the opportunities for employees to participate in the development and improvement of the Company's operations.

## Cultivation of Corporate Culture

Apart from encouraging efficient work, the Company also cultivates good morals to the employees from different backgrounds to work together in harmony under AMATA's culture regardless of their gender, age, language, race and culture.

In 2019 the Company refreshed AMATA DNA substances through various activities throughout the year to encourage the employees to follow concretely and to instill organizational culture through various trainings and activities, e.g.

- Orientation courses for 44 new employees to reinforce knowledge and understanding of organizational culture
- Refresher courses on organizational value to align working perception through annual recreational activities.

Classified by employee levels, each year the Company presents awards to distinguished employees who are qualified with all five AMATA DNA characteristics to promote value of the employees.



## Employee Participation

Not only the Company allows every employee to send suggestions to the Company for improvement of the operations, but also permits them to send any complaints or grievances directly to the top executives. Policy regarding receipt of the employees' complaints has been set and informants or petitioners are treated

with confidentiality according to the protection process. Information from the petitioners will be kept confidential and access of the information is limited only to those in charge of the investigation. Such complaints will be brought to the process as stipulated in the Code of Business Ethics.

Channels to receive complaints and grievances are as follows:

1. Inform the Chief Executive Officer directly via telephone, line application and email
2. Send by post to the post office P.O.Box 7, Monterey Tower, Bangkok 10323
3. Send through Suggestion Box at the office
4. Inform through Engagement Survey

### Employee Engagement

The Company has organized the annual employee engagement survey for all employees in the Company conducted by a third party since 2016. The Company has successfully achieved its 2019 target in increasing the employee engagement score compared to 2018 and set its 2020 target to increase employee engagement scores of more than 55% under the strategy: **building All-Win relationships between the Company and employees based on Say Stay Strive concept.**

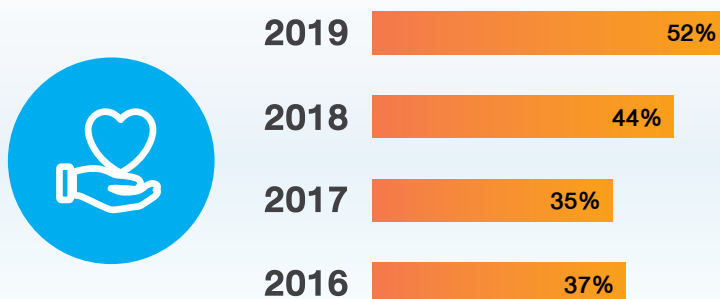
In 2019, The Company set the target of employee engagement score of more than 50%. The results from all employee (100%) showed that overall employee engagement score was 52%, increased by 8% compared to the previous year. The scores of permanent employees increased from 40% to 45% while the score from yearly contract employees decreased from 53% to 50%. However, the Company will strive to develop and improve

In 2019, there were 14 complaints, grievances and suggestions sent directly from the employees to the Chief Executive Officer via various channels. The Company had considered and proceeded to improve the matters as deemed appropriate. However, there were no complaints concerning labor and human rights. Suggestions relating to the employees' welfare were presented to the Welfare Committee for further action as deemed appropriate.

welfare, compensation and other matters continuously to respond fairly to all employees in order to increase their satisfaction and engagement to the Company.

The Company has analyzed the results of employee engagement survey in previous years and developed a 3-years action plan and also communicated the progress of improvement in the quarterly staff meeting. The survey result showed that the employee placed highest importance on compensation management and welfare. The Company, therefore, has reviewed the compensation structure and benefits which are related to the Performance Management System and expected to complete the improvement by 2020. The Company also focused on the development of effective KPIs and cascading the corporate KPIs systematically to individuals.

#### Employee Engagement Score



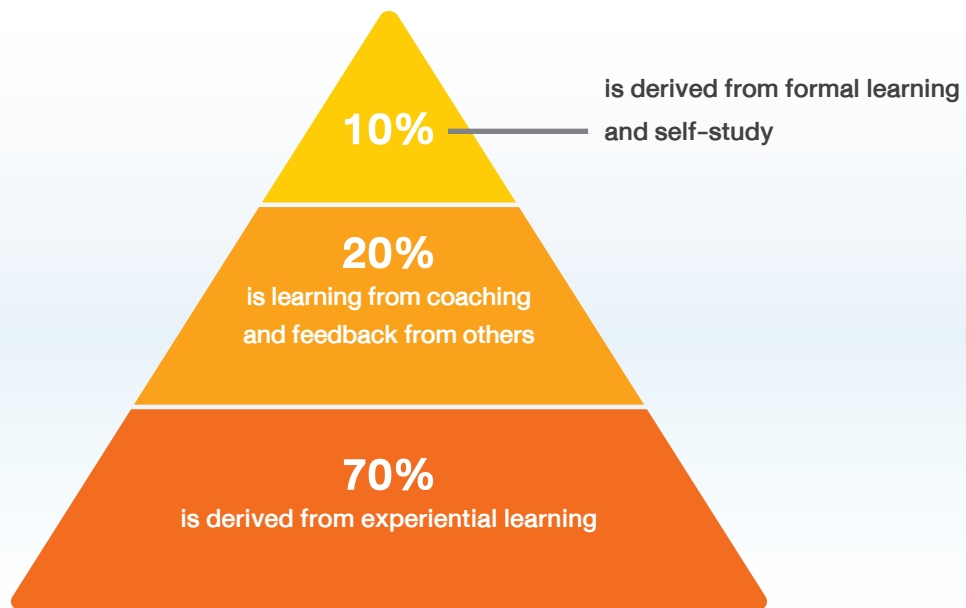
## Human Resource Development

The Company aims to create a High-Performance Organization that places importance on developing the capability and knowledge of the employees to meet the challenges and business opportunities in the future. Therefore, the Company has conducted the Competency Model (Core Competency and Leadership Competency) and Functional Competency development project which are scheduled to be completed by 2021 in order to develop the core competency required by the organization and lead to the human resource and successor development which would help the Company cope with the rapid changes and business growth in the future.

The Company has set human resource development strategy by preparing personnel training plan for

the employees on an annual basis on overall standard business skills, non-technical skills and functional skills according to employee level and job position. For individual planning, the Company applies information from Career Planning and Human Resource Development section in the annual performance evaluation form and data from Learning & Growth section from the Balanced Scorecard. The Company targets a two-year Training Roadmap Plan for the core business functions of the group companies and focuses on a 70:20:10 employee development model which is 70% from practical learning, 20% from coaching and 10% from training. The Company also analyzes the results from the human resources development in both individual level and organizational level to determine return on investment.

### Employee Development Approach by 70:20:10 model



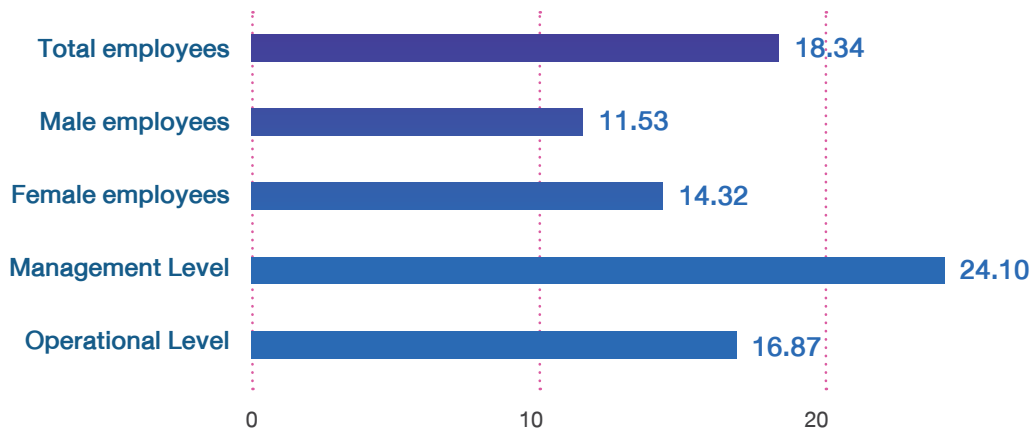
10% learning is derived from formal learning and self-study. Currently, the Company is in the process of uplifting training standard by considering the level of difficulty or suitability of the training course to be relevant to the competency of employees. A majority of the development, accounting for approximately 70% of learning, is derived

from experiential learning, e.g. extension of scope of responsibilities, assignment of new projects, participation in special committees, community volunteering, being members of the Board of Directors in subsidiaries. The remaining of 20% learning is derived from other means apart from training, i.e. coaching and feedback.

In 2019, the Company held trainings to develop potentials of the employees throughout the year, including 21 in-house trainings as well as encouraging employees to participate in public trainings with total training value of

THB 2.18 million. 78% of total number of the executives and employees participated in the trainings with average training per person of 18.34 hours per year.

**Average training hours of employees** (Unit : Hours per person per year)



**Successor Development**

For business continuity and to be prepared for business expansion, the Company has recruited and developed successors to replace the executives who are reaching their retirement or exposing to other risks which may cause discontinuity of business. The Company also develops experts as successors for the positions which require special skills by giving priority on internal recruitment before external recruitment to increase the opportunity of job advancement to highly capable employees with continuously decent performance. Processes of successor development plan are as follows:

The Company has already implemented the Competency Model Project in 2019. Therefore, in 2020, the Company has set a goal in determining the successor selection criteria in accordance with the qualifications and characteristics that the Company truly needs in order to prepare the new generation of leaders and develop an individual training plan and another goal in providing a list of potential successors of all high level executive positions in the AMATA Group of Companies.

# Safety



## 2019 Highlight

Number of employees of the Company and contractors who had lost time injury or death

Target **0** Result **1**



Safety and occupational health are matters that the Company and related stakeholders have always given priority. The Company has industrial estates covering a large area and is home to many multinational factories with people commuting back and forth for work within the estates not less than 200,000 people per day. Therefore, risk of accidents and emergencies in various forms such as traffic accidents, fire, chemical spills within the factory, etc. may occur which will impact stakeholders such as employees and contractors of the Company, customers and communities that are located around its two industrial estates. Being aware of such impact, the Company is determined to create a society of safety for its responsible area as well as the surrounding area of the industrial estate through focusing on compliance with relevant laws, emergency preparedness in both equipment and manpower that is capable of responding to various situations. Activities promoting safety for employees, customers, contractors and surrounding communities were organized to create safety consciousness, knowledge and understanding as to jointly create a society of safety and create confidence for the communities surrounding the industrial estate. (Disclosure 103-1).

## Management Approach (Disclosure 103-2, 103-3)

The Company has established the Occupational Health and Safety Policy and guidelines in place on occupational safety and health standards for employees, customers and contractors to comply strictly with rules, regulations and laws relating to safety management of industrial estates, as well as, international standards for management such as ISO 14001:2015 etc., with regular assessment and analysis on the effectiveness of the occupational health and safety implementation.

The Company has applied Zero Accident principle for safety management in the workplace of its employees and contractors and also in other areas both inside the industrial estates and surrounding areas under the project **“Safety City, Smart City”** which has started since 2019 at AMATA City Chonburi industrial estate as a pilot area. Moreover, the Company has equipped new technologies for more efficient safety management in the operation area.

## Employee Safety and Occupational Health (Disclosure 403-1)

The Company places importance to work safety as it is well informed that those who come to work within the Company's premises are at risk of occupational health and safety. Therefore, the Company attaches great importance to complying with relevant laws such as the Labor Protection Act, B.E.2541 (1998) and the Occupational Safety, Health and Environment ACT, B.E. 2554 (2011), etc. and cultivating a culture of occupational health and safety for executives and employees at all levels through the occupational health and safety policy with the objective to reduce the number of injuries to the extent of stoppage to zero (Zero Accident)

To achieve that goal, the Company has organized training on occupational health and safety for its employees,

such as office syndrome prevention, basic firefighting skills, fire evacuation drills and program on safety and working environment occupational health committee etc. In addition, the Company has inspected its office building for potential danger and fire hazards to improve the area by installing additional equipment or replace equipment to be ready for use such as CFC-free fire extinguishers, backup flashlights attached to the emergency exit area, safety signs, etc.

In 2019, there were an employee of the Company got lost time injury from work. The Company had reviewed the operation procedures and determined the preventive measures to ensure that no accidents will occur in the future.





## Safety in AMATA Industrial Estate

### Emergency Management

The Company places importance on the safety of customers in AMATA Industrial Estates by ensuring safe and well-maintained common areas as well as being ready at all times to manage emergency situations efficiently. Aside from having its own fire station in accordance with Regulation of Board of Industrial Estate Authority of Thailand Standard of Facilities, Infrastructures and Services in Industrial Estate, B.E. 2557, the Company has set up two Emergency Response Centers at AMATA City Chonburi Industrial Estate, and one Emergency Response Center at AMATA City Rayong Industrial Estate which is operated by personnel with expertise who have passed training according to law in firefighting and disaster relief. Customers can contact via direct telephone number of the Emergency Response Center at AMATA Chonburi Industrial Estate and AMATA City Rayong Industrial Estate 24 hours.

In addition, the Company foresees possible risks of emergencies such as fire or chemical spills from within factories of the customers in the industrial estates which is beyond the authority of the Company to manage, therefore, the Company established a school for industrial firefighting. The school provides training both in theory and in practice on safety occupational health and good working environment, as well as, protection and fire suppression in the workplace for factories located in AMATA City Chonburi and AMATA City Rayong Industrial Estate to promote safety, good occupational health, and good working environment in accordance with the law and employees can respond appropriately in event of a fire in the workplace.

In 2019, the Company helped suspend 30 fire incidents for customers in both industrial estates and has implemented activities to promote safety and occupational health in AMATA industrial estates as follow:

- The Company had provided basic firefighting training course, fire drills, fire evacuation, and safety related training courses to the factories in both industrial estates at total of 493 courses with 8,000 factory employees being trained.



- The Company has developed a project named **“Safety City, Smart City”** to promote a safe society creation both inside and outside the AMATA Industrial Estate. The activities in 2019 are as follows:
  - » The Company organized an annual Safety Week event for the year 2019 at AMATA City Chonburi in order to raise awareness and educate relevant stakeholders and prepare employees and related agencies to be ready to respond to emergency situation in a fast and appropriate manner, exchange of knowledge about building safety in industrial plants, and build a society and environment of safety.

Participants include executives, safety officers, employees, as well as, government agencies, relevant local government authorities, and other interested parties totaling of 500 people.



- » The Safety Network led by AMATA consists of 18 entities from public and private sectors had signed a memorandum of agreement for the cooperation in AMATA Emergency Response Team Alliance (AERTA) aiming to jointly work on the knowledge development and upgrading the operational capability in emergency prevention and response in AMATA City Chonburi Industrial Estate.



- » The Company established a Security Training Academy according to the Security Business Act B.E.2558 (2015), in order to raise the standard of security guards to be in accordance with the law and comply with international standards. The Company has provided training courses in both theoretical and practical in various topics such as basic knowledge of security, regulations and law related to security, traffic management, emergency response to the security guards of the factories in AMATA City Chonburi and AMATA City Rayong industrial estates in order to promote the safe and peaceful society creation in both industrial estates. In 2019,

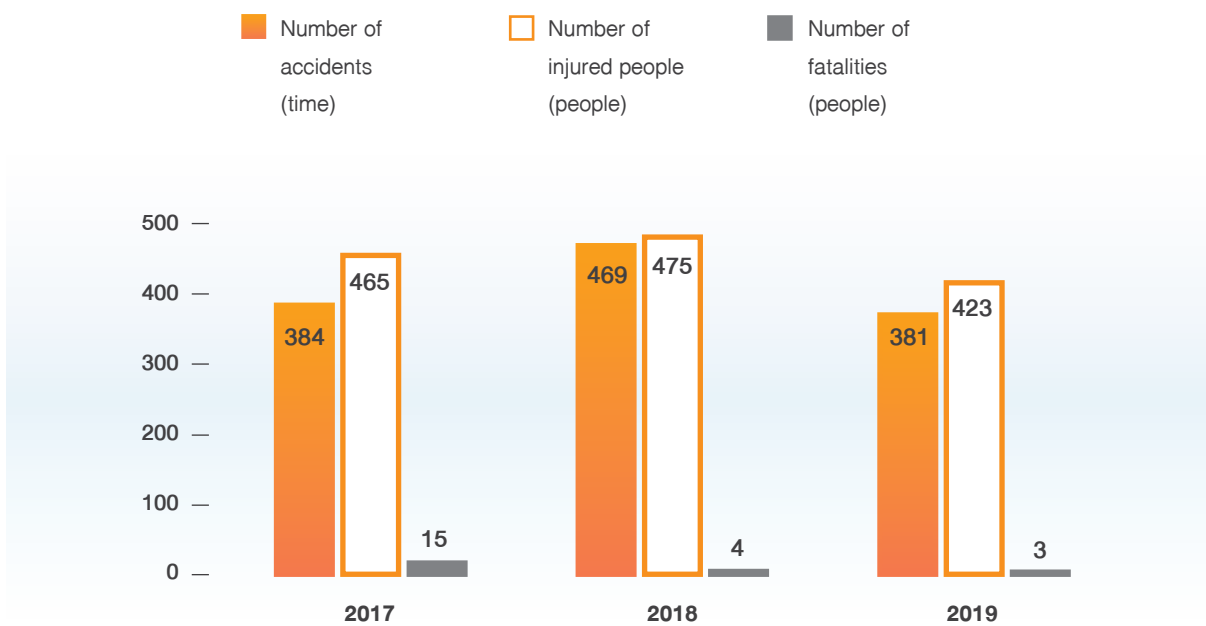
the Company had organized 5 security training courses for the factories in both industrial estates, with a total of 115 security guards being trained.



### Safety Road

- Road improvements were conducted in areas vulnerable to road accidents in order to reduce the road accidents inside the industrial estate. The Company has started installing CCTV systems in both AMATA industrial estates and is expected to be completed by January 2020. Information from these CCTVs will be analyzed and used for traffic management to free up traffic in rush hours, enable quick access to the accident areas, secure the property of customers, and prevent crime in the area. After implementation of many activities in 2019, the roads in AMATA City Chonburi Industrial Estate are becoming towards the safety road. The number of accidents has significantly decreased from 469 times to 381 times, the number of injured people has been reduced from 475 to 423 people and the number of fatalities has decreased from 4 to 3 people.

#### Statistics of Accident, Injury and Fatality in AMATA City Chonburi Industrial Estate



- In collaboration among Chonburi Provincial Disaster Prevention and Mitigation Office, AMATA Facility Services Company Limited and 19 alliances from both the public and private sectors had signed the memorandum of understanding on the cooperation in establishing safety road measures aiming to promote road safety and define accident prevention guidelines in order to reduce road accidents in AMATA City Chonburi industrial estate and reduce loss of life and property of people in the organizations participating in the network.



## Contractor Occupational Health and Safety

- The Company also emphasizes on the occupational health and safety of the contractors of both the Company and the customers in the industrial estates. Policy on Company safety and occupational health policy, including guidelines for various measures relating to practices in working in the industrial estate areas, were clarified to contractors of both the Company and its customers through organized meetings and urged them to comply strictly with labor laws, occupational health, and safety at workplace. The contractor's works will be monitored by the employee in charge of the project. In addition, the contractor must inform the Company of any lost time injury. In the year 2019, there are no employees from the contractor that encountered lost time injury or deaths.

## Safety in the area around AMATA Industrial Estate

AMATA has high risk of fire and traffic safety as there are many communities and residents located around the estates. To mitigate the risk, the Company therefore uses knowledge and competency that the Company has cooperated with customers in industrial estates and the Industrial Estate Authority of Thailand and developed various projects to reduce the negative impacts and create a safe society in the area around the industrial estate.

In the year 2019, the Company has suspended the 5 fire incidents within the surrounding communities. The Company has joined with the Industrial Estate Authority of Thailand to establish the Traffic Management Committee in both its estates. The committee consists of representatives from the central and local government authorities and factory operators in the industrial estates gathering ideas, providing suggestions on traffic management and road safety and also building confidence and preventing crime in areas of industrial estates and nearby communities.

# Community Development



## 2019 Highlights

Community satisfaction towards the Company's community development projects

- AMATA City Chonburi Industrial Estate

Target **>85%**

Results **90%**

- AMATA City Rayong Industrial Estate

Target **>85%**

Results **88%**



Industrial estates are developed to support growth of the industrial sector which is fundamental to the country's economic expansion. Simultaneously, growth of the industrial estates causes both positive and negative effects on local society and community. The Company is aware of its responsibility for looking after the community around AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate by considering economic, social, occupational health and safety and environmental impacts of the operation on the community both inside and outside both of AMATA's industrial estates.

According to the materiality assessment in 2019, both local community and the Company place importance on the development of community in various aspects such as health, safety, education and economy. Accordingly, the Company is determined to create stakeholder participation process aiming to help develop AMATA's industrial estates to be the perfect cities and to support the industrial sector to smoothly operate their business in long term. Consequently, the surrounding local community would happily live with the industrial estates. (Disclosure 103-1).

## Management Approach (Disclosure 103-2, 103-3)

Based on the business philosophy of "ALL WIN" which has always been adhered as a principle of business operations by the Company and the Company's goal in strengthening the business growth along with sustainable community and social development, the Company has established a key strategy of sustainability connected with communities and society by focusing on the cooperation among the Company, communities, customers in the industrial estates and the government agencies. In addition, the Company has adopted the UN Sustainable Development Goals (SDGs) as a guideline for community development.

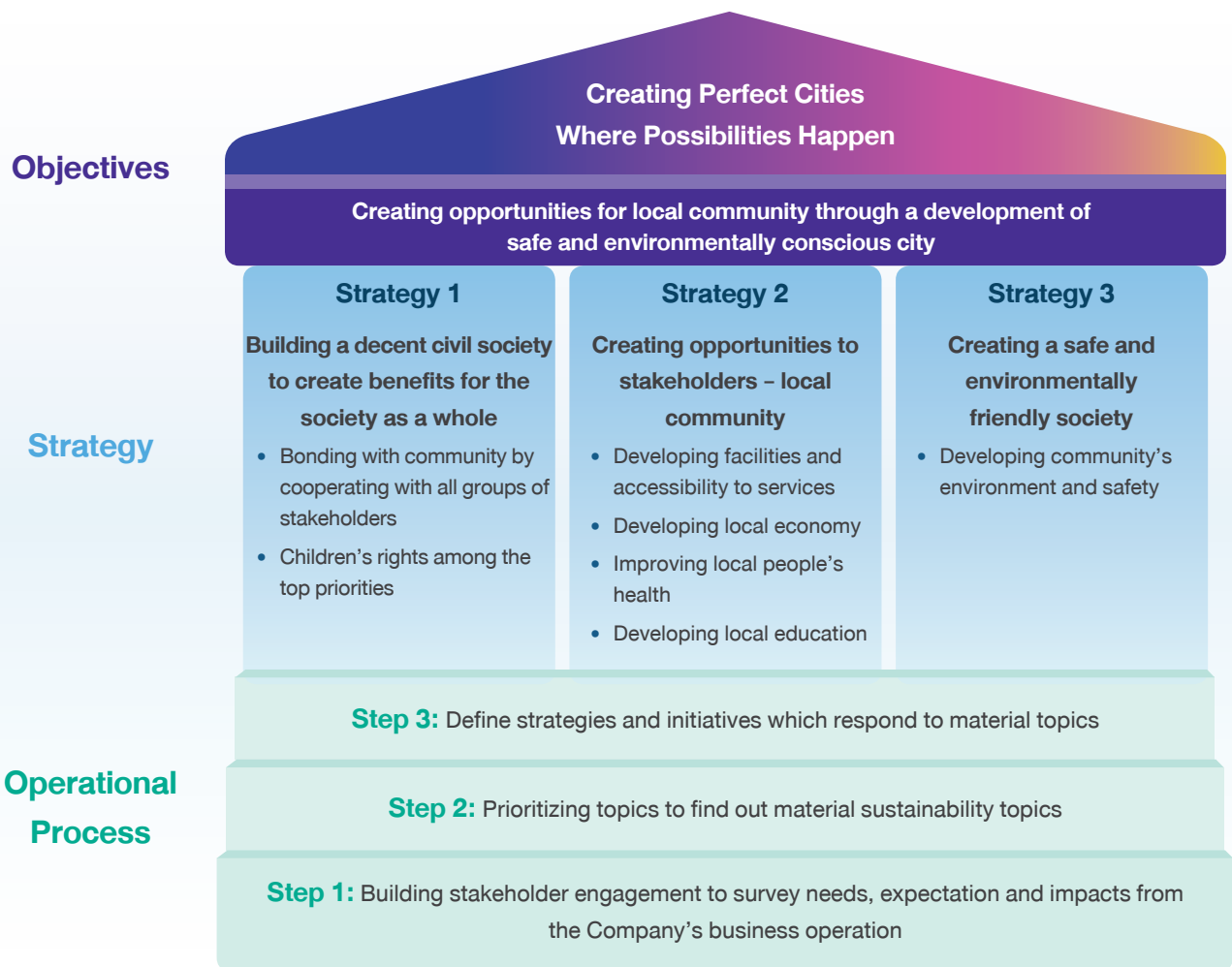
The Company has set the operational framework covering all aspects of community development by focusing on building good relationship with the local community who is one of major stakeholders to create an understanding and confidence in the Company's business operation and to provide opportunities for local citizens and other stakeholders to have access to the Company's services. Additionally, the Company focused on creating a network of cooperation amongst other stakeholders, e.g. customers and suppliers, and various entities to help develop local communities and society at large.

The Company has set up the Community Relations and Social Responsibility Working Committee since 2014 to drive the projects under its sustainable development goals which link with community and social development and to efficiently supervise and monitor community development projects. The Company conducted a survey about problems, needs and expectation of local community through stakeholder engagement process and developed material topics on sustainability into the Company’s strategy and activities target.

To achieve the sustainable development goals and community development goals, the Company had categorized the target groups into 2 groups as follows:








**Group 1:** People living in the surrounding area within a radius of 5 kilometers from AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate.

**Group 2:** Employees working in factories located in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate.



The Company had appropriately defined the strategies and initiatives to responds to the need and expectation of each group of stakeholders. Most expectations of both target groups would be related to the development of quality of life such as local economy, traffic and safety as well as environmental impact management, etc. The Company has targeted to obtain the community’s satisfaction on the Company’s community development projects not less than 85% with no significant complaint from the communities in 2019.

## Framework on Social Value Creation According to the Sustainable Development Strategy

Strategy	Strategy 1 Building a decent civil society to create benefits for the society as a whole	Strategy 2 Create opportunities for stakeholders - Local Community	Strategy 3 Creating a safe and environmentally friendly society
<b>Sustainable Development Target</b>	 (SDG target 17.17)	    (SDG target 1.4) (SDG target 8.3, 8.8) (SDG target 9.1) (SDG target 11.2)	  (SDG target 15.1) (SDG target 15.2) (SDG target 12.2, 12.4)
<b>Framework</b>	Collaboration to promote a sustainable development of the community surrounding both of the Company's industrial estates	Creating opportunities to access fundamental resources and services necessary to the existence of people in the community	Rehabilitating ecosystem and freshwater resources of the community using the Company's management knowledge and expertise
<b>Value to the Society</b>	<ul style="list-style-type: none"> <li>The community earns benefits from knowledge / development guidelines from the factory operators in both industrial estates</li> <li>Create the network of sustainable development in the area</li> </ul>	<ul style="list-style-type: none"> <li>Reduce the community's cost to access the fundamental services</li> <li>Community gets benefits from infrastructure development</li> <li>Increase household income</li> <li>Access to health and educational services</li> </ul>	<ul style="list-style-type: none"> <li>Preserve the biodiversity and local species</li> <li>The community has knowledge in water management and waste management</li> </ul>
<b>Value to the Company</b>	<ul style="list-style-type: none"> <li>The acceptance of the local community to the customer's business operations in the Company's operating areas</li> <li>Happy co-existence between community and industrial estate</li> </ul>	<ul style="list-style-type: none"> <li>Create community engagement to the Company</li> <li>Create acceptance of the Company's operation</li> </ul>	<ul style="list-style-type: none"> <li>Mitigate environmental impact and complaints</li> <li>Create the competitive advantage in environmental impact management</li> </ul>

## Framework on Children's Rights Management

Throughout its business operation, the Company has strictly abided by ALL WIN philosophy with the objective of providing benefits to those related to the Company's value chain and allowing them to grow with the Company sustainably in every dimension. Although children's rights topic had not been elevated as material sustainability topic, but the expansion of the industrial estates operated

by the Company in every area undoubtedly relates both directly and indirectly to the quality of life, opportunity and growth of the children living around both AMATA City industrial estates. Additionally, children's rights becomes an important concern internationally at present. Business operation must take into consideration the children's rights throughout business value chain.



The Company adopted “Children’s Rights and Business Principles” (CRBP) defined by the United Nations Children’s Fund (UNICEF) as guidelines on business operation which respects children’s rights. It comprised four principles that the business would affect children, i.e.

- 1) Support of children’s survival;
- 2) Protection of children from violence;
- 3) Appropriate development; and
- 4) Opportunity for the children to participate.

Operational framework was determined to become a perfect city which provides opportunities for the children and responds to CRBP principle as follows:

**Safety City:** to create a society which jointly protects and supports a safe survival: The Company announced the policy and supplier code of conduct which strictly prevent the use of child labor as well as has developed

process of business operation which mitigates environmental effect on the society children are residing in, e.g. the development of a smart environment which helps mitigate greenhouse gas emissions, efficient waste management, and zero waste to landfill, etc.

**Opportunities City:** The Company has developed various infrastructure and facilities to provide equal opportunities for the children in the surrounding community to access the utilities and services such as schools, hospitals and shopping centers.

**Edu-town:** The Company cooperated with the business strategic partners in developing diversified learning and educational space in both industrial estates, e.g. water management learning center, smart classroom, and recreational public parks.



## Performance

In 2019, the Company had implemented a total of 76 projects and activities by spending social investment budget excluding donation of Baht 32.97 million.

There were 345,371 participants joining the activities and 752,696 people were directly and indirectly benefited by these projects and activities.

	AMATA City Chonburi		AMATA City Rayong	
	Communities (subdistricts)	Factories in the industrial estate	Communities (subdistricts)	Factories in the industrial estate
Target groups	24	769	6	323
Number of participated communities / factories	23	472	5	154
Percentage of participated communities / factories	95.8	61.4	83.3	47.6
Number of participants (persons)	153,275	87,731	87,182	17,183
Social investment (million Baht) in 2019	17.19		15.78	



## Facility development and service accessibility

The expansion of AMATA industrial estates causes a rise in the population both in and surrounding the industrial estates as a result of non-registered population immigrating into the area. The increase in density of population affects service carrying capacity of local authorities and

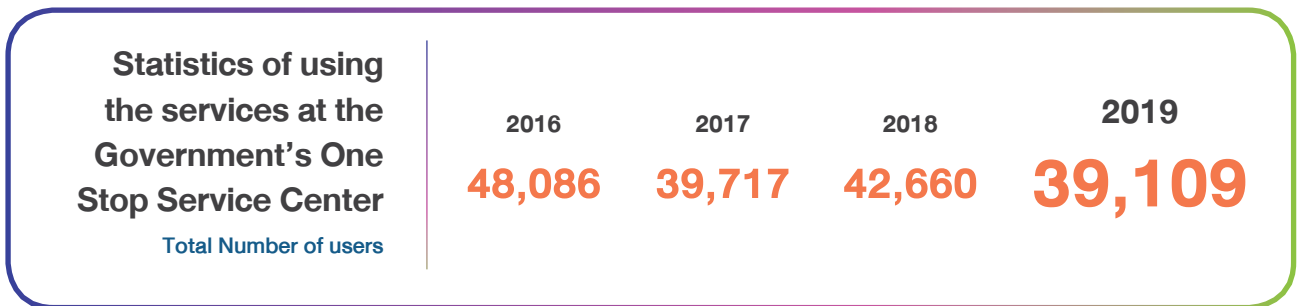
inconvenience in the accessibility of various fundamental services. In addition, according to a survey of surrounding communities, some population lived in the area far from transportation system, causing an inconvenience in the accessibility of various fundamental services and facilities.

Accordingly, the Company had developed various projects relating to facility development and fundamental service accessibility as follows:

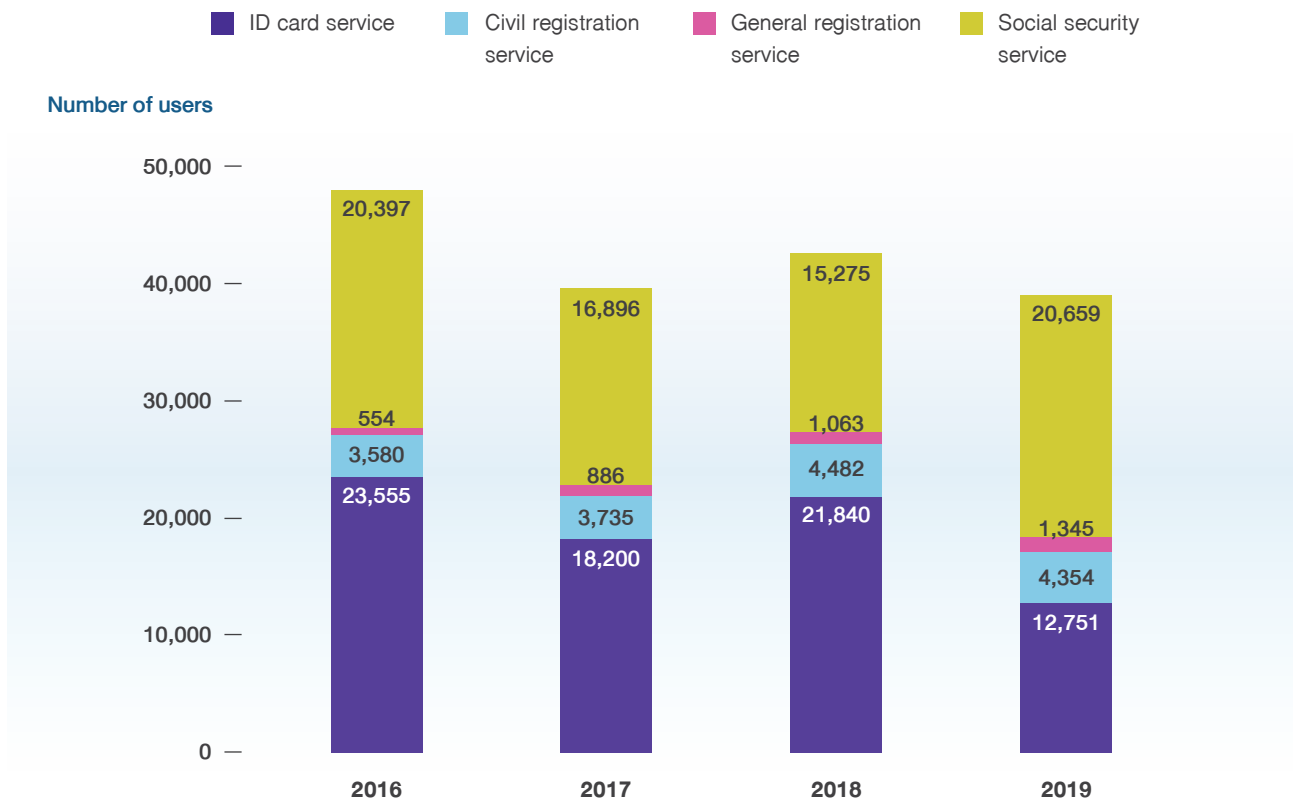
**1. One-Stop Service Center, Amphur Muang Chonburi**

This One Stop Service Center in AMATA City Chonburi Industrial Estate, or Front Service Center, Amphur Muang Chonburi, was the first model of government office in Thailand which was set up by the cooperation between private sector and various government agencies providing one stop service for various kinds of certificate registration and permits. It is considered as another service channel for the

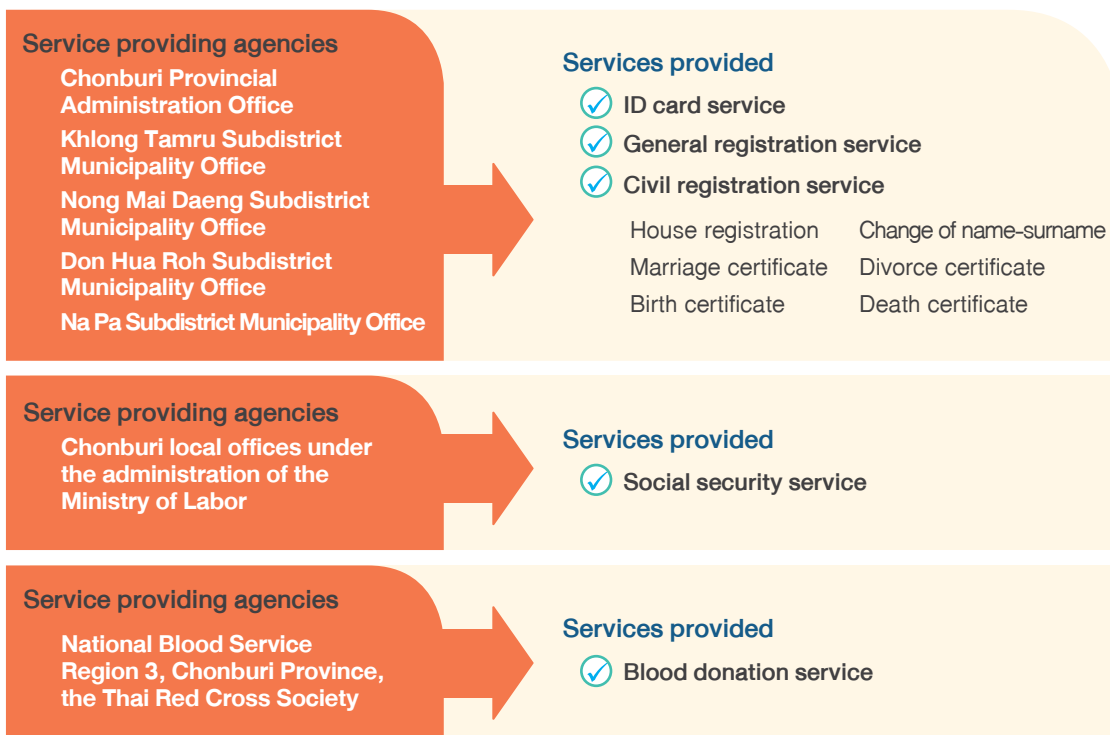
people of Chonburi province living near AMATA City Chonburi Industrial Estate which comprises high population density of more than 500,000 people, both registered and non-registered. This One Stop Service Center was established in 2014 to facilitate the customers, the employees working in the industrial estate and people living around the industrial estate in contacting the government agencies. Consequently, not only the process and time in contacting the government agencies, but also the traveling time and expenses were found to have been reduced.



**Statistics of using the services at the Government's One Stop Service Center**



Services provided at the Government's One Stop Service Center

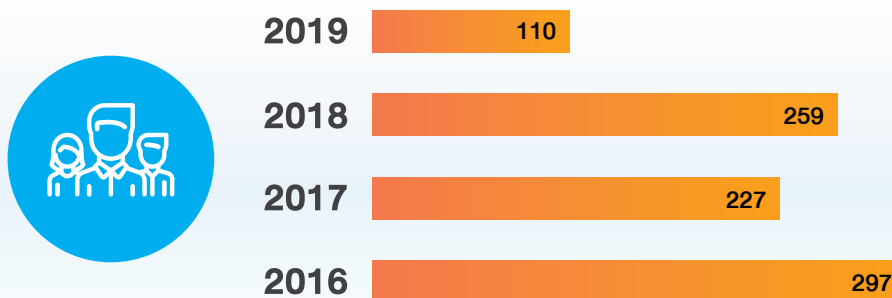


2. Visa and Work Permit Service Center

The Company established Visa and Work Permit Service Center to facilitate foreigners working in AMATA City Chonburi Industrial Estate. The center is opened once a month and it takes only an hour instead of approximately one week as previously required. As the Ministry of Labor has currently opened the EEC Labor Administration Centre at Nong Mai Daeng Municipality,

Amphur Muang, Chonburi, which covers visa and work permit service to support the expansion of the Eastern Special Development Zone (EEC), foreign employees have more channels for the services. Accordingly, the number of service users at the Company's Visa and Work Permit Service Center decreased.

Statistics of service users at the Visa and Work Permit Service Center



### 3. AMATA Smile Caravan

According to the Company’s survey of the environment and well-being of the communities surrounding both AMATA City industrial estates within a 5-km radius, some communities were located far from the fundamental facilities and services. As a result, since 2014 the Company has organized AMATA Smile Caravan project, which is a field trip to provide services to residents in the target area, e.g. health

checkup, haircut, electrical appliance repair, motorbike oil change, etc. The project is intended to assist, facilitate and lower expenses to the residents in the area as the services are provided free of charge. The Company receives a cooperation and support from the factories in both AMATA industrial estates, alliance and local authorities, who also volunteered in each Caravan.

AMATA Smile Caravan	AMATA City Chonburi				AMATA City Rayong			
	2016	2017	2018	2019	2016	2017	2018	2019
Number of target communities	8	8	10	10	-	-	8	9
Number of caravan activities	8	8	10	10	-	-	8	9
Number of participants from the communities (persons)	900	950	1,293	2,100	-	-	1,080	2,250
Number of participating employees (persons)	230	250	300	310	-	-	190	30
Number of participating operators from the industrial estates (companies)	10	12	15	17	-	-	33	23
Value of services (Baht)				249,600 Baht				46,500 Baht



Additionally, AMATA Smile Caravan allows the Company to be informed of various problems and needs of the communities directly. Information obtained from the project will be used in the development of other initiatives. The communities also have had a better understanding on the Company’s business operation as the Company met with the communities directly. This, thus, increased the communities’ confidence in the Company that it would help improve quality of life for the surrounding communities in parallel with the growth of industrial estates.

## Community Economic Development

The growth of the industrial estates has both positive and negative effects towards economic system of local community, e.g. income distribution, increasing demand for labor or the creation of demand for goods or services, while urbanization increases cost of living. Accordingly, the Company places importance on the growth of local community in parallel with its expansion by using strategy on creating economic opportunities to all groups of stakeholders in the community, e.g. local business operators, working age labor, senior citizens and the underprivileged, through the support of local employment and project arrangement to respond to the needs and to develop stakeholders in such community so that they could have jobs and income for their own independence sustainably.

In 2019 the Company conducted projects relating to the creation of economic opportunities to stakeholders as follows:

### 1. Job Fair

At present, there are more than 1,100 factories operating in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate while over 100 factories are under starting process which require

a great number of labor force. Hence, the Company joins the Employment Offices of Chonburi and Rayong Provinces under the Ministry of Labor and the Eastern Technological College (E.TECH) to organize an Annual Job Fair to facilitate the employers/entrepreneurs and job seekers to have the opportunities to meet and recruit directly. This Fair does not only provide the opportunities for job applicants to select the job positions that match their knowledge, ability and skills, but also help solve shortage of skilled workers for the factories in both industrial estates. It also promotes the local employment and saves time and expenses of both job applicants and entrepreneurs.

In 2019, the Company had targeted the employment ratio in the Annual Job Fair to be higher than that of 2018. Therefore, it publicized the Fair through many working agencies and invited customers in both industrial estates to join the activity. This year, there were 7,254 job vacancies to be recruited by 166 companies while 6,500 job applicants attended the Fair, 2,574 of which being recruited. The employment value was estimated to be about Baht 60 million.



## Statistics of Job Fair

AMATA City Chonburi	2016	2017	2018	2019
Number of job seekers (persons)	8,511	7,500	12,000	4,000
Number of employers (companies)	192	134	141	106
Number of vacancies (positions)	8,591	5,134	6,132	4,904
Employment value (million Baht)	73	56	60	40
Number of successful deals at the event	1,013	390	1,120	1,599

AMATA City Rayong	2016	2017	2018	2019
Number of job seekers (persons)	4,000	4,000	4,000	2,500
Number of employers (companies)	75	110	120	60
Number of vacancies (positions)	4,800	5,000	5,000	2,350
Employment value (million Baht)	48	35	40	20
Number of successful deals at the event	1,002	453	1,057	975

## 2. Farm to Factory Project

Owing to the results of the Company's local community survey, the community was found to have many agricultural and processed products that need marketing support. The Company foresees that many factories in the industrial estates and their employees are the target purchasers having great demand of many agricultural products. It then has organized "Farm to Factory" Projects aiming to promote trades between the factories in both AMATA industrial estates and the local communities in order to support local communities to have the opportunities to sell their products in a long run, especially the agricultural and processed products, thereby enhancing a sustainable growth of the local economy while purchasers are able to obtain the fresh and quality products directly from the producers.

In 2018, the Company started the Farm to Factory Project in collaboration with the Industrial Estate Authority of Thailand (IEAT) by using AMATA City



Chonburi Industrial Estate as a pilot area. The Company acted as a facilitator between the local communities and the factories in the industrial estate in trading of agricultural products. The Company and the Industrial Estate Authority of Thailand had also stepped in to help upgrading the standards of the products to meet the purchasers' requirements. In 2019, there

were 15 factories and 40 local communities from Chachoengsao and Chonburi provinces joining the "Farm to Factory" Project in AMATA City Chonburi Industrial Estate where the market was opened on an average of 21 times per month, generating revenue from selling the products totally 7,601,982 Baht.



### Revenue of Farm to factory Project

Total revenue from selling the products  
in 2018-2019

2018



**6.84**  
million Baht

2019



**7.60**  
million Baht

### 3. Constructive Industrial Waste to Community Value Project

The Company, in collaboration with the Industrial Estate Authority of Thailand and the factory operators in AMATA City Rayong Industrial Estate who are members of CSR Volunteer Club, encourages local communities to reprocess industrial waste into community products. This is called "Constructive Industrial Waste to Community Value" Project according to circular economy concept as industrial waste certified safe by the Department of Industrial Works can be released from the factories to be used for other purposes, as administered by IEAT office at AMATA City Rayong Industrial Estate. In 2019, the project was conducted in one community, i.e. Khao Ma phut community enterprise, Phana Nikhom subdistrict, Nikhom Phatthana district, Rayong province.

- **Khao Ma Phut Social Enterprise**

Pineapple farmers and housewives in Khao Ma Phut community, Phana Nikhom subdistrict,

Nikhom Phatthana district, Rayong province, assemble to form Khao Ma Phut Social Enterprise to process pineapple during its productive season and do embroidery from waste during pineapple low season. The Company and AMATA CSR Volunteer Club, a network of factories in AMATA City Rayong Industrial Estate who jointly organizes community services, conducted a survey and found that this community enterprise was potential to use waste from the factories producing community products.

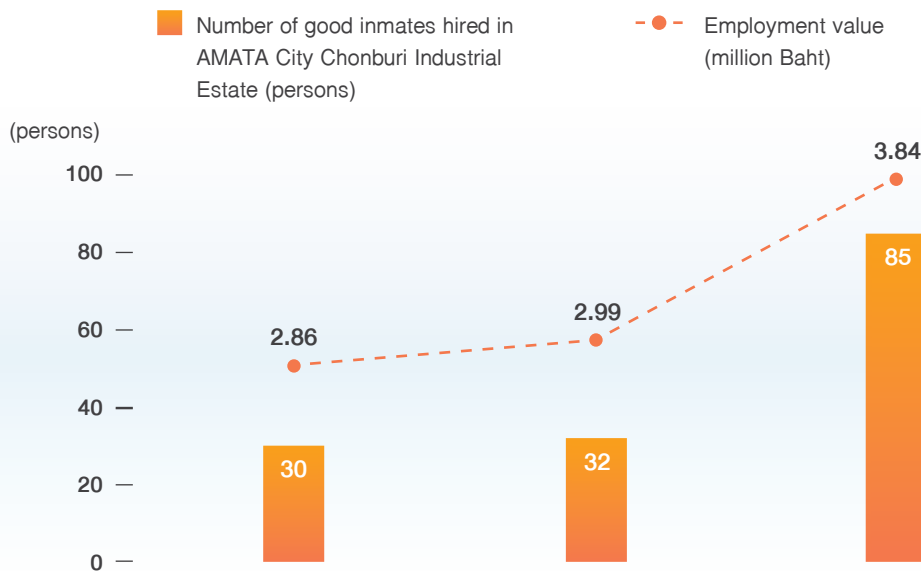
Nestle (Thai) Ltd. donated raw material bags to Khao Ma Phut community enterprise to be used for handbag production. Previously the raw material bags were disposed as non-hazardous waste. Processing of raw material bags into handbags is the reduction of waste and creation of income to the community. In 2019 the community earned revenue of 120,000 Baht from selling processed handbags.

#### 4. Employment of Good Inmates from Chonburi and Samut Prakarn Central Prisons

The Company has foreseen the lack of occupational opportunities for the underprivileged group in Chonburi province and neighborhood, e.g. the inmates. The Company, therefore, has cooperated with the Department of Corrections in providing the opportunities for occupations and incomes for “good inmates” or good behavior prisoners who are nearly acquitted by hiring the good inmates from

Chonburi Central Prison and Samut Prakarn Central Prison to do maintenance jobs on the central area of AMATA City Chonburi Industrial Estate such as tree and lawn maintenance, tree trimming, tree planting and replacement, weeding and landscape improvement, etc. Since 2005, the Company has conducted On the Job Training (OJT) for those good inmates and has paid them based on the general wages rate. In 2019, it had hired 85 good inmates creating the employment value of 3,839,520 Baht.

**Value of hiring good inmates from Chonburi and Samut Prakarn Central Prisons**



#### 5. Happy Money Project

In 2019 the Company and the Government Savings Bank, a financial partner, signed a Memorandum of Understanding for “Unlawful Loan Solution and Social Activities Project” on 13 March 2019. On 19 November 2019 they jointly conducted continuous activities by organizing financial management training under “Happy Money, Happy Mind, Pay off Debts, Grow Savings” topic to the Company’s employees and those working in AMATA City Chonburi Industrial Estate and providing advice on cash management, saving and financial problem solution, personal loan in particular. There were 70 participants attending the training.





## Community Health Development

### 1. AMATA Friendship Sports

AMATA Friendship Sports Project under the cooperation between AMATA group of companies and factories in AMATA industrial estates has been organized annually during March to August. In 2019, the 18th AMATA Friendship Sports Project was held with the objectives to promote unity, sportsmanship, good health, and productive use of free time in order for the executives and employees working in various establishments in AMATA Industrial Estates to be away from drugs as well as to strengthen good relationship between AMATA and entrepreneurs in both AMATA industrial estates. The sports competitions were held only on Sunday.

In 2019 AMATA City Chonburi Industrial Estate arranged eight types of sports, i.e. 11-male football, 9-female football, volleyball, basketball, sepak takraw, table tennis, petanque and badminton. There were 432 teams from 135 companies in total, or an increase of 10% and 17%, respectively, from that in 2018. AMATA City Rayong Industrial Estate divided sports into four types, i.e. 7-player football, volleyball, sepak takraw and petanque doubles. There were 165 teams from 85 companies in total, or the increase of 15% and 27%, respectively, from that in 2018. Trophies and awards of this project were also supported by the Company to encourage the employees to exercise for good health.

### 2. AMATA Junior League

The Company continually supports sports for youths around both AMATA City industrial estates, and has organized AMATA Junior League sports competition every year for youths in the area to be able to show their sports capability and to strengthen their health through four types of sports and two age ranges, i.e. not older than 12 years old (elementary) and not older than 15 years old (junior high school), both male and female. Sports umpires are supported by

the Institute of Physical Education Chonburi Campus, To Be Number One Club, Pluak Daeng district, Rayong province and Suankularb Wittayalai Chonburi School.

In 2019, 36 schools and 912 athletes participated in AMATA City Chonburi Industrial Estate Junior League. 27 schools and 985 athletes participated in AMATA City Rayong Industrial Estate Junior League. The Company sponsored scholarships as awards for the competition, and total budget of both sports competition amounted to 1,076,538 Baht.

### 3. AMATA City Charity Run

The Company, in cooperation with the factory operators in AMATA City Chonburi Industrial Estate and local communities, organized “AMATA City Charity Run 2019” with the objectives to promote walk and run exercise to members in AMATA City industrial estates and public for their health and to use their free time constructively as well as to strengthen good relationship among the Company, factory operators in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate and nearby communities who participated in the activity.

Apart from good health, the Company also encourages the participants to recognize and be aware of climate safety and climate change. It, therefore, organized an event under the theme of “**Save Earth, Safe Us**” to set an example of environmental protection, such as:

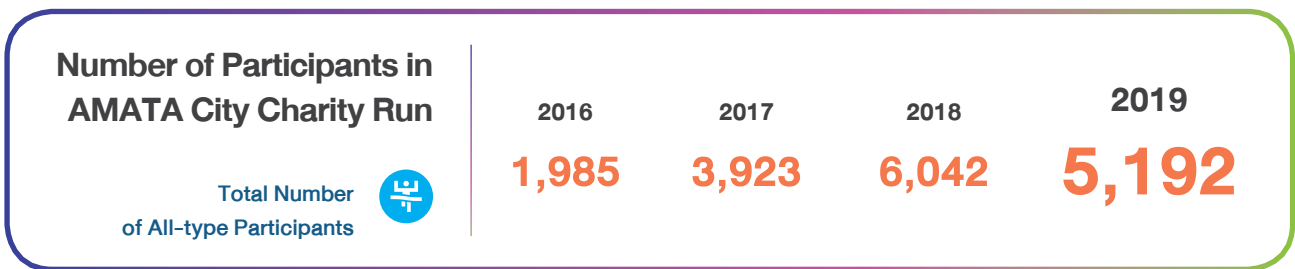
- Used of surplus fabric from the quality garment factories to make sports shirts under a circular economy concept by Moreloop Company aiming to reduce energy, chemical use and CO<sub>2</sub> emission from new fabric manufacturing. Based on 5,192 athletes participating in the activity, Greenhouse gas emission were reduced by 5,659 kg of carbon dioxide equivalent, or equivalent to 47,507 km of driving.

- Online enrolment to reduce paper use.
- Plastic waste reduction in the event by refraining from using plastic, promoting use of cloth bags and bagasse food containers, and waste separation according to 3R principles.

This mini-marathon run was divided into three types, i.e. 16-km mini-marathon, 10.5-km mini-marathon and 5-km walk-run for health. 5,192 people participated in the event, which were lower than 2019 target of 6,000 people. The number of participants

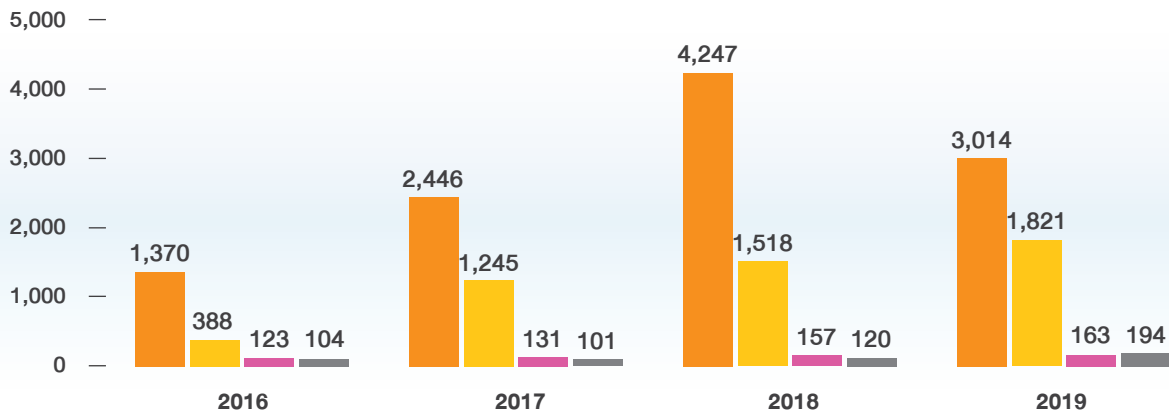
also declined by 14.75% from that in 2018 as there were several events being held at the same time. 3,177 participants were employees of the Company and factories in the industrial estates, accounting for 61.19% of total participants.

Part of the income after expense deduction was donated to Anuban Nawamintarachinee Army School to improve educational quality and to Phanthong Hospital, Chonburi province to support medical equipment purchase.



### Number of Participants in AMATA City Charity Run

- Employees from factories in AMATA industrial estates
- General public
- AMATA's employees
- Other agencies



#### 4. Blood Donation

As large-scale industrial estates, there are a lot of employees, both Thai and foreign, working in AMATA City Chonburi and Rayong. Total population including the surrounding communities are more than 500,000 people. Therefore, they are the areas with high potential for blood donation as blood reserve for the Thai Red Cross Society. The Company thus cooperates with the Regional Blood Service 3, Chonburi, Rayong Red Cross Chapter and the Industrial Estate Authority of Thailand to promote and invite the employees within AMATA group and those of the factory operators in both AMATA industrial estates to donate blood.

In 2019, blood donors from the Company's employees and workers of factories in both industrial estates declined by 31% from 8,489 donors in 2018

to 5,832 donors. Collected blood amounted to 2,347,850 cc, which was 37% lower than 3,732,550 cc in 2018 since the factories in both industrial estates had more channels of blood donation, or the blood donation units contacted the factories directly, so that the Company had no information about this.

The Company's blood donation activities also helped the Thai Red Cross Society cut expenses for blood collection by 291,600 Baht annually because a visit to factory sites by a mobile blood donation unit normally costs an average of 50 Baht per donor. Moreover, this activity promotes a unified contribution from all sectors within the industrial estates, local communities and general public for the benefit of our society.

#### Statistics of blood volume and donors

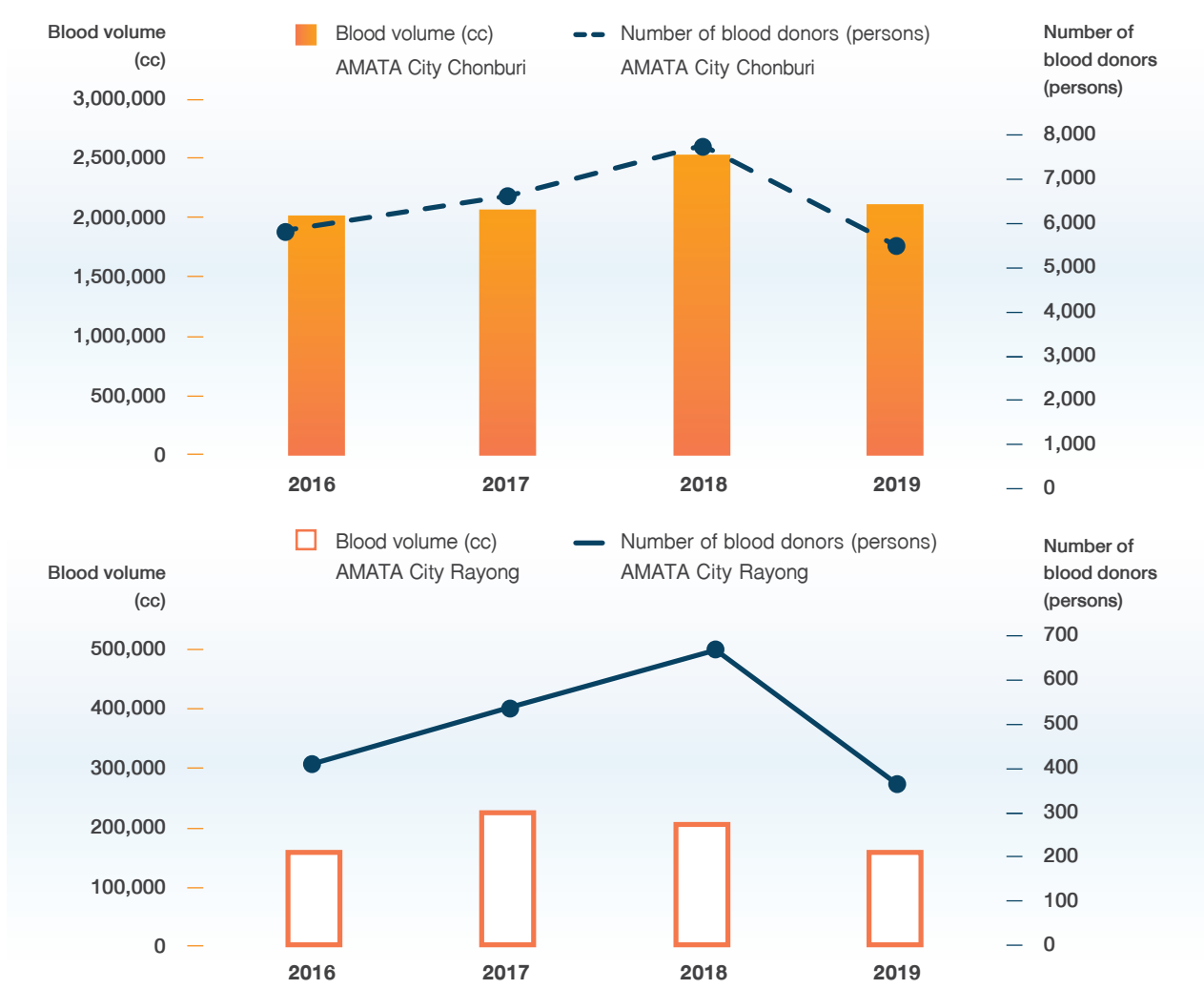
Total **5,832** persons

Total number of 2 industrial estates

Blood volume  
**2,347,850** cc



**Statistics of blood volume and donors**



**Community Environmental, Safety and Wellness Development Project**

As industrial estate expansion continues, population, including registered migrants and non-registered immigrants, has exponentially increased around these areas. Waste materials produced by these swelling communities have resulted in immense impacts as well as safety concern for life and personal property. The Company is also inevitably affected by the population clusters though outside of the industrial estate areas, due to a lack of proper and effective management.

**1. Development of Model Community in Water and Solid Waste Management at Nong Mai Daeng Municipality**

The Company is well aware that to tackle water and solid waste problem successfully requires an earnest collaboration and involvement of all parties. Such project is thus initiated as a cooperation among the Company,

governmental agencies, communities and independent entities having knowledge in water and waste management to work together, and the MOU was signed to display a concerted effort to establish a model community capable of handling water and solid waste.

Equipped with accumulated skills, knowledge and expertise in water and solid waste management, the Company has the ability to help create a model community to properly handle water and solid waste challenges according to proven methods and legal compliance. Nong Mai Daeng Sub-District Municipality, situated adjacent to AMATA City Chonburi Industrial Estate, has been chosen as a pilot project to showcase how to sustainably manage wastewater and solid waste. The gained knowledge will position it to be a case study for other communities in the future.

## Project Area of Model Community Development in water and Solid Waste Mangement at Nong Mai Daeng Municipality



### 2019 project performance of waste management

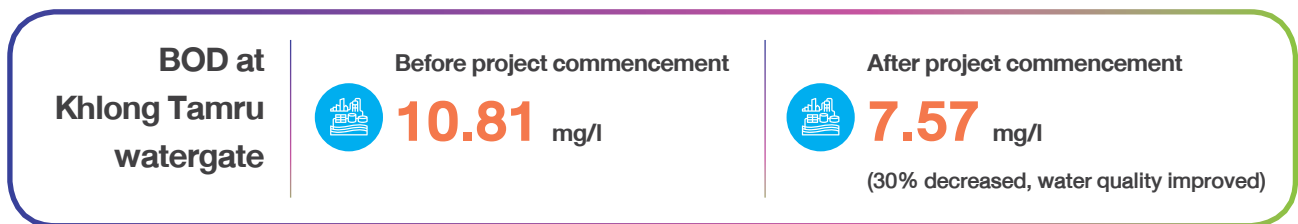
- The Company and the officers from Nong Mai Daeng Sub-District Municipality visited communities, markets and shops to select pilot areas which should have local policies on waste management and readiness of people in the community, and to choose areas for waste separation bin installation within the communities.
- The Company organized training on waste separation according to 3Rs principles, organic waste handling by composting using Cowtec machine, and launched No-Foam campaign in the market.
- AMATA Facility Services Co., Ltd. arranged a field trip of working group of Nong Mai Daeng model community project, representatives of the communities from Nong Mai Daeng and representatives from the factories in AMATA City Chonburi Industrial Estate to study waste disposal



appropriate for the pilot area. "Soil improvement materials" were prepared at Micro Biotec Co.,Ltd., Rayong while garbage was disposed using Cowtec composting machine at Suphattra Land, Rayong.

**2019 project performance of water management**

- Surveyed, collected samples from wastewater treatment facility in Nong Mai Daeng community, provided advice on the improvement of efficiency of wastewater treatment system and summarized the information to Nong Mai Daeng Sub-District Municipality to publicize the information to the community to find solutions together.
- Installed grease trap tanks to three pilot restaurants to improve wastewater quality before releasing it to public canals prior to expanding the installation to other shops in the community.
- Improved the landscape around Tamru Canal which flowed through the community and AMATA City Chonburi Industrial Estate with a total distance of 1,650 meters under the cooperation between AMATA Water Co., Ltd. and associated alliances, and improved water quality by installing aerators in Tamru Canal.
- Installed solar cells to be used as sources of energy for aerators instead of electricity.
- BOD at the Watergate, which is one of important water quality parameters, was decreased by 30% compared to BOD level before project started.



**2. Development of Model School for Environment and Safety**

The Company, the Industrial Estate Authority of Thailand by AMATA City Chonburi Industrial Estate Office, and operators in AMATA City Chonburi Industrial Estate which are Siam DENSO Manufacturing Co., Ltd., Siam KYOSAN DENSO Co., Ltd. and AMATA B.Grimm Power Co., Ltd., collaborated to upgrade educational institutions in the surrounding area of AMATA City Chonburi Industrial Estate to be “model school for environment and safety” by developing a curriculum and activities which raise awareness of environment and safety as well as being guest speakers to educate teachers, students and school staff. This is part of the improvement of surrounding communities to live sustainably with the society.

In 2019 the Company improved and upgraded two model schools, i.e. Wat Ban Kao School (upgraded since 2017 and continued the activity since then) and Ban Map Sam Kliaw School (commenced the upgrade in 2019). Details of the activities are as follow:

- **Wat Ban Kao School**  
 Since 2017 until at present, the Company and network alliances have adopted Eco-school principle to develop the curriculum on safety and environmental management, e.g. waste, water, energy, as well as income generation from environmental-friendly products, e.g. liquid soap, lotion and hand soap made from aloe vera.

In 2019 the Company and network alliances arranged training on road safety, fundamental safety and health and sanitation safety within schools, as well as fire drill and evacuation for teachers, students and school staff. Totally 280 people attended the training.



- **Don Hua Lo 1 Municipality School (Ban Map Sam Kliaw)**

In 2019 the Company and network alliances expanded model school for environment and safety project to Don Hua Lo 1 Municipality School

(Ban Map Sam Kliaw) to be a model school using wholeschool development approach. The curriculum and projects to create awareness of environment, sustainable economy of the community and safety, including road safety, fundamental safety and health and sanitation safety were established. Environment and safety related activities were organized for teachers, students and representatives from governmental entities, local agencies and private sectors. The school was a model of resource and energy appreciation, appropriate sanitation and activities which promote safety, including road safety, fundamental safety and health and sanitation safety in school. Totally 310 people attended the activities.



## Community Educational Development

The Company and local community put great importance on human resources development as industrial sector is in greater need of capable personnel and skilled labor at present according to the technology adopted in the production process and to respond to those industrial sectors planning to invest in the EEC project in the future. Therefore, it develops and conducts various educational projects to elevate capability of personnel in the factories and local labor by providing equal opportunity to access qualified education and supporting continuous learning.

Besides the Smart Education Project which the Company has been developing both vocational and

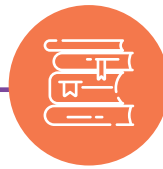
general education institutions, from kindergarten to university, by using international standard curriculum, the Company also supported education to the society in various areas as follows:

### 1. School library improvement project

The “School Library Improvement” project, undertaken by the Company along with the IEAT Office and CSR Club of AMATA City Chonburi, is a continuation of the “60 Library” mission honoring Her Royal Highness Princess Maha Chakri Sirindhorn, which was started in 2016. The goal is to modernize two school libraries every year focusing on those located within a 5-7-kilometer radius of AMATA City Chonburi Industrial Estate. The school selection criteria are:



1. A school in need of wide-ranging reading activities to support the overall teaching and learning experience.



2. A school in need of library system upgrade for book storing and searching.



3. A school in need of library resources to be more appropriate and attractive to users.

In 2019 the Company improved two libraries at Ban Bang Hak (Pracha Wittayakarn) School and Nikhom Sang Ton Eng Rayong 9 School. In addition, the Company also developed brain-based learning (BBL) area outside the classroom for kindergarten students.

### 2. AMATA scholarship

The Company is aware of the importance of education and wants to provide more educational opportunity to both children of AMATA’s employees and other youth. As a result, it presented the scholarships as follows:

- The Company’s scholarship to the employees’ children with outstanding academic record (GPA of not less than 3.50). In 2019, 15 scholarships totaling 164,500 Baht were awarded.

- AMATA scholarship project for underprivileged students who have excellent academic performance from the schools around AMATA City Chonburi and AMATA City Rayong industrial estates. The schools will select students for the scholarships which will be awarded on AMATA Children’s Day activities every year. The scholarships are sponsored by the Company and factories in both AMATA industrial estates. In 2019 AMATA City Chonburi Industrial Estate awarded 335 scholarships totaling 347,500 Baht while AMATA City Rayong Industrial Estate awarded 80 scholarships totaling 40,000 Baht.



### 3. Knowledge sharing through books

AMATA Foundation was founded in 1996 by Mr. Vikrom Kromadit, Chief Executive Officer of AMATA Corporation Public Company Limited. AMATA Foundation is operated under the philosophy of giving back to society. The foundation is devoted to making positive contributions to education for youth, preservation and management of the environment, and promotion of the arts and culture. AMATA Foundation is personally funded by Mr. Vikrom Kromadit.

As Chairman of the foundation, he expresses the teachings of his personal life and business experiences

as well as his thoughts and living approach through books, radio and television programs. These endeavors are vital to educating society at large, inspiring young people, and benefiting less fortunate population. In the past 17 years, more than 8 million copies of his 23 published books have been sold and translated into 8 languages.

In 2019, thanks to the philanthropy of the foundation, 130,976 books worth 2,464,320 Baht were donated to local communities and educational institutions near AMATA City Chonburi and AMATA City Rayong industrial estates, and to governmental and private agencies, as well as during charitable events.



### Creating Community Engagement

The Company focused on building relationship with the communities surrounding the industrial estates through various activities as well as listening to the problems, expectation and suggestion for the improvement from the communities via several communication channels. The Company also stated the facts and resolved complaints efficiently. As a result, the Company's major stakeholders, namely the surrounding communities and the overseeing government agencies, had a better understanding of the Company operations. This helped strengthen confidence and trust and promotes a healthy relationship between all parties.

Building relationship is intended in the creation of a "Tripartite Committee" representing the communities, the Company and government agencies. Examples of these committees are the Committee for Surrounding Community Development, Eco-Green Network and the Tripartite Council of Klong Luang Basin, to name a few. Each committee is tasked with resolving issues found at the two industrial estates, ranging from recommending solutions to address the community's concerns, to mitigating complaints stemming from the Company's operation.

Committee	Objectives	2019 Performance
<p><b>The Committee for Surrounding Community Development – AMATA City Chonburi:</b> 97 representatives from public, government agencies and business sector</p> <p><b>The Committee for Surrounding Community Development – AMATA City Rayong:</b> 29 representatives from public, government agencies and business sector</p>	<ul style="list-style-type: none"> <li>Building confidence of stakeholders in the Company's environmental management by disclosing the results of environmental supervision</li> <li>Being a forum for the Company's stakeholders especially the communities and local government agencies to share negative impacts and challenges to the environment caused by the operations of the industrial estate and to consider recommendations, solutions and community development ideas</li> </ul>	<ul style="list-style-type: none"> <li>The Committees of both industrial estates had two meetings in 2019.</li> <li>The Committees of both industrial estates expressed satisfaction and confidence in the Company's environmental management in accordance with set standards.</li> <li>The Committee of AMATA City Rayong expressed an interest in the traffic, wastewater management and income distribution to the community.</li> </ul>
<p><b>Eco-Green Network:</b> A working group formed to develop and link the operational network called "CSR + ECO + Environment &amp; Safety + CG or Eco-Green Network" in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate</p> <p>The working group consists of representatives from the Company, factories in the industrial estates, local communities, local government entities, hospitals and schools</p>	<ul style="list-style-type: none"> <li>Elevating and developing Eco-Industrial City for both industrial estates by creating five dimensional harmonies in physical, economic, social, environmental and management attributes</li> <li>Encouraging and supporting participation of all stakeholders, especially factories, local communities and government entities in advancing AMATA industrial estates to be Eco-Industrial City</li> <li>Publicizing achievements of the Eco-Industrial City at AMATA industrial estates</li> </ul>	<ul style="list-style-type: none"> <li>One meeting of the Eco-Green Network's working group at AMATA City Chonburi Industrial Estate and two meetings at AMATA City Rayong Industrial Estate in 2019</li> <li>Discussing 2019 action plan and projects to develop an Eco-Industrial City concept for the industrial estates</li> <li>The working group of AMATA City Chonburi Industrial Estate expressed an interest, in particular, in wastewater management, flood prevention and traffic problem.</li> <li>The working group of AMATA City Rayong Industrial Estate expressed particular interest in wastewater management and traffic problem.</li> </ul>

Committee	Objectives	2019 Performance
<p><b>Tripartite Council of Klong Luang Basin</b></p>	<ul style="list-style-type: none"> <li>Promoting and supporting the collaboration among government agencies, business sectors and local people to create a management system for the conservation, restoration and preservation of natural resources, and the ecology of Klong Luang Watershed</li> <li>Effectively managing the use of natural resources in the Watershed</li> </ul>	<ul style="list-style-type: none"> <li>One meeting held in 2019</li> <li>Adopting emergency plans to help communities in the event of natural disasters</li> <li>The Council expressed an interest in flood monitoring and prevention</li> </ul>

According to the performance of all Committees in 2019, no significant issues from the Company’s operation were raised. However, there were three complaints from the communities in 2019, all of which concerning environmental impacts of the operation of factories in the industrial estates on the communities. The Company

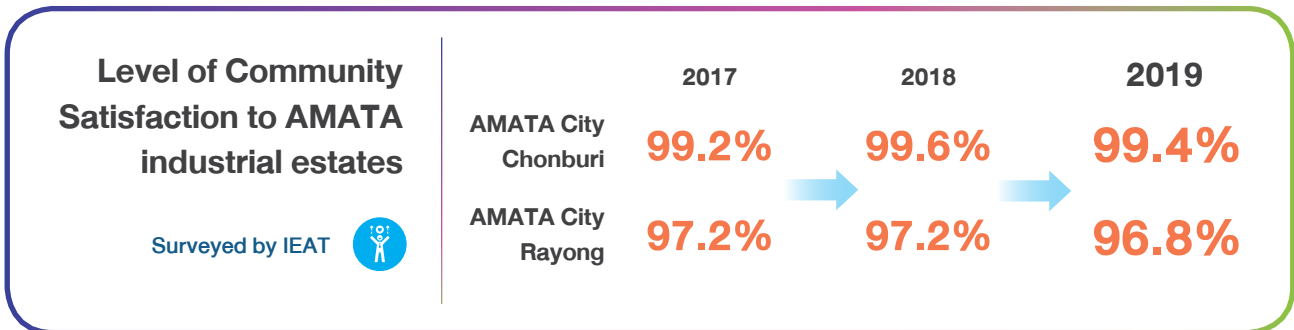
had already coordinated with related parties including the Industrial Estate Authority of Thailand by AMATA City Chonburi and Rayong industrial estate offices to investigate, follow up and resolve those complaints. It also determined measures to prevent any potential impacts in the future.



## Community Satisfaction Survey

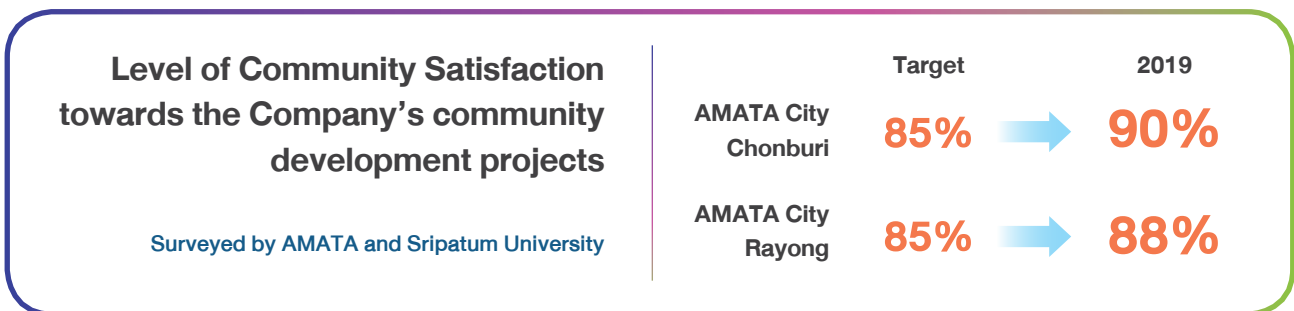
The Industrial Estate Authority of Thailand (IEAT) organized the annual satisfaction survey of surrounding communities at 33 industrial estates and jointly conducts the community satisfaction survey with the Company in both AMATA industrial estates. In 2019, The result showed that AMATA City Chonburi Industrial Estate and

AMATA City Rayong Industrial Estate received 99.4% and 96.8% satisfaction scores, respectively, which were slightly decreased from that in 2018. However, this is a clear indicator of outstanding level of trust and confidence in the Company.



In addition, 2019 was the first year that the Working Group of Community Relations and Corporate Social Responsibility of the Company conducted a satisfaction survey of the surrounding communities at AMATA industrial estates jointly with the Faculty of Communication Arts, Sripatum University, Chonburi Campus to gain an insight on the communities' satisfaction towards the Company's

community development projects as well as clear need and expectation of the communities. It targeted a level of satisfaction of more than 85%. AMATA City Chonburi Industrial Estate received 90% satisfaction scores while AMATA City Rayong Industrial Estate received 88% satisfaction scores.



# Performance Statistics

## Economic Performance

	2016	2017	2018	2019
<b>Economic Value Added (Consolidated Financial Statements for the Year ended 31 December)</b>				
<b>Common Share Information</b>				
Par value (THB)	1	1	1	1
Book value per share (THB)	10.44	11.59	12.03	13.17
Earnings per share (THB)	1.12	1.32	0.95	1.63
Dividend per share (THB)	0.39	0.50	0.40	0.37
<b>Economic Performance (THB, million) (Disclosure 201-1)</b>				
Revenue from sales and services	4,426.51	4,491.25	4,353.81	5,914.28
Total revenue	4,732.69	4,652.14	4,576.33	6,232.81
Net profit	1,198.27	1,409.49	1,018.22	1,742.06
<b>Financial Position (THB, million)</b>				
Current assets	10,218.17	10,056.99	10,290.91	10,245.51
Total assets	26,595.70	29,279.67	33,021.43	36,397.40
Current liabilities	5,862.62	2,160.35	3,866.22	5,179.19
Total liabilities	12,355.55	14,308.36	17,452.34	19,420.95
Registered and paid-up capital	1,067.00	1,067.00	1,067.00	1,067.00
Total shareholders' equity attributable to owners of the Company	14,240.15	14,971.31	15,569.09	16,976.46
<b>Financial Ratios</b>				
Return on Equity (%)	10.37	11.50	7.98	12.89
Return on Assets (%)	7.41	8.04	5.92	8.16
Gross margin (%)	53.24	53.73	51.75	50.67
Current ratio (times)	1.74	4.66	2.66	1.98
Debt to equity ratio (times)	1.03	1.14	1.35	1.38
<b>การกระจายมูลค่าสู่ผู้มีส่วนได้เสีย (ล้านบาท)</b>				
Domestic procurement <sup>(1)</sup>	2,098.62	2,177.74	2,377.62	2,482.00
Tax paid to the state and local authorities <sup>(1)</sup>	304.05	282.90	271.28	314.19
Financial cost <sup>(1)</sup>	226.45	227.95	245.82	329.90
Dividend to shareholders	416.11	533.48	426.80	394.76
Employee compensation <sup>(2)</sup>	199.82	214.64	268.41	308.65
Directors' remuneration	30.32	31.70	42.46	34.41
Social activities	11.80	14.47	12.96	11.03
Social investment excl. donation	N/A	N/A	67.21	32.97
<b>Donation</b>	<b>3.22</b>	<b>3.51</b>	<b>4.71</b>	<b>3.70</b>
<b>Business ethics</b>				
Numbers of complaints on business ethics	0	0	1	0
Numbers of Significant Violation against Business Ethics	0	0	0	1
<b>Supply Chain Management (Disclosure 204-1)</b>				
Percentage of Local purchases of goods and services <sup>(2)</sup>	100	100	100	100

Note: <sup>(1)</sup> The information from the consolidated financial statements of AMATA Corporation Public Company Limited and its subsidiaries 2019

<sup>(2)</sup> Local purchasing in Thailand

## Environmental Performance

### 1. Energy (Disclosure 302-1)

Energy Consumption at AMATA City Chonburi Industrial Estate (kWh/year)	2016	2017	2018	2019
Wastewater treatment system	4,326,274	3,834,935	3,941,009	3,771,061
Water supply treatment system	5,983,691	6,141,014	6,465,505	6,560,715
Street lighting system	715,190	758,218	765,337	775,431
Office building	1,755,203	1,472,616	1,129,367	1,085,458

Energy Consumption at AMATA City Rayong Industrial Estate (kWh/year)	2016	2017	2018	2019
Wastewater treatment system	1,972,530	2,220,173	2,288,869	2,626,882
Water supply treatment system	4,007,646	3,030,107	3,745,648	5,045,038
Street lighting system	-	-	436,538	433,490
Office building	-	152,699	144,794	138,479

### 2. Water (Disclosure 303-1)

AMATA City Chonburi Industrial Estate	Unit	Standard	2016	2017	2018	2019
Amount of total water used	m <sup>3</sup>	-	26,251,773	25,225,182	25,452,120	25,576,126
Amount of total raw water used	m <sup>3</sup>	-	21,280,749	19,234,025	19,332,025	12,070,852
Amount of recycle water (treated by RO)	m <sup>3</sup>	-	4,971,024	4,958,126	6,120,095	5,894,498
Amount of wastewater from factories to central wastewater treatment plant	m <sup>3</sup>	-	12,073,231	11,111,664	11,520,039	11,179,398
Amount of effluent discharged from central wastewater treatment plant	m <sup>3</sup>	-	12,073,231	11,111,664	11,520,039	11,179,398

AMATA City Rayong Industrial Estate	Unit	Standard	2559	2560	2561	2562
Amount of total water used	m <sup>3</sup>	-	16,929,290	16,390,177	21,363,618	22,657,437
Amount of total raw water used	m <sup>3</sup>	-	14,800,897	14,275,793	17,784,004	12,983,932
Amount of recycle water (treated by RO)	m <sup>3</sup>	-	2,128,393	2,272,218	3,579,614	5,826,182
Amount of wastewater from factories to central wastewater treatment plant	m <sup>3</sup>	-	7,876,263	9,241,402	10,188,021	10,612,353
Amount of effluent discharged from central wastewater treatment plant	m <sup>3</sup>	-	7,876,263	9,241,402	10,188,021	10,612,353

### 3. Effluent (Disclosure 306-1)

Quality of Effluent discharged from central wastewater treatment plant						
Effluent quality monitoring	Unit	Standard	2016	2017	2018	2019
AMATA City Chonburi Industrial Estate						
pH		5.5-9.0	7.02	6.8-8.0	6.4-8.1	6.6-8.0
Temperature	°C	≤ 40	31	27-35	28-37	29-36
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	≤ 20	2.8	2.3-18.4	<2.0-18.0	<2.0-17.9

## Quality of Effluent discharged from central wastewater treatment plant

Effluent quality monitoring	Unit	Standard	2016	2017	2018	2019
Chemical Oxygen Demand (COD)	mg/L	≤ 120	34	<40-72	<40-76	<40-77
Grease and Oil	mg/L	≤ 5	<2.0	ND,2.0-2.3	ND,<3.0-3.3	ND,<3.0
Suspended Solid (SS)	mg/L	≤ 50	14	<5-46	ND,<5-43	<5-41
Total Dissolved Solid (TDS)	mg/L	≤ 3000	1232	624-1,242	628-1,380	688-1,560
Total Kjeldahl Nitrogen (TKN)	mg/L	≤ 100	0.99	<5-33	ND,<5-42	ND,<5-33
Mercury (Hg)	mg/L	≤ 0.005	<0.0005	ND,<0.10	ND,<0.0010	ND,<0.0010
Selenium (Se)	mg/L	≤ 0.02	<0.0005	ND	ND	ND,<0.0020
Cadmium (Cd)	mg/L	≤ 0.03	<0.01	ND	ND	ND
Lead (Pb)	mg/L	≤ 0.2	<0.05	ND	ND,<0.10	ND,<0.10
Arsenic (As)	mg/L	≤ 0.25	0.0023	<0.0020-0.0036	<0.0020-0.045	<0.0020-0.0069
Chromium (Cr <sup>3+</sup> )	mg/L	≤ 0.75	0.05	ND	ND,0.10-0.17	ND
Chromium (Cr <sup>6+</sup> )	mg/L	≤ 0.25	<0.01	ND,<0.10	ND,<0.10	ND,<0.10-0.11
Barium (Ba)	mg/L	≤ 1.0	<0.02	<0.02-0.04	<0.02-0.11	ND,<0.02-0.07
Nickel (Ni)	mg/L	≤ 1.0	0.17	<0.10-0.28	<0.10-0.65	ND,<0.10-0.71
Copper (Cu)	mg/L	≤ 2.0	0.02	<0.10-0.10	<0.10-0.53	ND,<0.10-0.11
Zinc (Zn)	mg/L	≤ 5.0	0.16	0.11-0.45	0.11-0.81	0.12-0.52
Sulfide as H <sub>2</sub> S	mg/L	≤ 1.0	<0.03	ND,<0.53	ND,<0.53	ND,<0.53
Cyanide as HCN	mg/L	≤ 0.2	<0.01	ND	ND,<0.020-0.040	ND,<0.020
Chloride as Cl <sub>2</sub>	mg/L	≤ 1.0	<0.1	<0.1-0.2	<0.1-0.3	ND,<0.1-0.8
<b>AMATA City Rayong Industrial Estate</b>						
pH		5.5-9.0	7.35	7.3-8.1	7.1-7.7	6.4-7.8
Temperature	°C	≤ 40	31.2	27-35	29-31	28-33
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	≤ 20	8.6	<2.0-13	<2.0-14.2	<2.0-11.8
Chemical Oxygen Demand (COD)	mg/L	≤ 120	34	<40-45	41-71	<40-94
Grease and Oil	mg/L	≤ 5	<2.0	ND,<2.0	ND,<3.0	ND, <3.0
Suspended Solid (SS)	mg/L	≤ 50	6	<5-20	ND,<5-5	<5-20
Total Dissolve Solid (TDS)	mg/L	≤ 3000	868	1,020-1,360	1,652-2,470	1,020-2,460
Total Kjeldahl Nitrogen (TKN)	mg/L	≤ 100	16.85	15-26	11-30	<5-31
Mercury (Hg)	mg/L	≤ 0.005	<0.005	ND,<0.0010	ND	ND
Selenium (Se)	mg/L	≤ 0.02	<0.005	ND,<0.0020	<0.0020	ND, <0.10, <0.0020-0.0026
Cadmium (Cd)	mg/L	≤ 0.03	<0.01	ND	ND	ND
Lead (Pb)	mg/L	≤ 0.2	<0.05	ND	ND,<0.10	ND
Arsenic (As)	mg/L	≤ 0.25	0.009	<0.0020-0.0061	0.0048-0.0105	0.0020-0.0075
Chromium (Cr <sup>3+</sup> )	mg/L	≤ 0.75	<0.01	ND	ND	ND
Chromium (Cr <sup>6+</sup> )	mg/L	≤ 0.25	<0.01	ND	ND	ND
Barium (Ba)	mg/L	≤ 1.0	<0.20	0.05-0.07	0.10	0.05-0.14
Nickel (Ni)	mg/L	≤ 1.0	<0.05	ND,<0.10	0.11-0.16	<0.10-0.14
Copper (Cu)	mg/L	≤ 2.0	<0.01	ND	ND,<0.10	ND, <0.10
Zinc (Zn)	mg/L	≤ 5.0	0.1	0.13	0.15-0.22	0.06-0.44
Sulfide as H <sub>2</sub> S	mg/L	≤ 1.0	<0.03	ND,<0.53	<0.53	ND, <0.53
Cyanide as HCN	mg/L	≤ 0.2	<0.01	ND	ND	ND, <0.020-0.29
Chloride as Cl <sub>2</sub>	mg/L	≤ 1.0	<0.1	158-346	<0.1	Not available, <0.10-0.30

## 4. Air Emission

Air Quality Monitoring in surrounding area of Industrial Estate (Disclosure 305-7)	Unit	Standard	2016	2017	2018	2019
<b>AMATA City Chonburi Industrial Estate</b>						
<b>Location 1: Boonyarasri Temple (A1)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.012	<0.001-0.031	0.003-0.036	0.001-0.040
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.026	0.003-0.017	0.004-0.035	0.001-0.009
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.05-0.10	0.04-0.15	0.059-0.171	0.025-0.126
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.08	0.02-0.06	0.052-0.089	0.010-0.078
<b>Location 2: Ban Yan Sue School (A2)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.026	0.002-0.036	0.005-0.059	0.002-0.049
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.016	<0.001-0.014	0.002-0.014	0.001-0.007
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.05-0.14	0.04-0.13	0.069-0.137	0.035-0.284
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.06	0.02-0.06	0.043-0.074	0.032-0.090
<b>Location 3: Map Sam Kliaw Temple (A3)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.003-0.039	0.001-0.069	0.003-0.065	0.003-0.039
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.021	<0.001-0.007	<0.001-0.032	0.001-0.010
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.070-0.128	0.016-0.088	0.022-0.092	0.013-0.045
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.018-0.041	0.013-0.072	0.020-0.080	0.007-0.034
PM 2.5	mg/m <sup>3</sup>	≤ 0.05	0.003-0.047	0.006-0.048	0.005-0.049	0.004-0.049
<b>Location 4: Pan Thong Sapachanupathum School (A4)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.003-0.039	0.001-0.052	0.002-0.070	0.002-0.060
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.016	0.001-0.012	<0.001-0.033	0.001-0.005
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.090-0.212	0.046-0.169	0.030-0.150	0.046-0.145
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.054-0.115	0.024-0.080	0.020-0.091	0.024-0.070
PM 2.5	mg/m <sup>3</sup>	≤ 0.05	0.007-0.045	0.007-0.047	0.009-0.047	0.007-0.048
<b>Location 5: Don Damrongtham Temple (A5)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.003-0.036	<0.001-0.032	0.004-0.033	<0.001-0.042
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.006	0.002-0.029	0.019-0.025	0.002-0.015
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.06-0.16	0.05-0.13	0.058-0.117	0.043-0.112
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.04-0.07	0.02-0.09	0.040-0.066	0.023-0.065
<b>Location 6: Pan Thong Science-Based Technology Vocational College (Chonburi) (A6)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.001-0.053	0.001-0.025	0.004-0.020	<0.001-0.030
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.009	<0.001-0.034	0.013-0.018	0.003-0.018
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.03-0.10	0.03-0.10	0.043-0.065	0.021-0.080
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.05	0.01-0.06	0.021-0.032	0.011-0.045
<b>Location 7: U Ta Pao Temple (A7)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.002-0.042	0.001-0.065	<0.001-0.053	0.001-0.037
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	0.001-0.012	<0.001-0.021	<0.001-0.007	<0.001-0.006
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.045-0.083	0.021-0.076	0.024-0.106	0.020-0.056
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.003-0.061	0.011-0.057	0.016-0.065	0.013-0.038
PM 2.5	mg/m <sup>3</sup>	≤ 0.05	0.006-0.044	0.005-0.046	0.004-0.045	0.005-0.046



Air Quality Monitoring in surrounding area of Industrial Estate (Disclosure 305-7)	Unit	Standard	2016	2017	2018	2019
<b>Location 8: Ban Map Sam Kliaw (A8)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.036	0.002-0.057	0.003-0.028	<0.001-0.032
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	0.001-0.023	0.002-0.025	0.001-0.010	0.002-0.007
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.04-0.12	0.03-0.12	0.049-0.092	0.034-0.077
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.10	0.01-0.05	0.018-0.033	0.024-0.054
<b>Location 9: Charoenwat Village (A9)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.033	<0.001-0.055	0.001-0.030	0.001-0.036
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.005	0.002-0.006	0.001-0.016	0.001-0.013
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.03-0.09	0.03-0.08	0.042-0.078	0.021-0.249
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.06	0.02-0.06	0.028-0.053	0.019-0.059
<b>Location 10: Ban Ngio Temple (A10)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.001-0.028	<0.001-0.055	0.001-0.028	<0.001-0.030
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.010	0.001-0.014	0.017-0.022	0.001-0.015
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.03-0.20	0.04-0.14	0.037-0.106	0.029-0.321
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.08	0.02-0.07	0.036-0.085	0.025-0.076
<b>Location 11: Orm Kaew Temple (A11)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.002-0.023	<0.001-0.031	0.001-0.041	0.002-0.028
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	0.001-0.013	<0.001-0.012	0.001-0.018	<0.001-0.010
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.042-0.080	0.019-0.076	0.015-0.079	0.016-0.059
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.024-0.048	0.011-0.051	0.011-0.060	0.009-0.037
PM 2.5	mg/m <sup>3</sup>	≤ 0.05	<0.001-0.043	0.004-0.042	0.005-0.044	0.004-0.044
<b>AMATA City Rayong Industrial Estate</b>						
<b>Location 1: Ban Wang Tanmon (A1)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.037	<0.001-0.039	0.003-0.046	0.002-0.055
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	0.002-0.038	0.001-0.014	0.008-0.015	<0.001-0.003
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.02-0.23	0.04-0.11	0.076-0.204	0.093-0.286
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.01-0.09	0.03-0.05	0.037-0.080	0.052-0.117
<b>Location 2: Rat Atsadaram Temple (A2)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.035	0.003-0.053	0.003-0.048	0.003-0.057
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	0.009-0.028	0.002-0.007	0.013-0.028	0.001-0.012
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.04-0.14	0.05-0.08	0.055-0.096	0.063-0.185
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.02-0.08	0.03-0.05	0.024-0.050	0.034-0.103
<b>Location 3: Ban Phusai School (A3)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	0.001-0.033	0.002-0.017	0.005-0.016	<0.001-0.018
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.033	0.006-0.033	0.004	0.001-0.005
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.02-0.22	0.03-0.05	0.070-0.231	0.028-0.127
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.01-0.10	0.02-0.03	0.033-0.091	0.012-0.089
<b>Location 4: Phananihom Temple (A4)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.018	0.011-0.052	0.002-0.056	<0.001-0.058
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	<0.001-0.014	0.006-0.086	0.001-0.027	<0.001-0.023
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.013-0.089	0.043-0.185	0.033-0.130	0.013-0.085
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.007-0.064	0.027-0.078	0.020-0.087	0.008-0.065
PM 2.5	mg/m <sup>3</sup>	≤ 0.05	0.003-0.038	0.004-0.048	0.004-0.047	0.004-0.039

Air Quality Monitoring in surrounding area of Industrial Estate (Disclosure 305-7)	Unit	Standard	2016	2017	2018	2019
<b>Location 5: Ban Mapyangphon Health Center (A5)</b>						
Nitrogen Dioxide: NO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.17	<0.001-0.061	0.019-0.061	0.003-0.079	<0.001-0.047
Sulfur Dioxide: SO <sub>2</sub>	mg/m <sup>3</sup>	≤ 0.30	0.001-0.017	0.010-0.038	<0.001-0.036	<0.001-0.027
Total Suspended Particulates: TSP	mg/m <sup>3</sup>	≤ 0.33	0.021-0.210	0.069-0.218	0.035-0.172	0.014-0.130
PM 10	mg/m <sup>3</sup>	≤ 0.12	0.012-0.100	0.033-0.118	0.021-0.109	0.004-0.095
PM 2.5	mg/m <sup>3</sup>	≤ 0.05	0.006-0.048	0.005-0.048	0.005-0.047	0.002-0.048

## 5. Waste

Solid waste management (Disclosure 306-2)	Unit	2016	2017	2018	2019
Amount of solid waste at AMATA waste segregation plant in AMATA City Chonburi	Tons/Year	20,314.24	21,865.36	23,296.41	21,644.96
Amount of recyclable solid waste	Tons/Year	2,923.17	3,154.88	3,303.08	2,597.00
Amount of solid waste sent to RDF plant	Tons/Year	17,157.54	18,509.81	19,844.83	19,018.94
Amount of solid waste to landfill	Tons/Year	233.53	200.67	148.50	29.02

## 6. Environmental Compliance

Environmental Compliance	2016	2017	2018	2019
Number / Monetary Value of significant fines associated with environmental law violation (Disclosure 307-1)	0	0	0	0

# Social Performance

## 1. Employment

Employee (Disclosure 102-8)	2016		2017		2018		2019	
	Persons	%	Persons	%	Persons	%	Persons	%
Total number of employees on 31 December	254	100.0	247	100.0	257	100.0	268	100.0
<b>By Gender</b>								
• Male	142	55.9	134	54.3	144	56.0	154	57.5
• Female	112	44.1	113	45.7	113	44.0	114	42.5
<b>By Level</b>								
Top Management (level 9 - 12)	17	6.7	16	6.5	16	6.2	17	6.3
• Male	10	58.8	9	56.3	9	56.3	9	52.9
• Female	7	41.2	7	43.8	7	43.8	8	47.1
Middle Management (level 6 - 8)	35	13.8	34	13.8	37	14.4	42	15.7
• Male	19	54.3	20	58.8	20	54.1	23	54.8
• Female	16	45.7	14	41.2	17	45.9	19	45.2
First-line Management (level 4 - 5)	61	24.0	65	26.3	69	26.8	70	26.1
• Male	25	41.0	24	36.9	28	40.6	30	42.9
• Female	36	59.0	41	63.1	41	59.4	40	57.1
Operational level (level 1 - 3)	141	55.5	132	53.4	135	52.5	139	51.9
• Male	88	62.4	81	61.4	87	64.4	92	66.2
• Female	53	37.6	51	38.6	48	35.6	47	33.8
<b>By Age</b>								
less than 30 years old	69	27.2	68	27.5	59	23.0	59	22.0
• Male	29	42.0	30	44.1	28	47.5	29	49.2
• Female	40	58.0	38	55.9	31	52.5	30	50.8
30-50 years old	150	59.1	139	56.3	155	60.3	167	62.3
• ชาย	91	60.7	80	57.6	90	58.1	100	59.9
• Female	59	39.3	59	42.4	65	72.2	67	40.1
over 50 years old	35	13.8	40	16.2	43	16.7	42	15.7
• Male	22	62.9	24	60.0	26	60.5	25	59.5
• Female	13	37.1	16	40.0	17	39.5	17	40.5
<b>By Employment Contract</b>								
Permanent employees	138	54.3	140	56.7	145	56.4	155	57.8
• Male	65	47.1	65	46.4	70	48.3	71	45.8
• Female	73	52.9	75	53.6	75	51.7	84	54.2
Yearly Contract Employees	41	16.1	37	15.0	37	14.4	41	15.3
• Male	22	53.7	18	48.6	18	48.6	25	61.0
• Female	19	46.3	19	51.4	19	51.4	16	39.0
Temporary employees (outsourced)	75	29.5	70	28.3	75	29.2	72	26.9
• Male	55	73.3	51	72.9	56	74.7	58	80.6
• Female	20	26.7	19	27.1	19	25.3	14	19.4

Employee (Disclosure 102-8)	2016		2017		2018		2019	
	Persons	%	Persons	%	Persons	%	Persons	%
<b>By Employment Type</b>								
Full-time Employee	254	100.0	247	100.0	256	99.6	267	99.6
• Male	142	55.9	134	54.3	144	56.3	154	57.7
• Female	112	44.1	113	45.7	112	43.8	113	42.3
Part-time Employee	0	0.0	0	0.0	1	0.4	1	0.4
• Male	0	0.0	0	0.0	0	0.0	0	0
• Female	0	0.0	0	0.0	1	100.0	1	100.0
<b>By Location</b>								
Bangkok Office	72	28.3	69	27.9	76	29.6	83	31.0
• Permanent employees	46	63.9	44	63.8	43	56.6	44	53.0
• Yearly Contract Employees	11	15.3	8	11.6	11	14.5	18	21.7
• Temporary employees (outsource)	15	20.8	17	24.6	22	28.9	21	25.3
AMATA City Chonburi Office	151	59.4	144	58.3	142	55.3	144	53.7
• Permanent employees	75	49.7	79	54.9	82	57.7	89	61.8
• Yearly Contract Employees	27	17.9	27	18.8	24	16.9	20	13.9
• Temporary employees (outsource)	49	32.5	38	26.4	36	25.4	35	24.3
AMATA City Rayong Office	31	12.2	34	13.8	39	15.2	41	15.3
• Permanent employees	17	54.8	17	50.0	20	51.3	22	53.7
• Yearly Contract Employees	3	9.7	2	5.9	2	5.1	3	7.3
• Temporary employees (outsource)	11	35.5	15	44.1	17	43.6	16	39.0
<b>By Hometown</b>								
Bangkok	70	27.6	63	25.5	66	25.7	69	25.7
Central region	28	11.0	33	13.4	35	13.6	40	14.9
Eastern region	88	34.6	89	36.0	87	33.9	84	31.3
Western region	9	3.5	8	3.2	8	3.1	9	3.4
Southern region	4	1.6	7	2.8	9	3.5	6	2.2
Northern region	19	7.5	15	6.1	20	7.8	18	6.7
North-Eastern region	36	14.2	32	13.0	32	12.5	42	15.7
<b>By Nationality</b>								
Thai	239	94.1	234	94.7	243	94.6	249	92.9
English	1	0.4	1	0.4	1	0.4	1	0.4
Chinese	3	1.2	3	1.2	3	1.2	3	1.1
Singaporean	1	0.4	1	0.4	1	0.4	1	0.4
Japanese	2	0.8	3	1.2	4	1.6	4	1.5
Vietnamese	3	1.2	1	0.4	1	0.4	1	0.4
Burmese	5	2.0	4	1.6	4	1.6	7	2.6
Laos							2	0.7
<b>Employees with disabilities</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>
• Male	1	100.0	1	100.0	1	100.0	1	100.0
• Female	0	0.0	0	0.0	0	0.0	0	0.0

New Employee (Disclosure 401-1)	2016		2017		2018		2019	
	Persons	%	Persons	%	Persons	%	Persons	%
New employees	71	28.0	52	21.1	43	16.7	44	16.0
By Gender								
• Male	53	74.6	32	61.5	27	62.8	28	63.6
• Female	18	25.4	20	38.5	16	37.2	16	36.4
By Age								
• less than 30 years old	36	50.7	25	48.1	18	41.9	23	52.3
• 30-50 years old	34	47.9	26	50.0	24	55.8	20	45.5
• over 50 years old	1	1.4	1	1.9	1	2.3	1	2.3

Employee Turnover (Disclosure 401-1)	2016		2017		2018		2019	
	Persons	%	Persons	%	Persons	%	Persons	%
Employee Turnover Rate	33	13.0	63	25.5	42	16.3	34	12.7
By Gender								
• Male	15	45.5	43	68.3	24	57.1	18	52.9
• Female	18	54.5	20	31.7	18	42.9	16	47.1
By Age								
• less than 30 years old	11	33.3	22	34.9	18	42.9	16	47.1
• 30-50 years old	18	54.5	37	58.7	23	54.8	18	52.9
• over 50 years old	4	12.1	4	6.3	1	2.4	0	0.0
Voluntary employee turnover rate	25	9.8	47	19.0	32	12.4	34	12.7

Parental Leave (Disclosure 401-3)	2016		2017		2018		2019	
	Persons	%	Persons	%	Persons	%	Persons	%
Parental leave	1	0.89	1	0.88	2	1.76	3	2.63
Employee back to work after parental leave	0	0	1	100.0	1	50.0	3	100.0

Employee Development (Disclosure 404-1)	2016	2017	2018	2019
	hours/person	hours/person	hours/person	hours/person
Total average training hours per person per year	27.53	24.49	27.21	18.34
By Gender				
• Male	N/A	N/A	19.33	11.53
• Female	N/A	N/A	34.42	14.32
By Level				
• Management level	N/A	N/A	26.40	24.10
• Operational level	N/A	N/A	27.40	16.87

	2016	2017	2018	2019
Labour and Human rights Complaint (Case)	0	0	0	0
Employee Engagement (Percentage)	37	35	44	52

## 2. Safety and Occupational Health

Work-related illness and injury (Disclosure 403-9)	2016		2017		2018		2019	
	Male	Female	Male	Female	Male	Female	Male	Female
<b>Number of hour worked</b>								
• Employee	N/A	N/A	N/A	N/A	0	0	0	0
• Contractor	N/A	N/A	N/A	N/A	0	0	0	0
<b>Number of employees with work-related illness (persons)</b>								
• Employee	N/A	N/A	N/A	N/A	0	0	0	0
• Contractor	N/A	N/A	N/A	N/A	0	0	0	0
<b>Number of employees with work-related injury (persons)</b>								
<b>Injured but no workday lost</b>								
• Employee	N/A	N/A	N/A	N/A	0	0	0	0
• Contractor	N/A	N/A	N/A	N/A	0	0	0	0
<b>Injured with workday lost</b>								
• Employee	N/A	N/A	N/A	N/A	0	0	1	0
• Contractor	N/A	N/A	N/A	N/A	0	0	0	0
<b>Death from work-related accident</b>								
• Employee	0	0	0	0	0	0	0	0
• Contractor	0	0	0	0	0	0	0	0
<b>Severe injuries resulting in disabilities</b>								
• Employee	0	0	0	0	0	0	0	0
• Contractor	0	0	0	0	0	0	0	0
<b>Lost Time Injury Frequency Rate (LTIFR) (person/million man-hour)</b>								
• Employee	N/A	N/A	N/A	N/A	N/A	N/A	19.41	0
• Contractor	N/A	N/A	N/A	N/A	N/A	N/A	0	0
<b>Sick leave</b>								
Average sick days per employee (days)	1.13		1.08		1.34		1.33	
<b>Absentee Rate</b>								
Total Absentee Rate (%)	0		0		0		0	

# GRI Content Index

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<b>GRI 102 General Disclosures</b>			
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102-46	Defining report content and topic boundaries	8-9	
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GRI Standard	Disclosure	Page number(s)	External Assurance
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GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	61-63	
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	103-3	Evaluation of the management approach		
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GRI 304: Biodiversity 2016	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	108-113		
<b>EMISSIONS</b>					
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	103-3	Evaluation of the management approach			
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	89		
	305-2	Energy indirect (Scope 2) GHG emissions	89		
	305-3	Other indirect (Scope 3) GHG emissions	89-90		
	305-7	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	160-162		Yes
<b>EFFLUENTS AND WASTE</b>					
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	95-101, 102-107		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 306: Effluents and Waste 2016	306-1	Water discharge by quality and destination	158-159		Yes
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	103-3	Evaluation of the management approach			
GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	162		
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GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	59, 70-78		
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<b>GRI 400 Social Standard Series</b>					
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	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
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	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	117-118		
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<b>OCCUPATIONAL HEALTH AND SAFETY</b>					
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	127-132		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 403: Occupational Health and Safety 2016	403-1	Occupational health and safety management system	127-132		
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GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	115, 125-126		
	103-2	The management approach and its components			
	103-3	Evaluation of the management approach			
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	125-126, 165		
<b>LOCAL COMMUNITIES</b>					
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GRI 414: Supplier Social Assessment 2016	414-2	Negative social impacts in the supply chain and actions taken	71-72, 75		



## Feedback Form for Sustainability Report 2019

1. Your basic information

- Gender  Female  Male
- Age  below 30  30-50  over 50

2. Which stakeholder group do you belong to?

- Employees  Customers  Communities  Medias
- Suppliers  Shareholders  Business Partner  Creditors
- Government Agencies  Competitors
- Other (Please specify.....)

3. How did you receive the sustainability report?

- The company's website  Seminar report  Company's personnel
- Visiting the company  Others (Please specify.....)

4. What is your objective in reading the 2019 sustainability report?

- To gather information for deciding investments
- For education and research
- To use as a guideline to create your own report
- Others (Please specify.....)

5. How satisfied are you with the Company's 2019 sustainability report format?

- |                                   |                            |                                |                           |  |
|-----------------------------------|----------------------------|--------------------------------|---------------------------|--|
| Completeness of the report        | <input type="radio"/> High | <input type="radio"/> Moderate | <input type="radio"/> Low | <input type="radio"/> Should be improved |
| Issue specification of the report | <input type="radio"/> High | <input type="radio"/> Moderate | <input type="radio"/> Low | <input type="radio"/> Should be improved |
| Interesting presentation          | <input type="radio"/> High | <input type="radio"/> Moderate | <input type="radio"/> Low | <input type="radio"/> Should be improved |
| Report design                     | <input type="radio"/> High | <input type="radio"/> Moderate | <input type="radio"/> Low | <input type="radio"/> Should be improved |
| Easy understanding language       | <input type="radio"/> High | <input type="radio"/> Moderate | <input type="radio"/> Low | <input type="radio"/> Should be improved |
| Overall satisfaction              | <input type="radio"/> High | <input type="radio"/> Moderate | <input type="radio"/> Low | <input type="radio"/> Should be improved |

6. Additional recommendations for improving the Company's next year's report

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Please send this feedback form to the address specified at the back cover or email to [sustainability@amata.com](mailto:sustainability@amata.com)  
**AMATA Corporation PCL would like to thank you for your cooperation.**



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