

AMATA CORPORATION PUBLIC COMPANY LIMITED

SUSTAINABILITY REPORT 2 0 1 8





AMATA SMART ACTIVATION

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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

C VISION

D	Dependable	Being professionalism, credible, reliable and adhering to code of ethics
_ · · ·	Responsive	Fast and accurate responding and being responsible to stakeholders & environment
L	Innovative	Promoting innovation in products and services including working process improvement
V	Visionary	Having long term projection and creating opportunities for everyone
E	Efficient	Working with high standard and excellent team



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Message from CEO



"AMATA is committed to growing Thailand's commerce and economy, while simultaneously preserving the balance of harmonious coexistence between industries and surrounding communities based on rigorous social and environmental responsibilities under the "ALL WIN" philosophy throughout the past 40 years in our business. Integrating sustainable management approaches into our business plan has led to changes in our business strategies since last year to become a leading "Smart City" in Thailand and this region in order to embrace global changes and face the challenges of the future, while supporting The United Nations' Sustainable Development Goals, or SDGs."

Vikrom Kromadit Chief Executive Officer

2018 marked the Company's further progress in this direction starting with the January announcement of our transformation from being merely an industrial estate developer serving multi-national manufacturers, to becoming a leading Smart City developer in the Eastern Thailand providing a perfect investment area in the Eastern Economic Corridor Development Project, or EEC for targeted industries which will increase the economic prosperity in this region and create economic value to Thailand. Not only does it effectively respond to global trends and emerging risks, it will become a learning center for Smart City development in this region.

Under the AMATA Smart City development, we have collaborated with other world leaders in various industries to develop initiatives on 8 platforms: namely Smart Energy, Smart Mobility, Smart Community, Smart Environment, Smart Innovation, Smart Manufacturing, Smart Education, and Smart Aerospace City. In 2018, 6 projects under AMATA Smart City have been developed in order to drive economic growth, provide support for targeted industries, reduce negative social and environmental impacts, improve the well-being of citizens, protect environment and also address concerns of climate change by exploiting innovation and cutting-edge technology.

Thanks to support and endorsements over the past year from Thai and international government in developing AMATA Smart City, the Eastern Economic Corridor Policy Committee announced on 7 May 2018 the approval of the AMATA Industrial Estates to be designated an official Industrial Promotional Zone. These sites will accommodate targeted industries on 41,834 rai of land. The incentive package includes additional income tax exemptions for investors in the targeted industries.

Furthermore, the governments of China and Japan have realized the vast potential of the EEC of Thailand. Therefore, they agreed to jointly develop AMATA Smart City which is the first and only China-Japan cooperation project in the "third country" after signing the agreement on 26 October 2018 in Beijing, due to its high potential to create the business opportunities for the Chinese and Japanese industries.

During the 32nd ASEAN Summit in April 2018, ASEAN leaders concluded an agreement to establish ASEAN Smart Cities Network (ASCN) as a venue for exchanging experience, knowledge and technologies, plus collaboration in jointly developing Smart Cities to achieve the sustainable development goals in the future. On 8 July 2018, AMATA Smart City Project, in a partnership with the Ministry of Energy, representing Chonburi, Thailand as one of the 26 pilot Smart Cities from 10 nations, attended the ASEAN Smart Cities Network Forum in Singapore and signed a Letter of Intent (LOI) with Yokohama Urban Solution Alliance to join forces in developing a Smart Energy Management System.

Last year marked a crucial first step in adopting visionary plans to meet tomorrow's mission. One of the essential challenges is to develop human resources; a skilled workforce prepared for rapid change and expansion. The Company continues recruiting and developing our personnel including revamping all aspects of business practices and internal operations to achieve higher efficiency and good corporate governance.

Lastly, on behalf of the Board of Directors, executives and all employees, I am grateful for all support and encouragement for over 40 years. I believe that with the cooperation of all employees and executives in the Company, including the promotion and support of all "ALL WIN" stakeholders, together we will enable the Company to grow its business and drive the socio-economy with environmental responsibility and corporate governance to achieve our sustainable development goals for all sectors.

COur Pride 9



SET Sustainability Awards 2018-"Rising Star" granted by the Stock Exchange of Thailand





Sustainability Report Award 2018 – "Recognition" granted by Thai Listed Companies Association, the Securities and Exchanges Commission, Thailand and Thaipat Institute.





Member of Thailand Sustainability Investment (THSI) 2018 selected by the Stock Exchange of Thailand Companies with Excellent CG Scoring



 "Excellent" in Corporate Governance Report of Thai Listed Companies 2018 from Thai Institute of Directors



"Eco-industrial Estate level Eco-Excellence" for AMATA City Chonburi Industrial Estate by the Industrial Estate Authority of Thailand



 "Eco-industrial Estate level Eco-Champion" for AMATA City Rayong Industrial Estate by the Industrial Estate Authority of Thailand

About This Report 55

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

This is the fifth Sustainability Report which covers the performance during 1 January to 31 December 2018 (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 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 2018, 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 equal to previously disclosed. There is no significant difference comparing to the topics disclosed in the previous report. The content in this report covers all 14 material topics (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

This Report supplements AMATA Corporation PCL's Annual Report 2018 which has limited printed copies to minimize the impact on environment. However, both Annual Report and this Report can be accessed and downloaded at AMATA Corporation PCL's corporate website, www.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. The Company envisioned the opportunity in the economic development of Eastern Thailand, which was the result of the 5th National Economics and Social Development Plan (B.E.2525-2529) and Thai Investment Promotion Policy. The Company, therefore, initiated the development of area in Chonburi Province to support industrial investors in Eastern Thailand. From that starting point, the Company nowadays becomes the leading industrial estate development company which is highly successful in Asia.

AMATA specializes in planning, developing, managing, and marketing of integrated industrial estates (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 in totally 6 projects, with a total area of nearly 100 square kilometers. Our sites are home for global clientele of over 1,300 manufacturers from 30 nationalities, which employ over 300,000 people and produce annually almost USD 56 Billion worth of output. (Disclosure102-4) The 6 projects are

- AMATA City Chonburi, Thailand
- AMATA City Rayong, Thailand
- AMATA City Bien Hoa, Vietnam
- AMATA City Long Thanh, Vietnam
- AMATA Township Long Thanh, Vietnam
- AMATA City Halong, Vietnam

MYAN

AMATA City Chonburi

Area: 43.30 sq.km. No. of factories and tenants: 772 No. of factories' employees: 212,741

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

AMATA City Rayong

Area: 27.03 sq.km. No. of factories and tenants: 364 No. of factories' employees: 62,864

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



Location

AMATA Corporation Public Company Limited has its headquarter at 2126 Kromadit Building, New Petchburi Road, Bangkapi, Huay Kwang Bangkok 10310 (Disclosure 102-3) and an office branch at 700 Bangna-Trad Highway Km.57, A. Muang, Chonburi 20000, Thailand

Two industrial estates in Thailand operating by the Company (Disclosure102-4) are

- AMATA City Chonburi is located at 700 Bangna-Trad Highway Km.57, A. Muang, Chonburi 20000
- AMATA City Rayong is located at 7, Highway 331. Km.39, A. Sriracha, Chonburi 20230

As of 31 December 2018, the total number of employees was 257. (Disclosure102-7)

Our Business (Disclosure102-2, 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
AMATA City Chonburi	Power plant	Solid waste and industrial	• AMATA Asia
 AMATA City Rayong 	 Water supply plant and 	waste management	• AMATA VN
AMATA City Bien Hoa	distribution for industry	Ready built factory for rent	AMATA Global
AMATA City Long Thanh	Waste water treatment	 Logistics and distribution 	AMATA Energy
AMATA Township Long Thanh	plant	centers	
 AMATA City Halong 	Natural gas network and	Security	
	control station for	Telecommunication	
	industrial estate	Maintenance for office and	
	 Industrial gas business 	factory	
	 Fiber optics network 	 Hospital 	
	Renewable Energy	Education	
	business	Residential	
		Commercial	

Existing infrastructure and utilities at AMATA City Chonburi Industrial Estate



Existing urban area at AMATA City Chonburi Industrial Estate

AMATA Mansion 5-Floor, Condominium 168 Unit



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



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



Industrial / Es

Value Chain (Disclosure102-9)

AMATA CORPORATION PUBLIC COMPANY LIMITED







"Value Ch







tate Business





iness: Utilities, Facilities, Commercial

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GAMATA 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 and changes which may impact the Company and stakeholders and has prepared to efficiently deal with or respond to the problems.



 Prepare annual sustainability report The Sustainable Development Working Committee meets on a quarterly basis while the Business Development Working Team, the Community and Society Working Team and the Environment, Occupational Health and Safety Working Team meet at least once a month for the continuity of the operation.

Sustainable Development Principles and Framework (Disclosure 102-16)



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 natural resources and environmental preservation. 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.

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. The Company has been driving its sustainable development by working with the stakeholders and summarizing 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.

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.

The Company's "ALL WIN" philosophy is the foundation of stable and sustainable growth. The "Sustainable Development Policy", therefore, has been set for the Company and its subsidiaries 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, 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.

Sustainable Development

In combining sustainable development concept with business strategy, on 18 January 2018, the Company has announced new vision and mission under the 2017 sustainable development policy which conforms to its 5-year business plan (2017 – 2021) to move toward being the developer of Smart City in the Eastern Economic Corridor. It also aims to be able to cope with global changes and emerging risks more efficiently.

The vision and mission of AMATA are 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. AMATA has thus established key strategies for sustainable business operation as follows:

1. Enhancing competitiveness through the Smart City concept

AMATA 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 10 targeted industries promoted in the Eastern Economic Corridor (EEC). AMATA 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

AMATA sets out 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.

Key Strat AMATA Su Develo

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.

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.

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.

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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.

2. Population Growth

The development of AMATA Industrial Estate 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.



Figure demonstrating location of AMATA City Chonburi

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 301,719 people and it is estimated that the registered population will increase to 650,000 in 2022. This number does not include non-registered population who migrate to work in the industrial estate. As of 31 December 2018, the number of employees in the factories within AMATA City Chonburi Industrial Estate was over 210,000 people.



Figure demonstrating location of AMATA City Rayong

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 2018, the number of employees in the factories within AMATA City Rayong Industrial Estate was over 62,000 people. There are 19 villages and approximately 85,000 registered people living in the area within the radius of 5 kilometers from the boundary of the project.

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 and obtained an opinion from the community within and outside the industrial estates. 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.

3. Eastern Economic Corridor: EEC

According to the government's policy to move Thailand towards "Thailand 4.0", a value-based economy model focusing on innovation-driven economy in order to strengthen the prosperity and sustainability of the country's economy, the Eastern Economic Corridor (EEC) Development Project worth over 1.7 trillion Baht was stipulated covering 3 provinces which are Chachoengsao, Chonburi and Rayong. It is enhanced from the success of the Eastern Seaboard Development Program which has been operated for over 30 years. The EEC Development Plan aims to improve infrastructures to support the investment and economic expansion and 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 2017–2122



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 Economic Corridor Act B.E. 2561 of Thailand was published in the Royal Gazette on 14 May 2018.

The Eastern Economic Corridor (EEC) Project aims to attract foreign investment in 10 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.

The government has proactively proceeded to achieve such investment target by locating major operators in each targeted industry, increasing the investment privileges and facilitating an immigration of specialists in each industry to work or conduct research and development in the EEC area. It also supports and promotes education, especially skilled labor, to support targeted industries by increasing privileges for global academic institutions to develop curriculum on the subjects needed by the targeted industries and promoting educational organization by the academic institutions with high potential from abroad.

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 2018, of the economy of CLMV countries. Such high growth is expected to be maintained going forward (source: information from the Economic Intelligence Center of Siam Commercial Bank). 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 2018 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
MMM Employee	 Annual meeting between top executives and employees 	Appropriate compensation and welfare	 Regularly reviewed and improved compensation and offered appropriate welfare
	 Monthly staff meetings Online communication, intranet and email Direct channel to CEO for staff's complaint and suggestions Quarterly meeting of Welfare Committee Annual Employee Engagement Survey 	Fair Performance evaluation	 Improved performance evaluation to be more efficient
		 Good working environment and atmosphere 	 Offered priority to internal employees for job rotations and recruitment for job positions within the group of companies
		 Good working environment and atmosphere 	 Provided adequate working equipment and creating a safe and happy workplace
		 Development of employee's capability, knowledge and ability 	 Organized training courses that meet the needs and keep up with global changes
Customer	 Annual Customer Satisfaction Survey Customer relation activities/ marketing activities Online / Email Communications Face to face meeting Call Center 	Good quality of after sales servicesCustomer relation management	 Supported customers' business operations, such as organizing training courses for customers in accordance with the law Responded to customer complaints effectively
		Traffic problem	 Solved traffic problems by collaboration from many sectors and used technology to help manage traffic
		 Environmental impact management 	 Strictly complied to environmental laws and regulations Disclosed accurate and
		• Water management	 transparent information. Developed and enhanced the capacity of reclamation process to reduce the usage of raw water

Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
		Energy management	 Developed sources of renewable energy in Industrial estates
		 Risk management and crisis management 	 Conducted risk management process covering economic, social and environmental aspect
Local Community	 Public hearing and meetings with management Community activities 	Traffic problem	 Solved traffic problems by collaboration from many sectors and used technology to help manage traffic
	 Community satisfaction survey (annual and by activity) Online / Email Communication Other communication Channels for suggestion 	Water management	 Developed and enhanced the capacity of reclamation process to reduce the usage of raw water
		 Environmental impact management 	 Disclosed accurate and transparent information
	and complaint.	Environmental compliance	 Strictly complied to environmental laws and regulations
		Community and social development	 Promoted the development for a better quality of life in the communities and society Built local collaborative
			networks for community and social development
		Community engagement	Responded to community complaints effectively
		Safety	 Disclosed the Company's emergency and crisis management and safety measures
			Educated and supported communities to be able to cope with emergency situations

Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
	 Face to face meetings Supplier assessment Online / Email Communication Channels for suggestion and complaint 	Good Corporate Governance	 Complied with laws and regulations
Supplier/ Contractor		Fair business	Conducted transparent and fair procurement
		Fair and transparent procurement process	 Developed procurement policy and best practices to create sustainable supply chain management
Shareholder/ investor	 Annual Shareholder Meeting Directors' meetings in subsidiaries and associated companies Opportunity Investment Roadshow Opportunity Day at SET Quarterly Investor Meetings Analyst meetings Online / Email Communication Chappels for suggestion 	 Good performance and continued business growth which creates a sustainable profit Good Corporate Governance Risk Management 	 Continuously developed new business Promoted innovations and applied technology in cost reduction Complied with laws and regulations Carried out business in a transparent and fair manner Conducted risk management process covering economic,
Business Partner	 Channels for suggestion Directors' meetings in subsidiaries and associated companies Face to face meetings Online / Email Communication Response to requests for information disclosure or report 	Doing business with integrity and fairness Collaboration in business development and growing together	 social and environmental aspect Followed code of business ethics Developed fair joint venture agreements Kept confidential information of business partners
Stakeholders	Engagement Methods	Stakeholders' needs and expectations	The Company's response
---	--	---	--
Creditor	 Analyst Meetings Face to face meetings Site visits Online / Email Communication 	 Honoring terms and agreements on loan and debenture contracts 	 Strictly followed contract's terms and conditions Disclosed accurate and complete financial information
	Communication	Risk Management	 Conducted risk management process covering economic, social and environmental aspect
Government Agency and State enterprise	 Face to face meetings Participation in and support projects run by the government Participations in government lead committee as requested 	 Compliance with laws and regulations Management of social and environmental impacts occurred from the operation of the Company 	 Complied with laws and regulations and transparent Disclosed accurate and complete information
	 Site visits Online / Email Communication Response to requests for information disclosure or report 	 Good Corporate Governance Creating value for the economy and society 	 Carried out business in a transparent and fair manner Engaged with local communities and authorities and supported social and environmental development
Media	 Press release Special interviews as requested Site visits / Press tours Response to requests for information disclosure or report 	To receive an accurate and timely information	 Disclosed accurate information based on facts Maintained long-term relationship with media
Competitor	 Meetings with industry's association or organizations Participate in working team that are relevant to competitors as requested by the government 	Fair and legal competition	 Followed code of business ethics Collaborated with competitors in activities that benefit customers

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 risk 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

AMATA Sustainable Development Working Committee jointly categorized and prioritized the level of importance of group of topics. Scoring was considered from 1) degree of impacts of the Company's operation on the economy, society and environment and 2) degree of influence on stakeholders' assessment and decision based on Global Reporting Initiative (GRI standards). Material topics were then identified and put into the Materiality Matrix whereas the horizontal axis (X axis) represents the level of the Company's operational impact on economy, society and environment and the vertical axis (Y axis) represents the level of influence on stakeholders' assessment and decision and decisions.

In 2018 the Company had reidentified and reprioritized the material topics to derive the more accurate and clearer material topics. There were 14 material topics equal to the number of topics in the previous year's report. Significant difference of the material topics was not found.

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 (Disclosure 102-47)

Governance and Economic

- Good Corporate Governance
- Risk Management
- Good economic performance
- Supply Chain Management

S		

- Employment and Care
- Employee Development
- Community Development
- Good relationship with
 community
- Safety

Environmental

- Water Management
- Waste Water Management
- Solid Waste and Industrial Waste Management
- Environmental Impact Management
- Energy Management

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

		Impact	t Boundary	
	Material Topics	Internal	External	Report Content
	Good Corporate governance	Employees	Shareholders / Business partners	Corporate Governance Good Corporate Governance
0	Risk Management	Employees	Shareholders / Business partners	Business Ethics and Anti-corruption Risk Management
Governance and Economic	Good economic performance	Employees	Shareholders / Business partners	 Business Growth Economic Performance Product and Service Development
	Supply Chain Management	Employees	Suppliers/ Contractors / Customers / Business partners	 Supplier and Contractor Management Customer Management

GRI topic	GRI Disclosures	SDGs	SDG Targets	page
GRI 102 General Disclosure	102-16 Values, principles, standards, and norms of behavior 102-17 Mechanisms for advice and concerns about ethics	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.3, 16.5	47
GRI 205 Anti-corruption	205-2 Communication and training about anti-corruption policies 205-3 Confirmed incidents of corruption and actions taken			48
GRI 102 General Disclosure	102-11 Precautionary Principle or approach 102-29 Identifying and managing economic, environmental, and social impacts	8 DECENT WORK AND ECONOMIC GROWTH	8.2	51
			16.7	
GRI 201 Economic Performance	201-1 Direct economic value generated and distributed	7 AFFORDABLE AND CLEAN ENERGY	7.b	56
		8 DECENT WORK AND ECONOMIC GROWTH	8.2	
		9 NOUSTRY, NMOVATION AND INFRASTRUCTURE	9.4, 9.5	
		17 PARTNERSHIPS FORTHE GOALS	17.3	
GRI 204 Procurement Practices GRI 308 Supplier Environmental Assessment	204-1 Proportion of spending on local suppliers 308-2 Negative environmental impacts in the supply chain and actions taken	8 DECENT WORK AND ECONOMIC GROWTH	8.3, 8.8	65
GRI 414 Supplier Social Assessment	414-2 Negative social impacts in the supply chain and actions taken	12 RESPONDED AND PRODUCTION	12.4, 12.5	
		16 PRACE, JUSTICE INSTITUTIONS	16.1	

		Impact	Boundary	
	Material Topics	Internal External		Report Content
	Employment and Care	Employees		Human Resource Management
	Employee Development	Employees		Human Resource Management
Social	Community Development	Employees	Local Communities / Government Agencies / Business partners	 Community Development 1. Facility development and service accessibility One Stop Service Center AMATA smile Caravan Improvement of Cellular network Smart Mobility 2. Community Economic Development Job Fair Employment of good inmates
				 Farm to Factory Project of Constructive industrial waste to Community Value
				 3. Community Health Development Sports for society AMATA Friendship Sports AMATA Charity Run Blood Donation
				 4. Safety and Environmental Responsibility Development of Model Community in water and solid waste management at Nong Mai Daeng Municipality Development of Model School for Environment and Safety
				 5. Educational initiatives Smart Education School Library Improvement AMATA Scholarships Knowledge transfer through books

GRI Disclosures	SDGs	SDG Targets	page
401-1 New employee hires and employee turnover 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	5 GENDER EQUALITY EQUALITY A DECENT WORK AND B DECENT WORK AND	5.1	74
401-3 Parental leave	10 REDUCED	8.5	
		10.5	
404 -1 Average hours of training per year per employee	4 EDUCATION	4.3, 4.5	83
	5 EQUALITY	5.1	
		10.3	
413-1 Operations with local community engagement,impact assessment, and development programs413-2 Operations with significant actual and potential	1 [№] ∲¥ŤŤŤ	1.4	85
negative impacts on local communities		9.1	
		11.2	
	401-1 New employee hires and employee turnover 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees 401-3 Parental leave 404 -1 Average hours of training per year per employee 404 -1 Average hours of training per year per employee 413-1 Operations with local community engagement, impact assessment, and development programs 413-2 Operations with significant actual and potential negative impacts on local communities	401-1 New employee hires and employee turnover 401-2 Benefits provided to full-time employees 401-3 Parental leave<	CHI DisclosuresSUGsTargets401-1 New employee hires and employee turnover 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees 401-3 Parental leaveImage: Summer of the second seco

		Impact	t Boundary	
	Material Topics	Internal	External	Report Content
	Good relationship with local community	Employees	Local Communities / customers/ Business partners	Community Development 6. Community Engagement
Social	Safety	Employees	Local Communities / Government Agencies / Customers/ Suppliers/ contractors	Safety1. Employee Safety and Occupational Health2. Safety in AMATA Industrial Estates3. Safety in surrounding communities
	Environmental Impact Management	Employees	Local Communities / Government Agencies	 Environmental Impact Management 1. Smart Environment 2. Implementation according to measures specified in the EIA report 3. Implementation according to the government policy 4. Implementation according to the Company's environment standards.
Environmental	Energy Management	Employees	Government Agencies	Energy Management1. Smart Energy2. Energy Conservation3. Reduction of fossil fuel utilization4. Promoting renewable energy consumption
Enviro	Water Management	Employees	Local Communities /	Water Management 1. Water Supply Management
	Wastewater Management		Government Agencies / Customers	 Wastewater Management Coping with Climate Change Promotion of Water Management outside AMATA Industrial Estates
	Solid Waste and Industrial Waste Management	Employees	Local Communities / Government Agencies / Customers / Business partners	 Solid Waste and Industrial Waste Management 1. Solid waste management in AMATA Industrial Estates Zero Waste to Landfill 2. Building awareness of industrial waste management to customers AMATA Best Waste Management Awards 3. Innovation for waste recycling Recycled Plastic Road Project

GRI topic	GRI Disclosures	SDGs	SDG Targets	page
GRI 413 Local Communities	413-1 Operations with local community engagement, impact assessment, and development program	17 PARTINERSHIPS FOR THE GOALS		105
GRI 403 Occupational Health & Safety	403-1 Occupational health and safety management system	8 BECHT WORK AND ECONOMIC GROWTH	8.8	109
GRI 305 Emissions GRI 307 Environmental Compliance	305-7 Nitrogen Oxide, Sulfur Oxide and other significant air emissions 307-1 Non-compliance with environmental laws and	12 RESPONSIBLE OKISUMPTION AND PRODUCTION COOL 16 PEACE JUSTICE AND STROME	12.4	114
	regulations		16.3	
GRI 302 Energy	302-1 Energy consumption within the organization 302-4 Reduction of energy consumption	7 AFFORDABLE AND CLEAN HEREBY 	7.2, 7.3 12.2	120
		13 action	13.1	
GRI 303 Water and Effluents GRI 306 Effluents	303-1 Interactions with water as shared resource 303-2 Management of water discharge-related impacts 306-1 Water discharge by quality and destination	6 CLEAN WATER AND SANTATION	6.3, 6.4	124
and Waste		12 RESPONSELE CONSUMPTION AND PRODUCTION	12.2, 12.4, 12.5	
GRI 306 Effluents and Waste	306-2 Waste by type and disposal method	12 RESPONSELE CONSUMPTION AND PRODUCTION CONTRACTION 13 CLIMATE	12.2, 12.4, 12.5	129
			13.1	

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

		1 ^{no} ₱dverty ₼ ぉ゚ † *ੵੵੵੵੵੵ	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY
nomic	Corporate Governance					
and Ecor	Risk Management					
Governance and Economic	Business Growth					
Gove	Sustainable Supply Chain Management					
	Human Resource Management				4.3 4.5	5.1
Social	Community Development	1.4				
	Safety and Occupational Health					
	Environmental Impact Management					
nmental	Energy Management					
Environm	Water Management					
	Solid Waste and Industrial Waste Management					

6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 NOUSTRY, INVOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
										16.3 16.5	
		8.2								16.7	
	7.b	8.2	9.4 9.5								17.3
		8.3 8.8				12.4 12.5				16.1	
		8.5		10.3							
			9.1		11.2						17
		8.8									
						12.4				16.3	
	7.2 7.3					12.2	13.1				
6.3 6.4						12.2 12.4 12.5					
						12.2 12.4 12.5	13.1				

Governance and Economic Development



Total revenue 4,576 million Baht Received **Excellent** CG Scoring by Thai IOD

b Projects Supporting AMATA Smart City Transformation

Corporate Governance



2018 Highlight

 Received "Excellent Corporate Governance 2018" rating from the Corporate Governance Survey of Thai Listed Companies prepared by the Thai Institute of Directors Association

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).

Good Corporate Governance (Disclosure 103-2)

In 2018 the Company's Board of Directors consists of six members, three of which being independent directors. 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.

Thriving for good corporate governance efficiency, the Board of Directors conducts an annual performance assessment every year. In 2018, the evaluation result is as indicated below:

Individual	Sub-committee	Board as a group
97.7%	98.7%	94.1%

The Company supports knowledge 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 2018, Mr. Viboon Kromadit, Director attended a training course on Corporate Governance and Anti-corruption on 6 November 2018 and attended a workshop training on the Preparation of Risk Management Plan on 31 August 2018. In addition, all directors keep updated on the news of changes that will affect the business and corporate governance.

Business Ethics and Anti-Corruption (Disclosure 103-2)

The Company has set the corporate governance policy, Code of Ethics Manual (Disclosure 102-16) and anticorruption policy 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 and has been amended to fit any changes in the regulations and situations.

In 2018 the Company announced additional good corporate governance policy and guidelines, i.e. the procurement policy of AMATA group, tax policy and gift giving and receiving policy.

- The Company announced new procurement policy to ensure that the principles and code of conduct of all AMATA group are in the same direction, professional, efficient, transparent and equitable as well as to be against any direct or indirect form of corruptions. It also plans to prepare supplier code of conduct next year to encourage suppliers to conduct business ethically to jointly grow sustainably.
- 2. The Company amended tax policy and guidelines to declare its intention to operate transparently and in compliance with the law. It placed importance on managing tax correctly, transparently and verifiably for maximum benefit to all groups of stakeholders. Tax planning and practice of AMATA group has been in the same direction to be aware of any direct and indirect risks associated with tax as well as economic and social impacts.

3. The Company announced gift giving and receiving guidelines in compliance with the anti-corruption measures in order for the management and employees to have appropriate practice in giving and receiving gifts to avoid any conflict of interest. It also asked for cooperation from the suppliers and customers to refrain from giving gift, organizing party or giving any other benefits in the festival or any occasion to ensure the business was conducted according to good corporate governance principles and to reinforce transparency.



All management and employees have a duty to comply with the Company's corporate governance policy and Code of Ethics Manual as well as the anticorruption policy under supervision of the Corporate Governance Committee to

promote morality and accountability values to organizational culture. Each management 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 arranges trainings for employees to have accurate knowledge and understanding on good corporate governance and anti-corruption policy, measures and execution steps (Disclosure 205-1) via various communication channels. The operating results in 2018 are as follows:

- Organized orientation for 43 new employees.
- Organized CG & Anti-corruption Day 2018 on 6 November 2018 to refresh good corporate governance and anti-corruption knowledge and understanding of the management and employees. 86 employees, accounting for 34% of all employees, attended the training. The Company plans to organize training through various channels that encourage 100% of the management and employees attend the training.



Moreover, on 1 February 2018 the Company declared its intention to join the Private Sector Collective Action Coalition Against Corruption (CAC) and is preparing for a certification process.

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 2018 assessment, the Company was rated "Excellent".

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

Chairman of the Audit Committee	Ŕ	anucha.s@amata.com	\succ	AMATA Corporation Public
Mr. Anucha Sihanatkathakul				Company Limited
Chief Executive Officer		vikrom.k@amata.com		2126 Kromadit Building,
Mr. Vikrom Kromadit		C C		New Petchburi Road, Huaykwang,
Company Secretary		Varanara Qamata aam		Bangkok 10310 Thailand
Mrs. Varaporn Vatcharanukroh		varaporn@amata.com	\ge	P.O.Box no.7 Monterey Tower Huai
wis. varaporti valenaranukion				Khwang, Bangkok 10323 Thailand
			8	+66 (0) 2 792 0004

In 2018 the Company received one clue concerning business ethics and corruption. Such matter is still under investigation whereby one employee violated the Company's rules and regulations. The Company's actions followed the procedures specified in the Company's regulations.

AMATA CORPORATION PUBLIC COMPANY LIMITED SUSTAINABILITY REPORT 2018

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Risk Managemen

GRisk Management



2018 Highlight

• Emphasizing on risk management, particularly risks that may impact the business and promoting risk culture in the Company

Effective risk management is a key mechanism that helps the Company grow sustainably and cope with the current rapid changing world. 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 also created risk awareness and risk culture of all level employees by providing knowledge training. (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 Board of Directors has appointed the new Risk Management Committee on 28 September 2018 consist 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:

- Assessing key corporate risk factors 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 risk factors that may impact the Company. Providing suggestions on risk prevention and reduction to an acceptable level.
- 2. Monitoring, evaluating and improving risk mitigation plans to reduce risks continuously and suitable for 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/ training/ dissemination about knowledge of risk and risk management to personnel at all levels in the Company.

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, monitoring risk management performance, and promoting risk awareness, risk culture and participation of employees in their own departments.

Risk Management Policy

The Company has set risk management policy as following

- 1. 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.
- Risk management process must be in line with the international standard in order to manage all risks effectively. 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.
- 3. The Company must establish guidelines for risk prevention and reduction in AMATA Group to avoid damages or losses including regularly monitor and evaluate risk management measures.
- 4. The Company must provide knowledge and information about risk management to all employees thoroughly and set an effective risk management reporting system for executives, Risk Management Committee, Audit Committee, and the Board of Directors.

Risk Management Process

The Company conducts enterprise 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 treatment 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.

In 2018, 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 prepared the corporate risk management plan and defined key risk indicators. The Company has planned to further apply risk management approach into all business units in the Company.

Risk Categories	Risks
Strategic Risk	Country risksForeign investment riskNew business risk
Operational Risk	 Sales and Market Risks People Risk Risk in Water Management Risk of Emergency Management in industrial estates Environmental, Legal and compliance risks

Risk Categories	Risks
IT Risk	Risk in Information Security
Financial Risk	 Liquidity risk Foreign exchange risk Tax Risk Interest rate risk
Emerging Risk	Risk from Climate ChangeRisk from rapid changes in technology

Risk from Suppliers and Contractors

In 2018, the Company has analyzed and identified risks caused by suppliers and contractors who are providing products and services in supply chain to the Company. The Company has selected the major suppliers and contractors by using spending analysis approach and considering the potential risks to the business. The Company also considered the risk factors and the consequences which impact on the economy, society and environment (ESG) to identify the suppliers and contractors that are crucial to the Company's sustainability. 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, waste water and flooding 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 also build 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 2018, the Company provided a workshop on Business Opportunity and Risk Analysis and Risk Management plan to 46 executives from all departments and subsidiary companies, a

workshop on Risk Management for 56 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.



G Business Growth **5**



Highlights

- AMATA Smart City is the first Japan-China joint project in the third country
- 6 projects supporting AMATA Smart City transformation has started

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, 103-2)

Economic performance (Disclosure 201-1)

For the year 2018, the Company had total revenues of Baht 4,576.33 million, decreased from the year 2017 by Baht 75.81 million or 1.6% and reported the net profit of Baht 1,018.22 million

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

- The revenue from real estate sales was posted Baht 1,835.74 million contributed 40.1% of total revenues, decreased from 2017 by Baht 248.66 million or 11.9% decrease. The gross profit margin from real estate sales posted 63.5% decrease compared to the previous year 68.9% gross profit margin. The main reason came from the amount land transfer of AMATA City Chonburi industrial estate decrease compared to 2017.
- The revenue from utility services was posted Baht 1,837.08 million contributed 40.1% of total revenues, increased from 2017 by Baht 47.93 million or 2.7% increase. The gross profit margin from utility services posted 33.3% increase compared to the previous year 31.2% gross profit margin. The main reason came from increase of customer in AMATA Group which lead to higher demand of utility services.
- The revenue from rental was posted Baht 680.99 million contributed 14.9% of total revenues, increased from 2017 by Baht 63.28 million or 10.2% increase. The gross profit margin from rental posted 69.7% increase compared to the previous year 67.7% gross profit margin. The main reason came from increase of number customers in AMATA Group.

Selling expenses in 2018 was recorded at Baht 208.0 million, which was Baht 4.9 million or 2.32% less than 2017. Administrative expense increased Baht 167.7 million or 25.83% compared to 2017 which are resulted from the acquisition of land for future project and development of the Company.

Value distribution to stakeholders

	Year 2016	Year 2017	Year 2018		
Value distribution to stakeholders					
Dividend per share (Baht)	0.39	0.50	0.40		
Dividend to shareholders (Baht)	416,118,591.00	533,486,950.00	426,800,000.00		
Personnel investment					
Employee compensation (Baht)	199,828,852.66	214,647,476.62	268,411,129.03		
Directors' remuneration (Baht)	30,328,231.36	31,706,976.85	42,464,743.49		
Social and community investment					
Donation (Baht)	3,223,957.63	3,510,259.16	4,715,510.05		
Social activities (Baht)	11,805,430.73	14,478,071.83	12,960,000.00		
Social investment (Baht) excl. donation	N/A	N/A	67,219,350.00		
Sharing to business partners					
Domestic procurement (Baht)	2,098,623,590.67	2,177,740,491.64	2,377,624,379.60		
Other economic values					
Financial cost (Baht)	266,476,369.83	227,952,146.96	245,825,981.33		
Tax paid to the state (Baht)	304,052,654.66	282,904,368.64	271,276,402.79		

* Salary, bonus, wages, welfare, provident fund, social security, personnel development expenses Source: Consolidated Financial Statements of the Year 2018 and Annual Report 2018

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.

In 2018, the Company announced the revised tax policy for AMATA Corporation Public Company Limited and its subsidiaries to be used as a guideline for tax management complying with tax laws in conducting business both in Thailand and other countries with fairness and transparency. The Company is aware of both direct and indirect risks associated with taxes and the impact on economy and society. Effective tax management will help promote sustainable businesses and support overall national development. For more detail about tax policy, please visit at www.amata.com

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 second 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 2018, after the Company had considered investment plan for business expansion in various projects, the Company issued additional debentures in the amount of 1,000 million baht separating into 2 tranches, 7-year and 10-year tranche resulting in continuously reduction in finance cost. The debenture issuance is also in line with company's investment plan bringing about high financial flexibility and the Company can effectively control in other areas.

For cash management, the Company intends to maximize efficiency in terms of liquidity management such as cheque payment and money transfer. The cash management can help reduce company's financial cost, decrease redundant process with financial institutions and use less resources. The Company has continuously changed from paper work process to online transactions resulting in more flexibility, conveniently and efficiently. The change to online process creates a good relationship with creditors and supports the Company for overseas expansion. The results of converting into online transaction assist company to reduce transaction fee and other related expenses.

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 perfect 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 such as AMATA City Chonburi Industrial Estate, then further expansion into other industrial estates of the Company in the future.

AMATA Corporation Public Company Limited has signed a MOU with Energy Policy and Planning Office (EPPO), Ministry of Energy, on 14 March 2017 to jointly drive the projects under AMATA Smart City, especially the smart energy projects related to renewable energy of both Solar Energy Project, Waste to Energy Project (WTE) and Smart Grid Project.

In 2018, the progress of AMATA Smart City development is as follows:

- On 7 May 2018, the Royal Gazette had published the announcement of the Eastern Economic Corridor Policy Committee stating that AMATA City Chonburi (AMATA Nakorn), AMATA City Chonburi (AMATA Nakorn) 2nd phase, and AMATA City Rayong (AMATA City), covering the areas of 41,834 rai (6,693.4 hectare) in total, were approved to be "Industrial Promotional Zones" to facilitate the targeted industries. The companies who invest in those 3 promotional zones will receive additional tax exemption benefits.
- In 32nd ASEAN Summit 2018 held in April 2018, ASEAN leaders had agreed to establish the ASEAN Smart Cities Network (ASCN) to exchange experiences, knowledge and technology, and to create the collaboration in the joint development of smart cities in order to achieve the sustainable development goal. On 8 July 2018, AMATA Smart City Project along with the Ministry of Energy were appointed as the representatives of Chonburi Province, Thailand to be one of 26 pilot smart cities from 10 countries participated in the ASEAN Smart Cities Network Forum in Singapore. Furthermore, AMATA Smart City Project had signed a Letter of Intent (LOI) with Yokohama Urban Solution Alliance to jointly develop the smart energy management system.



In addition, the government of China and Japan have realized the importance and potential of the EEC areas.
 Therefore, they agreed to jointly develop AMATA Smart City as the first China-Japan cooperation project in the "third country" after signing the agreement on 26 October 2018 in Beijing.



AMATA Smart City has 8 development concepts including:



The Company has developed sub-projects under AMATA Smart City concept by firstly starting at AMATA City Chonburi Industrial Estate. The Company has set its strategy on growing business 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 who are the leaders in various businesses to develop new business projects under the framework of AMATA Smart City concept.

In 2018, there are 6 sub-projects has started implementing; i.e.

Name of Sub-Project	Concept	Objectives
Hotel Nikko AMATA City Chonburi	Smart Community	To build a 4-star hotel consisting of modern facilities to support the entrepreneurs of both Thai and foreign investors in the areas of eastern region and to develop the local economy and employment as well.
Smart Mobile Application supports both Android and IOS systems	Smart Mobility	To facilitate the stakeholders and to solve the traffic problems in industrial estates and surrounding areas.
 AMATA University SISA (Singapore School) Technical Training 	Smart Education	To improve the quality of education and to increase the access to quality education of youth in the surrounding communities, as well as, to develop the quality and potential of local workers in order to support the target industries in EEC areas.
GGGI	Smart Environment	To efficiently manage the environmental impacts in order to build the confidence and credibility to the stakeholders.
Smart Grid	Smart Energy	To study the feasibility of Smart Grid system development for efficient electricity management in industrial estates and to reduce the energy costs
Plastic road	Smart Environment	To effectively manage the plastic waste and improve the public utilities (roads) inside the industrial estates to be durable and to reduce the maintenance expenses

In addition to driving a smart city concretely under several projects, the cooperation with these leading companies 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 the important mechanism in helping to drive Thailand forward sustainably.

Smart Community

Apart from business development that generates the revenues to the Company continuously, the Company is also committed to develop new businesses that promote a quality society and drive the local economic and employment growth. The Company, therefore, has applied the principle of Smart Community to develop the Commercial Zone in AMATA City Chonburi Industrial Estate by targeting the development of real estate and services that implement the innovation and modern technology corresponding to the needs and the changing lifestyles of the target groups in the society, including Thai and foreign customers, communities, government agencies and educational institutions.

The Company has started to develop the Smart Community Project in collaboration with Yokohama Urban Solution Alliance (YUSA) of Yokohama City in Japan, an agency which has been supported by Japanese government, since 2017 by imitating the city of Minato Mirai, where the original industrial area of Yokohama had been developed into the new business district, as a city model and has defined the Smart Community Conceptual Model as follows:



Smart Community Conceptual Model

The business development under Smart Community Conceptual Model of the Company consists of:

- 1. Residential projects, such as hotel and service apartment projects to support the working people of both Thai and foreigners in the industrial estates;
- 2. A Commercial Zone, such as community mall, restaurants, supermarkets and various facilities for being the recreation areas for working people and residents in the area;
- 3. An area to support the establishment of International Headquarters (IHQ);
- 4. An area for establishment of exhibition and convention centers in order to support the industrial meetings of multinational companies, incentive travels, international conventions and exhibitions or so called MICE industry.

In 2018, the Company has started to develop the residential projects since the result of the area survey was found that those working in AMATA City Chonburi Industrial Estate and the nearby industrial estates have the demands of a 4-star hotel for business travelers and convenient living spaces near their workplaces in order to help reducing their commuting time and to improve their quality of life. AMATA Corporation, therefore, has jointly invested with Fujita Corporation Co., Ltd. (a 100% owned subsidiary of Daiwa House Group) and Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN), a Japanese government agency, in developing a new business; that is, Hotel Nikko AMATA City Chonburi, a 246-room hotel on the area of 21,000 square meters with a registered capital of 717 million baht by having a hotel expertise company, Okura Nikko Hotel Management Co., Ltd., as the hotel management.

In addition to implementing this project according to the Smart Community concept, the project will also be implemented in accordance with the assessment criteria of Thai Energy and Environmental Sustainability (TREES) of Thai Green Building Institute. The construction of hotel building will be started in 2019 and will be operational in 2021 causing the employment and the skill development of international standard services in Chonburi Province at least 100 job positions, representing the economic value of approximately 50 million baht.

As for the operation plan for the future Smart Community Project, the Company intends to develop the business by applying the Japanese integrated innovation and technology as a model; for example, building or renovating the building to be a Smart Building equipped with the Building Energy Management System (BEMS) or Factory Energy Management System (FEMS) in order to reduce the environmental impacts and to help saving the energy expenses for the building as well.



Business development in foreign countries

Since the Company has foreseen the growth opportunities in CLMV countries, the Company 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.

In 2018, AMATA VN Public Company Limited, a subsidiary of AMATA Corporation Public Company Limited, has started developing the areas of AMATA City Halong, which is the fourth Industrial Estate Project in Vietnam in order to expand its capacity in supporting the investors in Quang Ninh Province of Northern Vietnam after being granted an investment certificate from the Vietnamese government covering the total area of 714 hectares or about 4,500 rai. The Project is expected to be opened for the investors in 2020.

Moreover, the Company is now studying the feasibility of business development in Myanmar and Laos as well.

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 able 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 from the qualifications of Company's human resources as defined in AMATA DNA code of having innovative dimension, creative thinking and new challenges for development which are used as key performance indicators of performance 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, as well as, to participate in improvement of Company's work procedures. In 2018, the Company had initiated "**AMATA INNO Awards 2018**" 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 20 innovative projects to the contest. If these projects are actually implemented, they are estimated to create the value of 5 million baht to the Company.



Development of accounting management system to reduce work duplication

In 2015, AMATA Corporation had started to expand the results of using SUN System for accounting program to its subsidiaries in order to reduce the overlapping work procedures and rearrange the internal process to be more effective and under the same system for the whole group of companies enabling to facilitate the verification of accounting data in the future. However, the result of the implementation in 2015 was found that the program had some limitations of being unable to support the immediate services as soon as the customer did the payment and the trade receivables could not be automatically cut. The staff was still required to continue processing several steps to complete.

Owing to those problems, further development of accounting management system to reduce work duplication had been continued in 2016 until 2017. The newly developed system was Collection and Billing System Center which could effectively reduce the service time of payment by the customer and the working time of the employee. The results obtained from further development of this system had been measured throughout the year 2018 with the following details:

- Issuing various documents by using the Bar Code system; for example, in the invoices and tax invoices helps saving the paper and service time to the customers resulting to the increasing customer satisfaction, as well as, reducing the Company's cost by 200,000 baht per year.
- The preparation of reports as supporting documents of Accounting Department can be carried out quickly and accurately enabling to save the overtime working of an Accounting Staff by 740 hours per year.
- Collection and Billing System Center is an environmental-friendly system which can reduce the use of paper caused by the printing errors for 100,000 sheets per year calculated as GHG emissions by 224 kg of carbon dioxide equivalent per year.

AMATA CORPORATION PUBLIC COMPANY LIMITED SUSTAINABILITY REPORT 2018

Sustainable Supply Chain



2018 Highlights

Management >>

- Improvement of the procurement policy and best practices to cover ESG risks
- No complaints from customers and communities on the social and environmental impacts caused by the contractors

Suppply 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 risks of good corporate governance, economy, society and environment within the supply chain of the Company covering the suppliers, contractors and customers 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 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, also, its reputation, the supplier and contractor management is the important issue in building the sustainable value chain focused by the Company and its suppliers in order to be consistent to AMATA's sustainable development policy; especially, the fair, transparent and verifiable procurement including the accountability towards the society and the environment due to the operations of the suppliers and contractors.

In 2018, 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 considering the procurement policy, developing the procurement best practices by taking into account the human rights, safety, environment-friendly, corporate governance and anti-corruption in compliance with the international standards enabling to reduce the costs and risks of procurement, determining the procurement standards of AMATA Group, as well as, preparing and disseminating the Supplier Code of Conduct to communicate the intent **Business Growth**

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 2018

1. Identifying major suppliers/contractors

The Company had identified the major suppliers that have been continuously doing business with the Company by using the criteria of procurement value in analyzing 786 suppliers and contractors in its supply chain. Only 86 suppliers were found to be the major suppliers and considered to be 85% of the total procurement value.

2. Risk assessment of supply chain (Disclosure 308-2, 414-2)

The Company had assessed the risks from 86 major suppliers and contractors in its supply chain and found that there were high-risk issues in economic aspect e.g. goods and services delivery did not meet the schedule resulting to business interruption or damage; in environmental aspect e.g. complaints from customers and communities due to the operations of contractors causing the environmental impact; and in social aspect e.g. the issues of safety and human rights of the workers in the contractors' companies. Economic risks accounted for 17%, environmental risk 28% and social risks 34% of all major suppliers and contractors which cause the Company has to place diversified risk mitigation measures and supplier/contractor development to prevent and reduce any impacts that may occur from these risks.

3. 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 2019.

4. Supplier/Contractor audit and assessment

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 assessment 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 2018, the Company had audited and assessed 17 major suppliers which equivalent to 19.76% of total major suppliers, as well as, has planned to expand the assessment of additional major suppliers in the following year. there was no terminated collaboration with suppliers which were conducted risk assessments (0% relationship termination).

The Company has planned to do 100% audit and assessment of the existing major suppliers and contractors by 2020 and start screening and assessment of new suppliers and contractors by using ESG criteria including the performance evaluation of suppliers and contractors in 2019 onwards.

As for new supplier/contractor registration by using the criteria and guidelines covering the newly revised economic, social and environmental criteria, it will be implemented in 2019.

In 2018, the Company did not receive any complaints about the contractors on the social and environmental impacts from any customers and communities. (Disclosure 308-2, 414-2)

Customer management

The Company always gives the importance to customers according to the principle 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 2018, the Company had implemented the activities to build the good relationships with customers as follows:

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Activity	Objective	Result of Implementation
Exclusive Dinner with AMATA CEO	To create good relationship between the management of AMATA and its subsidiaries and the management of factories which are located in AMATA City Chonburi and AMATA City Rayong Industrial Estate, and also to increase the two-way communication channel for the Company and its customers. This activity is also a good channel to listen and exchange points of views and suggestions from the customers which will be used to improve the Company's services and business operation. In addition, this activity is also a channel to introduce new products and services to customers directly.	In 2018, the Company held 1 event and there were 22 top executives from factories joined the events.
CSR Club	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 2018, the CSR Club has the total of 120 factory members in AMATA City Chonburi Industrial Estate which was increased by 35 factory members from 2017. In 2018 The CSR Club organized 4 meetings and 9 activities for environmental preservation and community care. There were 3,250 CSR club members participated in these activities throughout the year.
AMATA CSR Volunteer Club	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 2018, the AMATA CSR Volunteer Club has the total of 63 factory members in AMATA City Rayong Industrial Estate which was increased by 13 factory members from 2017. AMATA CSR Volunteer Club organized 4 activities and there were 582 club members participated in the activities throughout the year.
AMATA Japanese Society	To be a center in business communication with Japanese customers in AMATA City Chonburi and AMATA City Rayong Industrial Estate because 65% and 30% of the customers respectively are Japanese.	In 2018, the AMATA Japanese Society has the total of 228 factory members which was increased by 7 factory members from 2017. The Society held 16 meetings and organized 8 golf tournaments in 2018.
AMATA City Management Group (ACMG)	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 2018, there are 128 factory members, which was increased by 8 factory members from 2017. ACMG organized 10 monthly meetings to share information among members and seminars on professional human resource management. There were 66 factories participated in the meetings. In addition, the club organized a yearly training program with certification to all attendees.

Activity	Objective	Result of Implementation
HR Association of AMATA City Chonburi (HRA)	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 2018, there are 322 factory members, increased by 7 factories from 2017. HRA organized 12 monthly meetings on professional human resource management. There were about 170 factories joined each meeting, totally 2,040 participants in 2018.
AMATA City Chonburi Safety and Environment Group (ASEG)	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 2018, there are 215 members, increased by 5 members from 2017. ASEG held 4 meetings in 2018. There were about 100 companies joined each meeting and 618 participants participated in the meetings throughout the year.

Customer Complaint handling process

The Company had improved the system and procedure of receiving and monitoring the complaints from the customers to be more efficient by establishing a 24-hour call center to receive the complaints and report the emergency incidents in the industrial estates. The complaints will be classified according to their related types such as environment, society and corporate governance. The responsible working unit has to response and solve the complaints within the specified period of time along with reporting the management team for acknowledgment of the results of the solution and further consideration of preventive guidelines.

In 2018, the Company received 399 complaints from its customers which 79.4 % of total complaints were about infrastructure and utilities, 17.8% were about services, and 2.8% were about the environmental impact. All complaints or 100% have been resolved within the due date. However, no complaints from the customers on the Company's suppliers and contractors were found.

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 executive meeting in order to consider improving the products, services and work procedures of the Company. In 2018, the Company, itself had conducted the customer satisfaction survey and the average scores obtained was at 68%.

In addition, the Industrial Estate Authority of Thailand (IEAT) had also conducted the annual customer satisfaction survey in 33 industrial estates. AMATA City Chonburi Industrial Estate was ranked 15th with the average scores of 84%, better from 2017 at 17th with the average scores of 79% and AMATA City Rayong Industrial Estate was ranked 7th with the average scores of 88%, better from 2017 at 9th with the average scores of 85%.



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 2018, 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 2018, the Company had implemented 2 supplier development projects; namely, the workshop on the Industrial Waste Management Act for the customers in industrial estates and the training on occupational health, safety and environmental management for waste transporters and waste separation staffs of waste separation plant, AMATA Facility Services Co., Ltd.
Workshop on the Industrial Waste Management Act for the customers in 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.

The Company, therefore, had organized a workshop to educate the knowledge of the law relevant to the industrial waste management in the factory for its customers in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate totally 302 factories covering 451 persons. The content of the training had emphasized the customers to understand the compliance with the law and to be able to apply the knowledge obtained to assess their waste processors on their own in order to prevent and reduce the opportunities of illegal industrial waste management.



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 2018, the Company had organized totally 6 training courses for the contractors such as Safety and Working Environment for Solid Waste Collection, Transport and Sorting Course, Basic Fire Extinguishing Course, Fire Extinguishing and Evacuation Drill Course, Solid Waste Spillage Recovery Drill Course, Work Analysis for Safety Course and Ergonomics for Safe Working Course in response to the target of zero environmental complaints on waste management in 2018 and no serious occupational accidents till stop working.

Presently, 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 target as planned.



CREATING VALUE FOR SOCIETY



AMATA City Chonburi received

99 out of 100 scores

from community satisfaction survey

Communities from 26 sub-districts and 549 factories engaged with AMATA

(communities in the areas within a radius of 5 kilometers from AMATA Industrial Estates)

266,809

people participated in AMATA Social activities

(all projects in both AMATA City Chonburi and AMATA City Rayong)

69 projects for social and environmental

development at AMATA Industrial estates in Thailand

(including all projects in both AMATA City Chonburi and AMATA City Rayong)

92%

of total employees were developed in accordance with Human Resources Development Plan

Ge Human Resource Management



2018 Highlight

9% increase in level of employee engagement compared to 2017

The Company recognizes that human resources are not only a key element for successful business operations but also a key drive of the Company's business towards sustainable development goals. Human resource management in current environment and intense competition is a challenge for the Company. Hence, the Company emphasizes on the importance of efficient human resource management from the recruitment process, caring and retaining personnel to human resource development in order to support the global trends, business goals and the Company's vision and mission, as well as responding to the needs and expectations of employees especially the compensation and welfare, career advancement and performance evaluation which are the most concerns of the employees. The Company has applied the principles of holistic care to the employees, both body and mind, in order for the employees to have a healthy body and happiness at work. A better quality of life will enhance the employees' efficiency to 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 appointed **Human Resource Management Committee**, whereby the Chief Executive Officer is a Chairman, consisting of ten members, namely Chief Marketing Officer, Chief Investment Officer, Acting Chief Financial Officer and Managing Directors of subsidiary companies. Human Resource Management Committee has a duty to determine strategy and operational plan of human resource management by setting 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 receiving complaints are established to obtain opinions, problems and expectations from all employees to be considered in improving the human resource management accordingly. The Company has improved the performance evaluation system to be more efficient so that the remuneration is fairly evaluated in all staff levels. It also promotes the activities which create organizational culture to incubate AMATA DNA characteristics in employees.

In 2018, the Human Resource Management Committee had improved such welfare as annual leave by allowing an accumulation for another one calendar year. TOEIC scores which are one criterion for promotion had also been adjusted to be more relevant to the position. Such improvement will be proposed to the top management for further consideration.

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.

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).

At the end of year 2018, the Company had a total of 257 employees, consisting of 182 contract employees and 75 temporary employees. There were 144 male employees (56.0%) and 113 female employees (44.0%). Regarding local employment, most employees, accounting for 33.9% of total employees, have their hometown in the eastern region. In 2018, the Company targeted the new employment at 48 positions. Through its recruitment and selection policy, the Company recruited 43 new employees or 89.6% of target. 30 new employees applied for the jobs through job posting websites, 5 new employees from the recruitment service agencies and 8 new employees.

Compensation Management and Employee Retention (Disclosure 401-2)

Retention of capable employees is one of the factors that helps drive the Company towards sustainable growth. The Company, therefore, fairly provides compensation and welfare according to the performance and awards those with evident capabilities to attract and retain key employees with the Company. It has participated in the salary survey conducted by the Personnel Management Association of Thailand since 2017 as well as salary and welfare benchmark survey among similar groups of businesses to be used for review and adjustment of compensation criteria appropriately to be competitive to the market based on pay for position principles. Difference in gender does not affect the determination of employees' salary. The Company also provides compensation and benefits based on pay for performance principles to retain and motivate capable and committed employees.

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. Benefits such as life and accident insurance including protection for people with disabilities from work related incidents, annual health check-up, maternity leave and language allowance are given to all types of employees.

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 ten employee representatives selected by the employees and six 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.

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Provident Fund

The Company supports long-term financial planning and retirement plan of the employees by establishing provident fund for the employees to save their money for retirement. External financial experts are 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 two retired employees in 2018. Therefore, in 2019 eight retired employees continue to be hired. Compensation is given according to the rules and regulation as deemed appropriate while welfare given is similar to that of other employees.

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 2018, all employees and executives within the organization (100%) were evaluated based on three categories:

- 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.





Activities in the AMATA Wellness Program 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 heath 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.

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.

The Company has encouraged its employees to understand the corporate culture and to develop characteristics expected for AMATA's people which enable them to work effectively and have the opportunity for career advancement, thereby leading to a sustainable growth of the Company. AMATA DNA consists of five characteristics as follows:

Dependable Being professionalism, credible, reliable and adhering to code of ethics
 Responsive Fast and accurate responding and being responsible to stakeholders & environment
 Innovative Promoting innovation in products and services including working process improvement
 Visionary Having long term projection and creating opportunities for everyone
 Efficient Working with high standard and excellent team

In 2018 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 43 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

In 2018, nine complaints, grievances and suggestions from the employees were sent directly 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.

Employee Engagement

The Company communicates business directions, movement in the organization and news relating to the Company to the employees through various channels on a regular basis. The Chief Executive Officer also communicates directly with the employees to relay thought and organizational culture for the employees to truly understand AMATA existence and "ALL WIN" business philosophy and to create working inspiration as well as the Company's business direction and potential changes in the future.

The Company regularly provides annual employee engagement survey for all employees in the Company which was conducted by a third party since 2016. The Company has adopted important issues from the results of the employee engagement survey in 2017 in a development plan for its human resource management. The key issues were Competency Development, Broad Base Compensation Review and Talent and Succession Management. The Company targeted to increase the employee engagement score in 2018 compared to that in 2017 and set a long-term goal to have employee engagement scores of more than 55% in 2020 under the strategy: building relationships between the Company and employees based on Say Stay Strive concept.

In 2018 all employees (100%) participated in the employee engagement survey, demonstrating that the employees placed great importance on the participation in expressing opinions and suggestions for the development of the Company's human resource management system. The result of the survey showed that the employee engagement scores increased by 9% from those in the previous year.

The results of the survey also showed that the employees placed importance on appropriate compensation according to work dedication. Apart from higher compensation than that of the rivals in the same industry, the organization should provide welfare which better responds to the requirement of each generation of the employees. It should also place importance on performance evaluation which will help bring about genuine work dedication from the employees. The Company, therefore, focuses on continual review of the Performance Management System, the improvement of apparent indicators and better conveyance from the organizational level to individual employees as well as the development of capabilities and potentials of the employees according to the requirement of the organization and employees. The Company has prepared the strategic plan and implemented the project to develop all three key issues since 2017. The Company continues to put effort into the improvement of key issues obtained from such survey for more efficiency and to better respond to the expectation of the employees for the benefit of the employees and the organization accordingly.

In 2018, the scores from the employee engagement survey of permanent and yearly contract employees increased from 28% to 40% and 45% to 53%, respectively. This achievement was the result of the Company's continual focus on the improvement of welfare, compensation and other matters that increased the employees' satisfaction and engagement.

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Employee Engagement Score



Human Resource Development

The Company places great importance on the development of the employees' potential, knowledge and skills to support the challenges and business opportunities in the future in order to enable the Company to be competitive and to drive business towards its goals. According to the employee engagement survey in 2018, the employees placed importance and expectation on the development of strength and other areas where additional development was needed. AMATA group of companies, therefore, has conducted Building People Capabilities project to plan and prepare for the development of the employees to respond to such issue.

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.

> 10% is derived from formal learning and self-study

20% is learning from coaching and feedback from others

70% is derived from experiential learning

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 training, i.e. coaching and feedback.

In 2018, the Company held trainings to develop potentials of the employees throughout the year, including 31 in-house trainings as well as encouraging employees to participate in public trainings with total training value of THB 2.57 million. 92% of total number of the executives and employees participated in the trainings with average training per person of 27.21 hours per year.

Average training hours of employees	Hours per person per year
Total employees	27.21
Male employees	19.33
Female employees	34.42
Management level	26.40
Operational level	27.40

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:



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Community Development 55



2018 Highlights

- AMATA City Chonburi had obtained 99% Local Community Satisfaction level the surrounding communities and AMATA City Rayong had also obtained 97% Local Community Satisfaction level
- No significant complaint from the local communities

Industrial estate development is a foundation of enhancing the country's economic growth through the expansion of the industrial sector. However, the growth of industrial estates will bring both positive and negative impacts towards the local communities and the society. Owing to the materiality assessment, both the communities and the Company have emphasized on the importance of having the good relationship among each other and the community development. The Company, therefore, is committed to building engagement with local communities who are also the major stakeholders and focus on the participation in community development for better quality of life and education. The Company also enable them to get better understanding and confidence in the Company's operations, as well as, to provide the opportunities for people in the communities and other stakeholders in the society to access the services operated by the Company.

The Company is well aware of the responsibility in helping to take care of the communities surrounding AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate by taking into account the economic, social, occupational health and safety, and environmental impacts of business operations towards the communities of both internal and external areas of those two AMATA industrial estates. Hence, the Company has established the operational approaches for the community development to cover all aspects and to focus on the cooperation from many sectors to jointly develop the society as a whole. The information of management approaches including the performance of community development shown in this report covers only the community development projects implemented by AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate in the areas within a radius of 5 kilometers. (Disclosure 103-1).

Management Approach (Disclosure 103-2, 413-1)

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 had surveyed the problems, needs and expectations of the local communities through the stakeholder engagement process and brought the results to develop as the Company's strategies and operational goals by focusing on activities that can reduce the impacts caused by the Company's operations; i.e. traffic and safety issues, the activities to reduce risks that may affect the businesses; for example, industrial labor shortage, and activities to help enhance the quality of life and education for the communities such as sports activities, donations to promote better quality of life for youth and people in the society, etc.

The implementation of Social Development Project of the Company had categorized the target groups into 2 subgroups as follows:

Group 1: People living in the areas around AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate within a radius of 5 kilometers.

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 activity models to meet the need and expectation of each group. Most expectations of both groups would be related to the development of quality of life, traffic, safety, environmental impact management, etc. by targeting to obtain the community's satisfaction with the Company's operations not less than that of previous year with no significant complaint from the communities. Strategies and activities implemented by the Company in 2018 in response to the expectations of the target groups in order to reduce the impacts towards the communities while reducing the risk of Company's operations can be divided into 3 types as follow:

- 1. Facility development and service accessibility
- 2. Community development in 5 areas such as economy, health, safety, environmental conservation and education
- 3. Engagement with the communities

In 2018, the Company had implemented a total of 69 projects and activities by spending social investment budget of Baht 71.94 million. There were 266,809 participants joined the activities and 897,192 people were benefited by these projects and activities.

	AMATA Cit	ty Chonburi	AMATA City Rayong		
	Local communities	Factories in AMATA City Chonburi	Local communities	Factories in AMATA City Rayong	
Target groups	23 Sub-districts	687 Factories	6 Sub-districts	308 Factories	
Number of local communities/	21 Sub-districts	414 Factories	5 Sub-districts	135 Factories	
factories participated in all projects	or 91.3%	or 60.3%	or 83.3%	or 43.8%	
Number of participants in all projects	145,446 people	102,600 people	13,242 people	5,521 people	
Social investment (Development budget/Donations)	THB 53.59 million		THB 18.35 million		

Performance (Disclosure 103-3, 413-2)

1. Facility development and service accessibility

The Company has taken into account the quality of life of the increasing population of both inside and outside AMATA Industrial Estates due to the expansion of the industrial estates causing problems of inconvenience in accessing the services and negative impact resulted from population density or the use of facilities. Moreover, owing to the survey of surrounding community areas, some remote communities were found to have inconvenience in accessing various facilities. The Company, therefore, has developed various projects and activities to meet their needs and to assist the communities around the industrial estates.

· Government One Stop Service Center at AMATA City Chonburi Industrial Estate

AMATA City Chonburi Industrial Estate is a large-scale industrial estate having hundreds of thousands of both Thai and foreigners working per day. The Company has realized the problems and needs of customers and communities in contacting the government agencies. Hence, the Company has cooperated with the government agencies in developing a service center in AMATA City Chonburi Industrial Estate since 2014 to facilitate the customers, the employees working in the industrial estate including the 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.

This One Stop Service Center in AMATA City Chonburi Industrial Estate 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 of high population density of more than 500,000 people of both registered and non-registered.

People coming to contact the government agencies can obtain the services in one location without traveling to contact many government agencies resulted in saving travel time and expenses, as well as, reducing the government's expenses in opening another public service center. Currently, there are a total of 7 government agencies joining in providing the services in this center. Service hours of this center covers working hours and holidays, including Monday-Friday from 09.00-17.00 hrs. and Saturday from 09.00-13.00 hrs.

Government Agencies	Services		
Chonburi Administration Office	ID card service, general registration service and		
Klong Tumru Sub-District Municipality Office	civil registration works; e.g., ID card issuing,		
Nong Mai Daeng Sub-District Municipality Office	document certification, house registration work, registration of birth certificate, death certificate, marriage/divorce certificate		
Don Hua Roh Sub-District Municipality Office			
Napa Sub-District Municipality Office			
Chonburi local office under the administration of Ministry of Labor	Social security work		
Thai Red Cross Society, Regional Blood Service No. 3, Chonburi	Blood donation		



Statistics of using the services at Government One Stop Service Center



· Visa and Work Permit Service Center

Visa and work permit application for foreigners working in AMATA City Chonburi Industrial Estate can be applied at a mobile unit of Visa and Work Permit Service Center which opens once a month and can serve 600 expats per year. The process takes only one hour to get the service done whereas in the past, it took about one week to finish. 100% of the expats using the services at this visa and work permit service center are satisfied with the overall services and 47.76% of them are very satisfied.



Statistics of using the services at the visa and work permit service center by foreigners



AMATA Smile Caravan

Since the Company has always taken the well-being of communities in the areas within a radius of 5 kilometers of AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate into consideration, especially the remote communities and those who are not convenient to access various facilities, the Company has started to implement AMATA Smile Caravan Project since 2014 by aiming to assist and facilitate the people in those areas to access the basic services and to reduce the burden of expenses for the communities. In this regard, the Company and its partners have participated in taking care the well-being of the communities; meantime, the Company have learnt the problems and needs directly from the communities. Also, information obtained will be used to further develop Company's activities in the future.

AMATA Smile Caravan Project aims to create smiles and happiness to the communities by providing some facility services to people in the target areas such as free basic physical check-up service, free haircut service, free electrical appliance repair service, free oil change service for motorcycle, etc. In providing the services each time, the Company has received the cooperation from the factories in AMATA Industrial Estates and the local authorities in joining as volunteers in the caravan. The results of AMATA Smile Caravan are building the bonds between the communities and the Company, getting better understanding in the Company's business operations, and creating confidence in the Company that it will help supporting the development of communities along with the growth of the industrial estates.

AMATA Smile Corours	AMATA City Chonburi			AMATA City Rayong		
AMATA Smile Caravan	2016	2017	2018	2016	2017	2018
Number of target communities	8	8	10	-	-	8
Number of caravan arrangements	8	8	10	-	_	8
Number of participants from communities	900	950	1,293	-	_	1,080
Number of participants from companies	230	250	300	-	_	190
Number of companies joined the caravans	10	12	15	-	-	33



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· Improvement of Cellular network in the industrial estate areas

Nowadays, telecommunications systems play the important role towards everyone's work and daily life. The Company, therefore, has prioritized the sufficiency and ability to access all types of telecommunications systems as it is found that there is an increase demand for mobile phone signals and problem of unstable signal strength and clarity in some areas including the change of signal frequency of mobile phone system from 3G to 4G.

In 2018, the Company had studied the sites for installing additional cell towers in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate together with the mobile phone service providers such as AIS, TRUE and DTAC in order to analyze no signal areas and suitable cell sites for installation of additional cell towers.



As a result, the Company had built its own cell towers to

receive 4G signal by installing additional 27 cell sites in AMATA City Chonburi Industrial Estate and 25 cell sites in AMATA City Rayong Industrial Estate resulted in reduced problem on unclear mobile phone signal in both areas while increasing the business opportunity for the Company to be a service provider for rental of cell towers for mobile phone transmittance installation as well.

· Smart Mobility

The traffic problem in AMATA City Chonburi Industrial Estate and neighboring area is an issue that stakeholders had paid attention to as they are greatly affected by it. The Company, therefore, has an idea to adopt innovative technology of smart mobility concept to sustainably solve the problem through the control system of Traffic Control Center in AMATA City Chonburi Industrial Estate which efficiently links the data management system.

In 2018, the Company had accomplished in the development of Smart Traffic Application, supporting both Android and IOS systems, in the form of Web Application. The users can check travel information, entrance and exit routes, and can be navigated to locations in AMATA City Chonburi Industrial Estate conveniently, as well as, can locate for specific entrance or exit during rush hours in order to avoid traffic congestion route. Besides, Smart Traffic Application has an alert system for incidents or accidents that are encountered in order to inform users to avoid those routes. In addition, there are other news distribution systems and user's complaint receiving system enabling to reduce data communication time and better access to the management of industrial estate and the users.

Presently, Smart Traffic Application is under Trial Test Run stage and is expected to be used by over 30,000 users per year after it is officially launched.



For further development in the future, the Company will bring data management innovation to involve in Smart Traffic Application management; for example, CCTV in the industrial estate, etc.

2. Community Economic Development

Whereas the growth of industrial estate is an important foundation of national economic development, it also causes economic impacts on local communities; e.g. increase in cost of living. The Company, therefore, has always given the importance to the development of local communities to grow together with the Company sustainably and has supported the local employment, as well as, has organized various activities to help develop the community's economy in cooperation with the Industrial Estate Authority of Thailand (IEAT) and factories in the industrial estates by targeting to increase the employment in the local communities along with helping to develop and promote community products to meet the standards and create jobs to generate incomes to the local communities.

In 2018, the Company had implemented 2 projects related to employment and local labor force and another 2 projects related to community product development and sales as follows:

Job Fair

At present, there are 995 industrial 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 to work in the industrial estates. 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, as well as, promote the local employment and save time and expenses of both job applicants and entrepreneurs.

Human Resource Managemen

In 2018, the Company had targeted the employment ratio in the Annual Job Fair to increase higher than that of 2017. Therefore, the Company had publicized the Fair through many working agencies and invited customers in both industrial estates to join the activity. This year, there were 11,132 job vacancies to be recruited by 261 companies and there were 16,000 job applicants attending the Fair of whom 2,177 successful applicants were recruited. The employment value was estimated to be about Baht 100 million.

AMATA City Chonburi	2014	2015	2016	2017	2018
Number of job seekers	3,894	3,022	8,511	7,500	12,000
Number of companies as employers	180	123	192	134	141
Number of vacancies	6,640	5,741	8,591	5,134	6,132
Employment value (million Baht)	60	52	73	56	60
Number of successful deals at the event	1,259	1,128	1,013	390	1,120
AMATA City Rayong	2014	2015	2016	2017	2018
Number of job seekers	-	_	4,000	4,000	4,000
Number of companies as employers	_	_	75	110	120
Number of vacancies	-	-	4,800	5,000	5,000
Employment value (million Baht)	-	-	48	35	40
Number of successful deals at the event	-	-	1,002	453	1,057

Statistics of Job Fair



• Employment of good inmates from Chonburi Central Prison and Samut Prakan Central Prison

The Company has foreseen the lack of occupational opportunities for the underprivileged group in Chonburi province; for example, 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 Prakan Central Prison to do maintenance jobs on the central area of AMATA City Chonburi Industrial Estate such as tree and lawn maintenance, tree trimming, pesticide spraying and tree planting and replacement, 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 2018, the Company had hired 32 good inmates creating the employment value of 2,995,800 Baht.





• Farm to Factory Project

Owing to the results of the local community survey, the community was found to have many agricultural products 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, the Company 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 the long-term, especially the agricultural and processed products, enhancing a sustainable growth of the local economy and purchasers are able to obtain the fresh and quality products directly from the producers.

In 2018, the Company had 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 had acted as a facilitator between the local communities and the factories in the industrial estate in trading of agricultural products. Besides, the Company and the Industrial Estate Authority of Thailand (IEAT) had also stepped in to help upgrading the standards of the products to meet the purchasers' requirements. Presently, there are 16 factories and 10 local communities from Chachoengsao and Chonburi provinces joining the "Farm to Factory" Project in AMATA City Chonburi Industrial Estate where the market is open on an average of 10 times/month, generating incomes from selling the products during the period of 1 year starting from 24 November 2017 — 20 November 2018 for totally 6,847,330 Baht.



Community Income from Farm to Factory Project



· Project of Constructive industrial waste to Community Value

The Company has cooperated with the Industrial Estate Authority of Thailand (IEAT) and factories in AMATA City Rayong Industrial Estate who are members of AMATA CSR Volunteer Club in promoting local communities to transform the industrial waste into community products under the "Project of Constructive industrial waste to Community Value" by commencing with wood pallets and wood plates donated by Dowa Metals & Mining (Thailand) Co., Ltd. and Daikin Compressor Industries Co., Ltd. According to the survey, in AMATA City Rayong Industrial Estate have an average volume of 14,000 tons of unused materials like wood pallets and wood plates per year in which, factories normally would sell these wood.

The Company has implemented this project since 2015. A group of elderly persons of Klong Plu community and Ban Nong Rakam community in Phana Nikhom Sub-district have been selected to participate in this project due to having capability to produce wood products. The group of elderly then establish "Klong Plu Doo Dee Woods Group" and later was able to registered under "Community Enterprise for Elderly Wood Lovers of Phana Nikhom Sub-district".

This community enterprises would process woods donated by factories into products such as mobile phone holders, key hangers, pencil cases, photo frames and wooden chairs, increasing the value of wood pallets and wood plates in factories from the original 7 Baht per piece to 250-1,200 Baht per piece or increase of 36-172 times. The Community Enterprise for Elderly Wood Lovers of Phana Nikhom Sub-district has earned incomes from sales of processed wood products from year 2016-2018 totaling of 158,900 Baht and the revenue increase ratio in 2017 and 2018 of 69% and 32% respectively.

In 2019, the Company has planned to help promoting the products derived from the wood pallets by creating online media such as Facebook, LINE, email and offline channels; for example, newsletters to publicize to customers in the industrial estates. In addition, the Company has foreseen the importance of bookkeeping preparation in order to record the incomes and expenses by planning to arrange training on bookkeeping for community enterprise group in order to collect the income data from the sale of products. As for the long-term development plan, the Company has planned to arrange a carpentry training in collaboration with Community Enterprise for Elderly Wood Lovers of Phana Nikhom Sub-district and AMATA CSR Volunteer Club plans for youth and interested persons to promote the group's activities and to generate incomes for the carpenters in the future.

Incomes of Community Enterprise for Elderly Wood Lovers of Phana Nikhom Sub-district

Year	Income (Baht)	%Change
2016	17,500	-
2017	56,900	+69%
2018	84,500	+32%
Total	158,900	



3. Community Health Development

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 2018, the 17th 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 competition will be held only on Sundays.

In 2018, AMATA City Chonburi Industrial Estate had divided the competition into 8 categories. There were 414 teams of athletes from various factories participating in the competition, equivalent to 18% increase compared to that of 2017. Meantime, AMATA City Rayong Industrial Estate had also divided the competition into 5 categories. There were 140 teams of athletes participating in the competition, equivalent to 15% decrease compared to that of 2017.



AMATA City Charity Run

The Company along with entrepreneurs in AMATA City Chonburi Industrial Estate and neighboring local communities have organized mini marathon annually by aiming to promote exercise for people in industrial estate and the nearby communities by walking and running in order to have good health and spend free time effectively with exercise. Additionally, it also strengthens good relationship among the Company, entrepreneurs in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate, and communities nearby both industrial estates joined the activity which enables them to acknowledge the Company's health policy that promotes and supports exercise widely, consistently and continuously.

The Company had targeted to increase the number of participants from its employees, factories' employees and local community people for the 10th Mini Marathon in 2018 to be more than that of 2017. The Company has changed the purpose of organizing the event "AMATA City Charity Run" so that proceeds, after expense deduction, would be donated for scholarships for Nawamindharachini Army Sponsor School and to Queen Savang Vadhana Memorial Hospital in Sri Racha, Chonburi. To achieve the target, the running route was changed to be more challenging and interesting in order to motivate more participants to the event.

The competition was divided into 3 categories of 16 km mini marathon, 10.5 km mini marathon and 5 km walk & run for health. This activity was joined by 6,042 participants in total, a 54% increase compared to that of 2017. Among them, 4,404 participants were the Company's employees and factories' employees in the industrial estates, equivalent to 73% of total participants with an increase ratio of 71% compared to that of 2017. Also, the total running distance of this event could be calculated into 47,166 kilometers or total calories burned of 2,924,292 kcal.



Number of Participants in AMATA Charity Run



Blood Donation

The Company realizes an immense potential within AMATA City facilities, both in Chonburi and Rayong, in organizing a blood donation drive. This is due to the combined population of more than 500,000, including factory workers and locals from surrounding communities. Acting upon this fact, AMATA City Chonburi, AMATA City Rayong and Thai Red Cross Society of Chonburi and Rayong, have joined forces to regularly arrange "Blood Donation for Lives" campaigns encouraging the participation of the two facilities' employees and factory workers. The aim is to provide another source of blood reserve that can be utilized by hospital blood banks and the Thai Red Cross Society.

Held regularly every quarter since 2014, the blood drive at AMATA City Chonburi, is open for public donations between 9.00 AM to 2.00 PM on Mondays, Tuesdays and Thursdays. The Company allocates space in one of its buildings and designates it "Blood Donation Center - AMATA City Chonburi" to be used by the Thai Red Cross Society, Regional Blood Service 3, Chonburi. For blood donation drives at AMATA City Rayong Industrial Estate, factories at the help support venues for the campaign activities.

In 2018, blood donors from Company's employees and workers of manufacturing establishments in both facilities, topped 8,489, an increase of 15.5% over 2017. Collected blood amounted to 3,732,500 CC, which is 15.2% higher than 2017.

As a result, the Company's sponsored efforts helped the Thai Red Cross cut expenses for blood collection substantially, a cost saving of 424,450 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 Company, local communities and general public for the benefit of our society.





4. Safety and Environmental Responsibility

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

• Development of Model Community in water and solid waste management at Nong Mai Daeng Municipality.

The Company is well aware that tackling a solid waste problem successfully requires an earnest collaboration and involvement of all parties. An MOU signed by the Company, governmental agencies and local communities displays 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, has been chosen as a pilot project to showcase how to sustainably manage waste water and solid waste. The gained knowledge will position it to be a case study for other communities in the future.

In 2018, the Company's accomplishments included:

- Conducting waste water treatment training on 10 August 2018 for 5 personnel from the Division of Public Works and Division of Public Health, Nong Mai Daeng Sub-District Municipality. As a result of the training, the participant's better understanding of waste treatment system was increased by 80%.
- Organizing a communal water and solid waste management workshop, in partnership with Nong Mai Daeng's Division of Public Health, based on the 3Rs Concept, on 18 October 2018. Out of 100 target participants, there were participants from 7 villages who are Village Health Volunteers, and 30 operators of rental property, apartments, restaurants, retail stores, mini marts, and fresh markets. After the conclusion of the workshop, the participants' knowledge on the subject had increased by 80%. Using the findings gathered from the workshop, the Company and the government agency will be able to formulate criteria for selecting a pilot site to be developed into the model site in solid waste management at Nong Mai Daeng Sub-district Municipality.
- With a collaboration of Nong Mai Daeng Sun-district Municipality, communities' waste water treatment system was surveyed at their sources on 6 December 2018. Samples of treated water were collected from 8 premises: restaurants, markets, high rises, and housing estate. The result of the survey was summarized to the officials along with recommendations to operate the treatment system more effectively. The Nong Mai Daeng officials will share the information with these businesses and engage them to implement solutions together.
- Improving water quality and beautifying the landscape behind the water treatment plant. A joint effort of AMATA Water Co. Ltd., a subsidiary in AMATA Group of Companies and the administrator of the industrial estate's water management system, and its suppliers, various forms of aerators were installed to improve the water quality of Klong Tamru Canal. The waterway runs behind the water treatment plant, passing through the estate and onto the ocean. Installation of the project also serves as an educational resource of aeration technology which the Company employs to improve water quality.



· Development of Model School for Environment and Safety at Wat Ban Kao Eco-School

Not only does the Company play a role in providing basics of firefighting and fire evacuation exercises to various agencies, the expertise in these fields are also utilized, in partnerships with Siam DENSO Manufacturing Co. Ltd., Siam KYOSAN DENSO Co. Ltd., the IEAT Office at AMATA City Chonburi, and Wat Ban Kao School in Chonburi, to upgrade the school into a "Model Eco-School of Environment and Safety". This successful endeavor resulted in the school being named first runner-up for the 2017 School Safety Assessment award conducted by the Safety Division, Department of Labor Protection and Welfare. Learning the firefighting basics and performing fire escape drills enable the school staff and students to apply life-saving procedures during emergency situations.

This partnership has extended to other areas of interest under the Eco-School principles. Curriculums related to environmental topics such as waste management, water resource management, and energy efficiency have been developed. The students are also trained to process Aloe Vera into various community products, from liquid soap and lotion to foamy hand soap, and then sell them to Siam DENSO Manufacturing Co. Ltd., Siam KYOSAN DENSO Co. Ltd., thus achieving the overall goals previously set for them.

In 2018, the alliance and Wat Ban Kao School participated in a workshop designed specifically to combine the school's community enterprise with the manufacturing approach of Creating Share Value (CSV). The result is a more modern design of product packaging. The success of the Wat Ban Kao School as a distinguished model of Eco-School concept is made possible primarily because of the teamwork between the Company and other dedicated contributors. These stakeholders share a common goal of building a quality society, and are planning further collaboration in the program in 2019.



5.Educational Initiatives

Education has always been the Company's focal emphasis. To meet an increasing demand for highly qualified personnel and skilled workforce to keep up with advances in production process technology, various educational projects have been initiated. To elevate the worker potential and to keep Thai industries competitive, easy access to higher education is widely available. On-going learning opportunities are also promoted.

Smart Education

One initiative the Company's Smart Education uses to cultivate human capital for AMATA Smart City, is to advocate learning at all levels. The Company is determined to build a skilled workforce to serve 10 targeted industries. The Company has established both vocational and general education institutions, from kindergarten to college level, using internationally acclaimed educational programs.

In 2016, a joint venture with Singapore's Kinderworld Education Group, established AMATA Kinderworld Education Group and started operating SIRASART SUKSA KINDERGARTEN (SISA), conveniently located in AMATA Industrial Estate's grounds. Elevating the school to an international standard, the school's curriculum was revised, starting with an upgrade to textbooks from Singapore, primarily in math, English and science. The main goal of running the school is to provide educational benefits to the children of employees working at the site. The tuition fee is subsidized to keep the cost of the international program as affordable as ones offered under Thai curriculum.



An MOU was signed in 2017 with National Taiwan University to explore the feasibility of offering Engineering Science courses, and as well as a satellite campus to serve the needs of EEC and ASEAN community. The license to establish the campus has already been authorized by the Ministry of Education.

Another significant agreement involves an MOU signed by AMATA, King Mongkut's Institute of Technology Ladkrabang and Digital Economy Promotion Agency (DEPA) to consider offering Technical Training to factory workers. A Survey was conducted among the manufacturers operating in AMATA industrial estates to assess training needs that corresponds to their needs and also increases the development of their workers skills.

In partnership with Ministry of Social Development and Human Security, a study is under way to establish a "Handicap Service Center". The center would provide training, and activities for the disables, and elderly citizens to develop skills necessary for a better quality of life and wellbeing, including more social opportunities.

In 2018, a license to establish AMATA University was granted to AMATA Corporation PCL by the Head of the National Council for Peace and Order under the Order No. 29/2560. Developed with the help of National Taiwan University, ranked 76th in the World best 100 Universities by QS World University Rankings in 2018, the so-called Smart Manufacturing courses will raise production standards, and design R&D strategies relevant to Thailand's manufacturing technology, directly supporting the industrial sectors in the Eastern Economic Corridor or EEC. In the initial stage, master's degree programs and short training courses will be made available for the general public.



AMATA University has signed a Memorandum of Understanding with the Digital Economy Promotion Agency (DEPA) to collaborate in the SMART University project to develop digital-related courses and develop areas that meet future education by setting up the SMART Showcase in AMATA City Chonburi to be a model for the area of education management and to provide technological studies and the management of Smart City aiming to attract 1,500 students annually. The university's vocational curriculum and framework are in the research stage in partnership with other international institutions. The Company expects to apply for additional operational licenses in 2019.

DEPA x AMATA University: SMART UNIVERSITY Develop digital human resource for Thailand บันทึกข้อตกลงความร่วมมือว่าด้วยการขับเคลื่อนและพัฒนาเมืองอัจฉริยะ (Smart City) MOU SIGNING on Smart City MOU SIGNING on Smart City

School Library Improvement

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 2 school libraries every year focusing on those located within 5-7 kilometer radius of AMATA City Chonburi Industrial Estate. The school selection criteria are:

- A school in need of wide-ranging reading activities to support the overall teaching and learning experience.
- A school in need of an upgrading library system.
- A school in need of library resources to be more appropriate and attractive to users.

In 2018, the library modernization project was completed at the Wat Woraphot Sangkhawat School, Ban Nang Sub-District, Phantong District in Chonburi.



· AMATA Scholarships

On Children's Day each year, the Company presents scholarships to impoverished students who excel academically. Students are selected by schools neighboring AMATA City Industrial Estates in Chonburi and Rayong. The scholarships are funded by AMATA and the generosity of factories and businesses at both sites. A total of 305 scholarships totaling 152,590 Baht were awarded in 2018.



Statistics of AMATA Scholarship Presentation



· Knowledge transfer through books

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.

As Chairman of the foundation, he expresses the teachings of his personal life, and business experiences outlined in his books, and his radio and television programs. These endeavors are vital to educating society at large, inspiring young people, and benefiting less fortunate populations. In the past 16 years, more than 8 million copies of his 22 published books have been sold and translated into 8 languages.

In 2018, thanks to the philanthropy of the foundation, 352,857 books worth 7,250,750 Baht were donated to local communities and educational institutions near AMATA City Chonburi and AMATA City Rayong, and to governmental and private agencies, as well as during charitable events.



6. Community Engagement

The findings from the materiality assessment process confirmed a robust engagement with local communities surrounding both industrial estates as being the most material topic. Realizing the importance of local community involvement in various activities, the Company solicited feedback, expectations, and concerns from the communities through multiple channels of engagement. The insights provide valuable opportunities for the Company, not only to effectively address legitimate concern and challenges, but also for disseminating accurate information. As a result, the Company's major stakeholders, namely the surrounding communities and the overseeing government agencies, have a better understanding of the Company operations. This helps 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 operations.

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Committee

The Committee for Surrounding Community Development - AMATA City Chonburi: 97 representatives from local communities, government agencies and the business sector

The Committee for Surrounding Community Development at AMATA City Rayong: 29 representatives from local communities, government sector and the business sector

Eco-Green Network:

A working group formed to develop and link the operational network called "CSR + ECO + Environment & Safety + CG or Eco-Green Network" in AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate. Consist of representatives from the Company, factories in the industrial estates, local communities, local government entities, hospitals, and schools

Objectives

- Building confidence of stakeholders in the Company's environmental management by disclosing the results of environmental supervision
- Being a forum for the Company's stakeholders 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
- Elevating and developing
 Eco-Industrial City for both
 industrial estates by creating 5
 dimensional harmonies in
 physical, economic, social,
 environmental and management
 attributes.
- Encouraging and supporting participation of all stakeholders, especially factories, local communities and government entities in advancing AMATA industrial estates to be Ecoindustrial City.
- Publicizing achievements of the Eco-Industrial city at AMATA Industrial Estates

2018 Accomplishments

- Each Committee had one meeting in 2018.
- The Committees of both industrial estates expressing satisfaction and confidence in the Company's environmental management in accordance with set standards.
- The Committee of AMATA City Rayong expressed an interest in the factories in AMATA City Rayong's wastewater handlings and suggestions to be studied by the Company
- A meeting of the Eco-Green Network's working group at both industrial estates
- Discussing 2018 action plan and strategies to develop an Eco-Industrial City concept for the industrial estates
- The working group of AMATA City Chonburi industrial estate expressed an interest, in particular, on the management of solid waste from factories and communities, and road safety
- The working group of AMATA City Rayong industrial estate expressed an interest in establishing a community enterprise for their Women Group to upgrade their product standards and sell to businesses in the industrial estate.
| Committee | Objectives | 2018 Accomplishments |
|---|--|------------------------------------|
| Tripartite Council of Klong Luang Basin | Promoting and supporting the | • 4 Meetings held in 2018 for a |
| | collaboration among government | selection of council members in |
| | agencies, business sectors and | different levels e.g. 9 |
| | local people to create a | representatives from sub district |
| | management system for the | level, 10 from district level, and |
| | conservation, restoration and | 19 from the Watershed's |
| | preservation of natural resources, | communities and fulfilling the |
| | and the ecology of Klong Luang | representation requirements from |
| | Watershed | government, private and public |
| | To effectively manage the use of | sectors |
| | natural resources in the | Adopting emergency plans to help |
| | Watershed | communities in the event of |
| | | natural disasters |

With reference to the accomplishments of all committees in 2018, the Company received no significant complaints caused by the Company's businesses at both AMATA industrial estates. Regardless, the Company has carefully considered suggestions and feedback from local communities in order to earn the community's trust and acceptance.



Community Satisfaction Survey

The IEAT organizes the annual satisfaction survey of surrounding communities at 33 industrial estates and jointly conducted the community satisfaction survey with the Company in both AMATA industrial estates. In 2018, The result showed AMATA City Chonburi Industrial Estate receiving 99.6% satisfaction, compared to 99.2% in 2017, and 97.2% for AMATA City Rayong Industrial Estate, unchanged from 2017. This is a clear indicator of increased trust and confidence in the Company.



Safety and Occupational Health



2018 Highlight

• There is no employee of the Company and contractors causing accidents from lost time injury or death.

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 180,000 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 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 also taken the Zero Accident principle and applied it in the management for safety in the workplace for employees and contractors. The "Safety Road" project was initiated as a pilot project at AMATA City Chonburi industrial estate for the safety of factories' employees. Moreover, the Company has equipped new technologies for more efficient safety management in the operation area.

1. 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

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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 year 2018, there was zero lost time injury or death at the work.



2.Safety in AMATA Industrial Estate

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 City Rayong 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 response appropriately in event of a fire in the workplace.

In the year 2018, the Company has 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 has organized basic firefighting training course: fire drills and fire evacuation training for the factory in both industrial estates at total of 472 times (less than target for year 2018 at 550 times), with 8,530 factory workers being trained;



• The Company organized an annual Safety Week event for the year 2018 in order to 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 1,000 people.



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 2018, there are no employees from the contractor that encountered lost time injury or deaths. In addition, the Company places an importance on the road traffic safety inside AMATA industrial estates. Therefore, the Company initiated the "Safety Road project" in target to reduce accidents caused by driving of the factories' employees. Road improvements were conducted in areas vulnerable to road accidents. The Company has started installing CCTV systems in both AMATA industrial estates and is expected to be completed by the end of 2019. 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.

3. 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 safety society in the area around the industrial estate.

In the year 2018, the Company has suspended the 4 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 owners in the industrial estates to gather ideas, provide suggestions for traffic management and road safety. The Company has expanded the "Safety Road" project to cover the community areas connected to the industrial estate border to reduce accidents in the communities. Campaigns were organized to raise awareness about organizational behavior on safety. Road improvements were conducted in areas vulnerable to road accidents. The Company also provided CCTV to areas connected to the public road outside the industrial estate to reduce impact of traffic, accidents and prevent crime to its connected communities.



ENVIRONMENTAL CARE



Factories participating in AMATA Best waste management Awards increased by 25.3%

compared to 2017

Solid waste to landfill reduced to 0.64%

100% of recycled water was utilized within industrial

estates

Awarded Eco-industrial Estate Ievel ECO-Excellence and level ECO-Champion

100% of environmental complaints were resolved

Environmental Impact Management



2018 Highlights

- 100% of environmental complaints have been resolved.
- The Company received the Eco-Industrial Estate Awards in Eco-Excellence level for the AMATA City Chonburi Industrial Estate and in Eco-Champion level for the AMATA City Rayong Industrial Estate.

Industrial estate development is a business that can directly cause environmental impact if operating without good management. Therefore, local communities and relevant government agencies focus on the importance of this issue and it is one of the material issues that has a great impact on the Company's business operations. The Company has assessed the risks and impacts caused by the Company's business operation throughout the supply chain including the risks and environmental impacts caused by factories in AMATA's two Industrial estates. The concerned environmental impacts are air pollution and water pollution.

Therefore, the Company focuses on good and efficient environmental management by 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 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)

Smart Environment

After changing business plan to become a Smart City Developer, the Company has started the first development of the Smart City at the AMATA City Chonburi Industrial Estate. The Company has introduced the concept of Smart Environment to develop and improve the area in the AMATA City Chonburi Industrial Estate, with the goal of creating good quality of life and well-being for major stakeholders such as customers, communities, the Company's employees and factory employees. The other goal is to conduct risk management and impacts caused by climate change. Therefore, the Company's guidelines on the Smart Environment emphasizes the increase of green space or corridor, watershed management, waste to energy management and the promotion of renewable energy consumption. Regarding the concept of the Company's Smart Environment management, it led to the cooperation between the Company and the Global Green Growth Institute (GGGI), an international organization which is supported by the governments of more than 10 developed countries that have expertise in sustainable environmental management to study a framework of Smart City development in Smart Environment aspect at AMATA City Chonburi Industrial Estate.

On 12 July 2018, the Company signed a cooperative MOU with GGGI, covering a period of 5 years, and has begun to conduct a feasibility study for guidelines to improve AMATA City Chonburi Industrial Estate in accordance with the Company's Smart Environment management guidelines. The feasibility study will analyze and compare AMATA City Chonburi to the leading Green Industrial Estates around the world. The results are used to plan the Company's short-term, medium-term and long-term development. The first project under the said cooperation is the infrastructure development at AMATA City Chonburi Industrial Estate, according to the Green Infrastructure principle. It focuses on designing and managing natural or semi-natural areas to create the maximum benefits to the ecosystem services and ecosystem protection whilst utilizing green infrastructure in many areas at the same time (Multi-function). For example, green areas can be developed to a basic structure for water management while also used as a recreational area that can further generate business opportunities to the Company.



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 2018, 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 in 2013 and have been operating to the present to continuously monitor and control environmental quality in AMATA's two Industrial estates areas. There are 4 centers at the AMATA City Chonburi Industrial Estate and 2 centers at the AMATA City Rayong Industrial Estate. The real-time data from both locations are synced and are 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 both industrial estates and their factories, such as water consumption, wastewater volume, wastewater quality, industrial waste volume and air quality, etc.
- The monitoring and controlling system for the treated wastewater quality after treated by the central wastewater treatment plant; Wastewater quality data, after wastewater is treated by the central wastewater treatment plant, is linked to EMCC in the format of BOD Online. In case the treated wastewater quality is incompatible with the standard as specified in the Notification of Ministry of Science and Technology Issue no. 3 B.E. 2539 (1996) on the Standard of Sewerage Control from Industry and Industrial Estate, 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 the Air Quality Monitoring Station (AQMS). 4 AQMSs at the AMATA City Chonburi Industrial Estate area cover the surrounding areas of U Tapao Temple, Mab Sam Kleow Temple, Panthong Ratchanupatham School and Omkaew Temple and 2 AQMS at AMATA City Rayong Industrial Estate cover the surrounding areas of Health Promotion Hospital, Tumbon Mabyangporn and Pananikom Temple. The AQMSs investigate the total suspended particulates (TSP), particulate matter up to 10 microns (PM10), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and wind speed/ wind direction. Then, the AQMSs analyse the collected data together with wind direction and air quality from factory smokestacks to identify the source of any air pollution.
- The monitoring and controlling system of air quality emitted from factory smokestacks; This system is an online method to monitor and control environmental impact by linking the air quality measurement data from factory smokestacks to EMCC. If air pollution over the standard has been released by any factory, the system will alert the factory in question to inspect and report the causes, then immediately make corrections and improvement. All power plants located in AMATA Industrial Estates are required to link to the data online once the plant construction is completed.
- The security surveillance system in the area using CCTV to process and inform safety planning and traffic management in the industrial estates.



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

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 Industrial Estate Authority of Thailand and the Office of National Resources and Environmental Policy Planning (ONEP) every 6 months. The report discloses the performance after the implementation of preventive and corrective measures stated in the Environmental Impact Assessment report in the AMATA City Chonburi and AMATA City Rayong Industrial Estate. The Company also presents the EIA Monitoring reports to the Environmental Quality Audit Committee of the industrial estate in both AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate for their acknowledgement.

In 2018, 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.

- The Environmental Quality Audit Committees of AMATA City Chonburi Industrial Estate suggested that the Company raise awareness for water management among its surrounding communities because wastewater problems caused by communities may affect the quality of surface water and groundwater in industrial estates in the future.
- The Environmental Quality Audits Committees of AMATA City Rayong Industrial Estate proposed to organize activities to educate foreign operators about the business operations laws in industrial estates in order to reduce pollutants emissions from the industrial plants by negligence or reckless actions.

Implementation according to the government policy

1. Eco-Industrial Estate Development

The Company has collaborated with the Industrial Estate Authority of Thailand (IEAT) in developing AMATA Industrial Estates to be Eco-industrial Estates 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 Estate 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.

To develop Eco-industrial Estates at AMATA City Chonburi Industrial Estate and AMATA City Rayong Industrial Estate, the Company has carried out several activities and projects 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 2018, the Company was awarded "Eco-industrial Estate level: Eco-Excellence" for AMATA City Chonburi and "Eco-industrial Estate: level Eco-Champion" for AMATA City Rayong. Nevertheless, the Company intentionally thrives to create perfect and sustainable Eco-Industrial Estates.



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 2018, 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 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 2018, there were a total of 399 complaints, 11 of which were about the social and environmental impact (2.75% of total complaints received). The Company's complaint management system and problem-solving monitoring system oversee the complaints until the problems are 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 2018, the Company completely solved all 399 complaints including the complaints related to social and environmental impact.

Energy Management



2018 Highlight

 Reduced greenhouse gas emissions by 160,800.15 tons of carbon dioxide equivalent

Energy is vital to the industry sector while the activities that consume the energy are one of the sources of greenhouse gas emissions which lead to climate change. The Company realizes the importance and responsibility for efficient use of energy and the impact on the global climate change. The Company, therefore, always takes into account the appropriate energy management from the development of standardized utilities to an adoption of environmental-friendly technology, such as cogeneration power plants for ensuing the customers and communities in having sufficient electricity sources for business operations and energy security for community development.

The Company sets the energy goals for AMATA Smart City to be self-reliant on energy with the efficient energy management through the use of renewable energy in various forms, including an investment and development of clean energy sources and advanced technology which helps reduce pollution and sustainable environmental management. Those are for the stability of the Company's energy and the benefits of the Company's stakeholders. The use of renewable energy and energy efficiency management affects the operation cost in a long run as well as support the reduction and avoidance of greenhouse gas emissions. (Disclosure 103-1)

Management Approach (Disclosure 103-2)

In order to reduce environmental impact and to preserve natural resources, the Company has adopted the principles of smart energy management and developed them into practices in accordance with relevant laws such as the Building Control Act, B.E. 2522 (1979), the Energy Conservation Promotion Act, B.E. 2535 (1992) and related standards, e.g. Thai's Rating of Energy and Environmental Sustainability (TREES) and the ISO 14001: 2015 standard. Such practices are used for energy management in the Company's buildings, utilities and common areas of AMATA Industrial Estates to create a society with low carbon emissions and to be a part of helping preserve the environment and the community sustainably.

In 2018 the Company implemented the Smart Energy project that helped reduce the Company's business risks and organized the energy conservation activities such as a reduction of energy consumption in buildings campaign, an application of innovation and technology to reduce fossil fuel consumption and a promotion of renewable energy consumption in the Company's utility system. Details are as follows:

1. Smart Energy Project

The Company focuses on the development of energy stability, such as electricity and natural gas for industrial use, in order to create confidence for investors and factory operators within AMATA City Chonburi Industrial Estate. It currently operates 5 cogeneration power plants with power generation capacity of approximately 734 megawatts using clean fuels from natural gas, causing high energy stability in AMATA Industrial Estates which are chosen as the location of business requiring high energy stability, e.g. regional data center etc.

In 2017 the Company began to develop into a Smart City with a focus on the importance of energy management. On 14 March 2017, AMATA Corporation Public Company Limited has signed a memorandum of understanding with the Energy Policy and Planning Office (EPPO), Ministry of Energy, to develop the Smart City focusing on smart energy. The Company has set the following guidelines for the Smart Energy development:

- 1. Supporting the use of renewable energy from various energy sources.
- 2. Aiming to reduce the emission of greenhouse gases which leads to a low carbon city.
- 3. Being a city that is self-reliant on energy and not relying on the external power supply.
- 4. Being a city with a smart grid system.

The Company has set a long-term goal for the Smart Energy Management projects, i.e. increasing the proportion of renewable energy consumption from various sources to 20% of total energy consumption in the Smart City in 2040 and increasing energy efficiency by applying innovation of the Smart Grid to the entire area.

In 2018 the Company collaborated with the Energy Policy and Planning Office (EPPO) to conduct a research and study on Micro Smart Grid and Smart Grid systems in the industrial estates as well as research and development of energy management systems in the factories. Potential factories in AMATA City Chonburi Industrial Estate have been involving in the project by being pilot factories in the installation of an energy management system which can support remote management system to help manage the electricity consumption in the factories, as well as participating in the testing of the electricity demand response measures, which will be completed by 2019 and will be used to plan the development of renewable energy power supply sources and the investment plan for the complete smart grid system in AMATA Smart City afterwards.

2. Energy Conservation

The Company has set the implementation guidelines on business processes which will help save energy consumption and reduce greenhouse gas emissions by starting a pilot project in the Company's office building and common areas in AMATA City Chonburi Industrial Estate.

• Energy Saving in Office Buildings

In 2017 the Company's office building in AMATA City Chonburi Industrial Estate had a total electricity consumption of 1,472,616 kilowatt-hours or equivalent to Baht 5,796,363. In 2018 the Company aimed to further reduce the electricity consumption as compared to that in 2017. Therefore, it had organized activities to promote the Company's employees and tenants in the office building to gain more knowledge on the reduction in the energy consumption in buildings and to focus on building employees' 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 walk instead of

using elevators and limiting the air conditioning system's temperature in the offices to 24 degrees Celsius etc. Such activities helped save electricity energy in the building as the electricity consumption in office building decreased by 23% compared to the year 2017 or reduced to 1,129,367 kilowatt-hours or equivalent to Baht 4,445,300. The Company saved the electricity expense by Baht 1,351,063, equivalent to the reduction of greenhouse gas emission by 199.81 tons of carbon dioxide equivalent.

Energy Saving in Common Areas

The Company is responsible for managing all common areas in the industrial estates, including the maintenance of the street lighting system in the industrial estates. In 2013, the Company has started to reduce energy consumption in the common areas of AMATA City Chonburi Industrial Estate by using LED lighting sets. Such replacement was also implemented in AMATA City Rayong Industrial Estate in 2015 by gradually replacing the broken fluorescent lamps with LED lighting sets until it was complete in the year 2018. The Company totally installed 3,111 LED lighting sets which helped the Company reduce the electricity consumption by 2,314,785 kilowatt-hours per year or reduced the greenhouse gas emission of 160,392.66 tons of carbon dioxide equivalent per year.



3. Application of Innovation and Technology to Reduce Fossil Fuel Consumption

The Company has investments in various areas both domestically and internationally. Therefore, it incurred considerable amount of travelling expenses for the meetings at the offices in various areas as well as wasting time and fuel. The Company has thus installed the teleconferencing system technology and remote online meeting application in every office including subsidiaries. As a result, traveling expenses and fossil fuel from domestic travel were reduced by 14%, representing Baht 623,985 or equivalent to 24,170 liters of gas. Traveling expenses for overseas meetings were reduced by Baht 10 million while greenhouse gas emission was reduced totally by 87 tons of carbon dioxide equivalent per year. In addition, it also saves time and reduces the risk of traveling accident.



4. Promotion of Renewable Energy Consumption in the Company's Utility System

The Company encourages its subsidiaries within supply chain to increase the efficiency of energy management and reduce electricity consumption. AMATA Water Co., Ltd., responsible for managing water and wastewater 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 reclamation system since 2017.

In 2018 AMATA Water Co., Ltd. installed additional solar roof system at the water supply production plant with reclamation system in AMATA City Rayong Industrial Estate. As a result, 207,320 kilowatt-hours of electricity from solar energy was produced to replace the electricity consumption in the whole system, accounting for 6.76% of total electricity consumption in the water supply production by reclamation system. The greenhouse gas emission was reduced by 120.68 tons of carbon dioxide equivalent per year.







2018 Highlights

- No complaints from local communities in water reservoir scrambling
- 100% of recycled water utilized within the industrial estates
- Proportion of raw water in water supply production process reduced to 63% of total water consumption

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. As a result, the countermeasures on risks of water shortage or flooding are major issues to which the Company always pays attention.

In addition, wastewater management within AMATA Industrial Estates is deemed to be important issues which the Company and its stakeholders greatly focus on. The Company, thus, places importance on minimizing any environmental impacts from business operation within AMATA Industrial Estates as well as planning for the sustainable natural resources consumption by setting 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.

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 required raw water consumption 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, there are 17 reservoirs supplying raw water for both AMATA Industrial Estates with the total water reservoir capacity of 44.7 million cubic meters.

Currently, water consumption demand in AMATA Industrial Estates is 58.8 million cubic meters per year. The Company recognizes the importance of the efficient and worthy water consumption. Therefore, it has invested in the reclamation system to improve the quality of recycled water by applying Reverse Osmosis technology to produce high quality water supply to the factories in the industrial estates since 2008. The Company has been continuously increasing the capacity of reclamation system to maximize the recycled water consumption and reduce the volume of raw water used in water supply production process.



In 2018 the Company targeted to reduce the proportion of raw water used in water supply production process to 65% of total water consumption. The Company has increased the capacity of reclamation system to 33,360 cubic meters per day, thereby increasing the proportion of recycled water used in the reclamation system from 40% in

2017 to 45% of the total recycled water. As a result, in 2018 the volume of raw water sent to water supply production was reduced to 33.33 million cubic meters (Disclosure 303-1), or a reduction from 78% in 2017 to 63% of total water consumption. The Company's cost of raw water sourcing was then reduced by Baht 59.4 million per year.

As a result, the Company's raw water reserve for consumption could be extended by 4 more months. An expansion of reclamation system capacity also helps 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.



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.

In the wastewater management process of the industrial estate, the factories will deliver the preliminary treated wastewater with 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.

In 2018, 21.7 million cubic meters of wastewater were treated by the central wastewater treatment system and reused in various forms, i.e. sent to the reclamation system using Reverse Osmosis method for water supply production, used in the power plants' cooling system in AMATA Industrial Estates and used in common areas. The Company also regularly monitors water quality in the canals around AMATA Industrial Estates to ensure water quality.



Climate Change Countermeasures

In addition to water management for the production process, the Company also focuses 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, 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.

According to the Company's survey, detention areas which accommodate water from the community outside AMATA City Chonburi Industrial Estate include winding and shallow public canals coupled with the community intrusion problem in the downstream canal area. The Company, therefore, held a meeting together with local authorities for water management. Each entity is in charge of its own area to dredge the canals in the responsible areas to be ready to detain rainfall. The Company also installed automatic electric pump and improved the efficiency of the drainage system of the industrial estate. The rainfall in Chonburi in 2018 was 1,350 mm. The volume of rainfall in AMATA City Chonburi Industrial Estate area was 171 million cubic meters which was less than that in 2017. The Company has developed and improved various systems, resulting in no flooding in the upstream community area before entering the raw water reservoir. Water drainage period on the road surface decreased from 4 hours to 2 hours as measured from the lowest area of AMATA City Chonburi Industrial Estate, in front of Colgate Palmolive (Thailand) Co., Ltd. to Don Hua Ror intersection.

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. Therefore, the Company has set the management guidelines as follows:

- Increase in green areas and reservoirs to accommodate surface runoff
- Automatic drainage system improvement

In 2018 the Company has set the water management plan jointly with internal organizations which were responsible for the public utilities, i.e. AMATA Water Co., Ltd. who was responsible for overseeing an opening and closing of the drainage system gates and AMATA Facility Services Co., Ltd. who was responsible for monitoring the amount of water flow in AMATA City Rayong Industrial Estate.

Water Management Promotion Outside the Industrial Estates

Water is one of the most important resources for all industries and communities. The Company, therefore, encourages 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 268 visiting groups with a total of 9,329 visitors.

In 2018 the Company aimed to welcome at least 300 visitors to the learning center with a focus 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 2018 there were 723 visitors from 24 groups visiting the Water Management Learning Center in AMATA City Chonburi Industrial Estate, consisting of 7 groups from academic institutions, 12 groups from the government agencies and local authorities, 2 groups from the operators in the industrial estates and 3 groups from general visitors.

AMATA CORPORATION PUBLIC COMPANY LIMITED SUSTAINABILITY REPORT 2018

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Energy Management

Solid waste and Industrial waste management



2018 Highlights

- The solid waste that must be disposed by landfill method is reduced to 0.64%
- The number of factories participating in the AMATA Best Waste Management Award program was increased by 25.3% compared to 2017
- Recycled Plastic Road Project: Using 8% of plastic waste from industrial waste as an alternative raw material instead of asphalt in the asphalt concrete process

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 solid waste and industrial waste management of each factory does not comply with the law, it will cause negative impacts on the environment and the surrounding communities both in the short and long term. This will hinder the Company's factory license application in the future as well. Effective waste disposal from production 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 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. Additionally, the Company has applied 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.

Туре	Scope of Responsibility	The Company's waste management approach (Disclosure 306-2)
Solid waste	750 factories in AMATA Industrial Estates have hired the Company to manage waste.	 Establishing a waste separation plant to provide solid waste management services to industrial plants in the AMATA City Chonburi Industrial Estate. Providing industrial plants solid waste management services in the AMATA City Rayong Industrial Estate. Applying the Plastic Road innovation to manage the remaining plastic waste after the separation process from the waste separation plant.

Solid waste and Industrial waste management

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Туре	Scope of Responsibility	The Company's waste management approach (Disclosure 306-2)
Industrial waste	All factories in AMATA Industrial Estates. 30 of them have hired the Company as their waste processor.	 Providing training about compliance with the laws related to waste management for factories in both AMATA's Industrial Estates. Organizing a project named AMATA Best Waste Management Awards to promote waste management standard in the factory for factories in both AMATA Industrial Estates. 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. Conducting a feasibility study for power generation using industrial waste according to Waste to Energy principles.

Performance (Disclosure 103-3, 306-2)

1. Solid waste management in AMATA Industrial Estates

The Company gives importance to the factories' waste management process in both AMATA Industrial Estates and has assigned AMATA Facility Services Company Limited (AFS), a subsidiary company, to implement 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 and is the main cause of climate change. The Company therefore has aimed to manage waste with landfill method as little as possible and has adopted the principle of reducing waste disposal by the means of zero waste to landfill by instead collecting, sorting and disposing solid waste services in AMATA City Chonburi Industrial Estate since the year 2011 and plans to expand its operations to AMATA City Rayong Industrial Estate in the year 2019.

In 2018, the Company provided solid waste management services to factories in both industrial estates, managing 27,676 tons of waste that year. It is divided into 23,296 tons per year of solid waste generated by factories in AMATA City Chonburi Industrial Estate and 4,380 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 management process from landfill to produce alternative fuel (Refuse-derived fuel: RDF) and sintering process management in cement plants.

In 2018, the Company's waste separation plant was able to separate recyclable waste from solid waste by 14.17% of the total amount of solid waste, and solid waste that could be recycled into alternative fuel or Refusederived fuel (RDF) accounted for 85.19%. This allowed the Company to reduce the amount of waste disposal by landfill method from 0.92% of the total amount of solid waste managed by the Company's waste separation plant in 2017 to 0.64% in 2018. However, some types of solid waste still required disposal by landfill method, viz. noncombustible waste such as bricks, stones, cement, sand, food waste, etc.

Waste management according to Zero Waste to Landfill guidelines allowed the Company to save waste management costs by 7.95 million baht in 2018 and 85% of business operators which were the customers of the Company's waste management service expressed satisfaction in the Company's waste management service and expressed confidence that the waste was 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, the execution of zero waste to landfill measures optimized resource utilization and indirectly reduced carbon dioxide emissions from the cement production process as well.



Comparison between landfill and recycling methods



2. Building awareness of industrial waste management to customers

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.

In 2018, there were a total of 87 companies applying to join the project, an increase of 25.3% over the 65 participating companies in 2017. 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.

	Total number of	Award-winning factories in 2018				
	Award-winning factories in 2017 (company) 2018 (company)		AMATA City Chonburi I.E. (company)	AMATA City Rayong I.E. (company)		
Silver Level Awards	20	33	25	8		
Gold Level Awards	20	23	19	4		
Platinum Level Awards	25	31	24	7		
Total	65	87	68	19		

The Company examined each factory by conducting internal audits for industrial waste management lead by 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 advised 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.



Number of factory joining AMATA Best Waste Management Awards

3. Innovation for 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 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 roads within the area of AMATA City Industrial Estate, Chonburi, with an area of 1,440 square meters.

The Company has plans to extend this project in the year 2019 by building additional recycled plastic roads 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



C Performance Statistics

Economic Performance

	2015	2016	2017	2018
Economic Value Added (Consolidated Financial Statements for the	Year ended 31	December)		
Common Share Information				
Par value (THB)	1	1	1	1
Book value per share (THB)	10	10.44	11.59	12.03
Earnings per share (THB)	1.14	1.12	1.32	0.95
Economic Performance (THB, million)				
Revenue from sales and services	5,115.42	4,426.51	4,491.25	4,353.81
Total revenue	6,237.71	4,732.69	4,652.14	4,576.33
Net profit	1,216.02	1,198.27	1,409.49	1,018.22
Financial Position (THB, million)				
Current assets	11,345.49	10,218.17	10,056.99	10,290.91
Total assets	25,451.40	26,595.70	29,279.67	33,021.43
Current liabilities	5,095.60	5,862.62	2,160.35	3,866.22
Total liabilities	11,950.88	12,355.55	14,308.36	17,452.34
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	13,500.52	14,240.15	14,971.31	15,569.09
Financial Ratios				
Return of equity (%)	11.43	10.37	11.50	7.98
Return on assets (%)	5.11	7.41	8.04	5.92
Gross margin (%)	44.79	53.24	53.73	51.75
Current ratio (times)	2.23	1.74	4.66	2.66
Debt to equity ratio (times)	1.07	1.03	1.14	1.35
Tax and Tax Incentives (THB, million)				
Tax paid ¹	396.12	304.05	282.90	271.28
Business ethics				
Numbers of complains on business ethics	0	0	0	1
Numbers of complains on business ethics that are true	0	0	0	0
Supply Chain Management (Disclosure 204-1)				
Percentage of Local purchases of goods and services ²	100	100	100	100

Note:

1 The information from the consolidated financial statements of AMATA Corporation Public Company Limited and its subsidiaries 2018 2 Local purchasing in Thailand

Social Performance

1. Employment

Employee	20 [.]	16	201	2017		2018	
(Disclosure 102-8)	Persons	%	Persons	%	Persons	%	
Total number of employees on 31 December	254	100.0	247	100.0	257	100.0	
By Gender							
Male	142	55.9	134	54.3	144	56.0	
Female	112	44.1	113	45.7	113	44.0	
By Level							
Top Management (level 9 - 12)	17	6.7	16	6.5	16	6.2	
Male	10	58.8	9	56.3	9	56.3	
Female	7	41.2	7	43.8	7	43.8	
Middle Management (level 6 - 8)	35	13.8	34	13.8	37	14.4	
Male	19	54.3	20	58.8	20	54.1	
• Female	16	45.7	14	41.2	17	45.9	
First-line Management (level 4 - 5)	61	24.0	65	26.3	69	26.8	
• Male	25	41.0	24	36.9	28	40.6	
• Female	36	59.0	41	63.1	41	59.4	
Operational level (level 1 - 3)	141	55.5	132	53.4	135	52.5	
• Male	88	62.4	81	61.4	87	64.4	
• Female	53	37.6	51	38.6	48	35.6	
By Age							
less than 30 years old	69	27.2	68	27.5	59	23.0	
• Male	29	42.0	30	44.1	28	47.5	
• Female	40	58.0	38	55.9	31	52.5	
30-50 years old	150	59.1	139	56.3	155	60.3	
• Male	91	60.7	80	57.6	90	58.1	
• Female	59	39.3	59	42.4	65	72.2	
over 50 years old	35	13.8	40	16.2	43	16.7	
• Male	22	62.9	24	60.0	26	60.5	
• Female	13	37.1	16	40.0	17	39.5	
By Employment Contract							
Permanent employees	138	54.3	140	56.7	145	56.4	
• Male	65	47.1	65	46.4	70	48.3	
• Female	73	52.9	75	53.6	75	51.7	
Yearly Contract Employees	41	16.1	37	15.0	37	14.4	
• Male	22	53.7	18	48.6	18	48.6	
Female	19	46.3	19	51.4	19	51.4	
Temporary employees (outsource)	75	29.5	70	28.3	75	29.2	
Male	55	73.3	51	72.9	56	74.7	
Female	20	26.7	19	27.1	19	25.3	

Employee	20 ⁻	16	201	17	20	18
(Disclosure 102-8)	Persons	%	Persons	%	Persons	%
By Employment Type			i i i			
Full-time Employee	254	100.0	247	100.0	256	99.6
• Male	142	55.9	134	54.3	144	56.3
Female	112	44.1	113	45.7	112	43.8
Part-time Employee	0	0.0	0	0.0	1	0.4
• Male	0	0.0	0	0.0	0	0.0
Female	0	0.0	0	0.0	1	100.0
By Location						
Bangkok Office	72	28.3	69	27.9	76	29.6
Permanent employees	46	63.9	44	63.8	43	56.6
Yearly Contract Employees	11	15.3	8	11.6	11	14.5
Temporary employees (outsource)	15	20.8	17	24.6	22	28.9
Amata City Chonburi Office	151	59.4	144	58.3	142	55.3
Permanent employees	75	49.7	79	54.9	82	57.7
Yearly Contract Employees	27	17.9	27	18.8	24	16.9
Temporary employees (outsource)	49	32.5	38	26.4	36	25.4
Amata City Rayong Office	31	12.2	34	13.8	39	15.2
Permanent employees	17	54.8	17	50.0	20	51.3
Yearly Contract Employees	3	9.7	2	5.9	2	5.1
Temporary employees (outsource)	11	35.5	15	44.1	17	43.6
By Hometown						
Bangkok	70	27.6	63	25.5	66	25.7
Central region	28	11.0	33	13.4	35	13.6
Eastern region	88	34.6	89	36.0	87	33.9
Vestern region	9	3.5	8	3.2	8	3.1
Southern region	4	1.6	7	2.8	9	3.5
Northern region	19	7.5	15	6.1	20	7.8
North-Eastern region	36	14.2	32	13.0	32	12.5
By Nationality						
Fhai	239	94.1	234	94.7	243	94.6
English	1	0.4	1	0.4	1	0.4
Chinese	3	1.2	3	1.2	3	1.2
Singaporean	1	0.4	1	0.4	1	0.4
lapanese	2	0.8	3	1.2	4	1.6
lietnamese	3	1.2	1	0.4	1	0.4
Burmese	5	2.0	4	1.6	4	1.6
Employees with disabilities	1	0.4	1	0.4	1	0.4
• Male	1	100.0	1	100.0	1	100.0
• Female	0	0.0	0	0.0	0	0.0

New Employee (Disclosure 401-1)	201	2016		2017		2018	
	Persons	%	Persons	%	Persons	%	
New employees	71	28.0	52	21.1	43	16.7	
By Gender							
• Male	53	74.6	32	61.5	27	62.8	
• Female	18	25.4	20	38.5	16	37.2	
By Age			·		· ·		
less than 30 years old	36	50.7	25	48.1	18	41.9	
• 30-50 years old	34	47.9	26	50.0	24	55.8	
over 50 years old	1	1.4	1	1.9	1	2.3	

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

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

Employee Development	2016	2017	2018
(Disclosure 404-1)	hours / Person	hours / Person	hours / Person
Total average training hours per person per year	27.53	24.49	27.21
By Gender			
• Male	N/A	N/A	19.33
• Female	N/A	N/A	34.42
By Level			
Management level	N/A	N/A	26.40
Operational level	N/A	N/A	27.40
	0016	0017	0010
	2016	2017	2018

	2010	2017	2018
Labour and Human rights Complaint (Case)	0	0	0
Employee Engagement (Percentage)	37	35	44

2. Safety and Occupational Health

Occupational Disease Rate	2016	2017	2018
Number of employees with work-related illness (persons)	·		
• Male	N/A	N/A	N/A
• Female	N/A	N/A	N/A
Injury rate employees (persons)			
Injured employees (no workday lost)			
• Male	N/A	N/A	N/A
• Female	N/A	N/A	N/A
Injured employees (with workday lost)			
• Male	N/A	N/A	0
• Female	N/A	N/A	0
Death from work-related illnesses/ accident			
• Male	0	0	0
Female	0	0	0
Severe injuries resulting in disabilities			
• Male	0	0	0
• Female	0	0	0
Sick leave			
Average sick days per employee (days)	1.13	1.08	1.34
Absentee Rate			
Total Absentee Rate (%)	0	0	0

Environmental Performance

1. Energy (Disclosure 302-1)

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

2. Water (Disclosure 303-1)

AMATA City Chonburi Industrial Estate	Unit	Standard	2014	2015	2016	2017	2018
Amount of water used	m³	-	24,579,626	25,818,699	26,251,773	25,225,182	25,452,120
Amount of raw water used in water production	m³	-	22,756,953	22,418,955	21,280,749	19,234,025	19,332,025
Amount of recycle water (treated by RO)	m³	-	1,822,673	3,399,744	4,971,024	4,958,126	6,120,095
Amount of waste water from factories to central waste water treatment plant	m³	-	12,934,293	13,301,901	12,073,231	11,111,664	11,520,039
Amount of effluent discharged from central waste water treatment plant	m³	-	12,934,293	13,301,901	12,073,231	11,111,664	11,520,039
AMATA City Rayong Industrial Estate	Unit	Standard	2014	2015	2016	2017	2018
Amount of water used	m³	-	13,906,040	14,839,161	16,929,290	16,390,177	21,363,618
Amount of raw water used in water production	m³	-	12,063,812	12,941,012	14,800,897	14,275,793	17,784,004
Amount of recycle water (treated by RO)	m³	-	1,842,228	1,898,149	2,128,393	2,272,218	3,579,614
Amount of waste water from factories to central waste water treatment plant	m³	-	6,547,556	7,140,132	7,876,263	9,241,402	10,188,021
Amount of effluent discharged from	m³	-	6,547,556	7,140,132	7,876,263	9,241,402	10,188,021

3. Effluent

Quality of Effluent discharged from central wastewater treatment plant (Disclosure 306-1)							
Effluent quality monitoring	Unit	Standard	2014	2015	2016	2017	2018
AMATA City Chonburi Industrial Estate							
рН		5.5-9.0	7.11	7.04	7.02	6.8-8.0	6.4-8.1
Temperature	°C	≤ 40	32	32	31	27-35	28-37
Biochemical Oxygen Demand (BOD_)	mg/L	≤ 20	<2.0	6.2	2.8	2.3-18.4	<2.0-18.0
Chemical Oxygen Demand (COD)	mg/L	≤ 120	36	48	34	<40-72	<40-76
Grease and Oil	mg/L	≤ 5	<2.0	<2.0	<2.0	ND,2.0-2.3	ND,<3.0-3.3
Suspended Solid (SS)	mg/L	≤ 50	8	6	14	<5-46	ND,<5-43
Total Dissolved Solid (TDS)	mg/L	≤ 3000	956	1280	1232	624-1,242	628-1,380
Total Kjeldahl Nitrogen (TKN)	mg/L	≤ 100	0.99	1.69	0.99	<5-33	ND,<5-42
Mercury (Hg)	mg/L	≤ 0.005	<0.0005	<0.0005	<0.0005	ND,<0.10	ND,<0.0010
Selenium (Se)	mg/L	≤ 0.02	<0.0005	<0.0005	<0.0005	ND	ND
Cadmium (Cd)	mg/L	≤ 0.03	<0.01	<0.01	<0.01	ND	ND
Lead (Pb)	mg/L	≤ 0.2	<0.05	<0.05	<0.05	ND	ND,<0.10
Arsenic (As)	mg/L	≤ 0.25	0.0044	0.005	0.0023	<0.0020-0.0036	<0.0020-0.045
Chromium (Cr ³⁺)	mg/L	≤ 0.75	<0.01	<0.01	0.05	ND	ND,0.10-0.17
Chromium (Cr ⁶⁺)	mg/L	≤ 0.25	<0.01	<0.01	<0.01	ND,<0.10	ND,<0.10
Barium (Ba)	mg/L	≤ 1.0	<0.20	<0.02	<0.02	<0.02-0.04	<0.02-0.11
Nickel (Ni)	mg/L	≤ 1.0	0.5	<0.05	0.17	<0.10-0.28	<0.10-0.65
Copper (Cu)	mg/L	≤ 2.0	0.01	<0.01	0.02	<0.10-0.10	<0.10-0.53
Zinc (Zn)	mg/L	≤ 5.0	0.16	0.13	0.16	0.11-0.45	0.11-0.81
Sulfide as H S	mg/L	≤ 1.0	<0.03	<0.03	<0.03	ND,<0.53	ND,<0.53
Cyanide as HCN	mg/L	≤ 0.2	<0.01	<0.01	<0.01	ND	ND,<0.020-0.040
Chloride as Cl	mg/L	≤ 1.0	<0.1	<0.1	<0.1	<0.1-0.2	<0.1-0.3
AMATA City Rayong Industrial Estate							
рН		5.5-9.0	7.25	7.04	7.35	7.3-8.1	7.1-7.7
Temperature	°C	≤ 40	29.8	31	31.2	27-35	29-31
Biochemical Oxygen Demand (BOD ₅)	mg/L	≤ 20	5.8	6.5	8.6	<2.0-13	<2.0-14.2
Chemical Oxygen Demand (COD)	mg/L	≤ 120	28	29	34	<40-45	41-71
Grease and Oil	mg/L	≤ 5	<2.0	<2.0	<2.0	ND,<2.0	ND,<3.0
Suspended Solid (SS)	mg/L	≤ 50	4	15	6	<5-20	ND,<5-5
Total Dissolve Solid (TDS)	mg/L	≤ 3000	676	752	868	1,020-1,360	1,652-2,470
Total Kjeldahl Nitrogen (TKN)	mg/L	≤ 100	13.35	5.19	16.85	15-26	11-30
Mercury (Hg)	mg/L	≤ 0.005	<0.005	<0.005	<0.005	ND,<0.0010	ND
Selenium (Se)	mg/L	≤ 0.02	<0.005	<0.005	<0.005	ND,<0.0020	<0.0020

Quality of Effluent discharged from central wastewater treatment plant (Disclosure 306-1)								
Effluent quality monitoring	Unit	Standard	2014	2015	2016	2017	2018	
Cadmium (Cd)	mg/L	≤ 0.03	<0.01	<0.01	<0.01	ND	ND	
Lead (Pb)	mg/L	≤ 0.2	<0.05	<0.05	<0.05	ND	ND,<0.10	
Arsenic (As)	mg/L	≤ 0.25	0.0039	0.0023	0.009	<0.0020-0.0061	0.0048-0.0105	
Chromium (Cr ³⁺)	mg/L	≤ 0.75	0.02	<0.01	<0.01	ND	ND	
Chromium (Cr ⁶⁺)	mg/L	≤ 0.25	<0.01	<0.01	<0.01	ND	ND	
Barium (Ba)	mg/L	≤ 1.0	<0.20	<0.20	<0.20	0.05-0.07	0.10	
Nickel (Ni)	mg/L	≤ 1.0	<0.05	<0.05	<0.05	ND,<0.10	0.11-0.16	
Copper (Cu)	mg/L	≤ 2.0	<0.01	<0.01	<0.01	ND	ND,<0.10	
Zinc (Zn)	mg/L	≤ 5.0	0.18	0.09	0.1	0.13	0.15-0.22	
Sulfide as H_2	mg/L	≤ 1.0	<0.03	<0.03	<0.03	ND,<0.53	<0.53	
Cyanide as HCN	mg/L	≤ 0.2	<0.01	<0.01	<0.01	ND	ND	
Chloride as Cl	mg/L	≤ 1.0	<0.1	<0.1	<0.1	158-346	<0.1	

4. Air Emission

Air Quality Monitoring in surrounding area of Industrial estate (Disclosure 305-7)								
	Unit	Standard	2014	2015	2016	2017	2018	
AMATA City Chonburi Industrial Estat	e		•					
Location 1: Boonyarasri Temple (A1)								
Nitrogen Dioxide: NO	mg/m ³	≼ 0.17	<0.001-0.029	0.001-0.032	<0.001-0.012	<0.001-0.031	0.003-0.036	
Sulfur Dioxide:SO2	mg/m ³	≤ 0.30	0.002-0.021	<0.001-0.017	<0.001-0.026	0.003-0.017	0.004-0.035	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.04-0.08	0.06-0.12	0.05-0.10	0.04-0.15	0.059-0.171	
PM 10	mg/m ³	≼ 0.12	0.02-0.05	0.03-0.09	0.02-0.08	0.02-0.06	0.052-0.089	
Location 2: Ban Yan Sue School (A2))		-					
Nitrogen Dioxide: NO2	mg/m ³	≼ 0.17	0.001-0.072	0.001-0.045	<0.001-0.026	0.002-0.036	0.005-0.059	
Sulfur Dioxide:SO2	mg/m ³	≤ 0.30	0.004-0.049	0.014-0.097	<0.001-0.016	<0.001-0.014	0.002-0.014	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.07-0.14	0.09-0.14	0.05-0.14	0.04-0.13	0.069-0.137	
PM 10	mg/m ³	≤ 0.12	0.01-0.09	0.04-0.09	0.02-0.06	0.02-0.06	0.043-0.074	
Location 3: Don Damrongtham Temp	le (A5)							
Nitrogen Dioxide: NO	mg/m ³	≤ 0.17	<0.001-0.064	0.002-0.030	0.003-0.036	<0.001-0.032	0.004-0.033	
Sulfur Dioxide:SO2	mg/m ³	≤ 0.30	0.003-0.032	0.002-0.029	<0.001-0.006	0.002-0.029	0.019-0.025	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.07-0.11	0.08-0.15	0.06-0.16	0.05-0.13	0.058-0.117	
PM 10	mg/m ³	≤ 0.12	0.04-0.08	0.06-0.10	0.04-0.07	0.02-0.09	0.040-0.066	
Location 4: Science-Based Technology Vocational College (Chonburi) (A6)								
Nitrogen Dioxide: NO	mg/m ³	≼ 0.17	<0.001-0.024	0.001-0.028	0.001-0.053	0.001-0.025	0.004-0.020	

Air Quality Monitoring in surrounding area of Industrial estate (Disclosure 305-7)								
	Unit	Standard	2014	2015	2016	2017	2018	
Sulfur Dioxide:SO	mg/m ³	≤ 0.30	0.001-0.005	<0.001-0.062	<0.001-0.009	<0.001-0.034	0.013-0.018	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.03-0.07	0.04-0.08	0.03-0.10	0.03-0.10	0.043-0.065	
PM 10	mg/m ³	≼ 0.12	0.02-0.03	0.02-0.07	0.02-0.05	0.01-0.06	0.021-0.032	
Location 5: Ban Map Sam Kliaw (A8)								
Nitrogen Dioxide: NO2	mg/m ³	≼ 0.17	0.002-0.089	<0.001-0.029	<0.001-0.036	0.002-0.057	0.003-0.028	
Sulfur Dioxide:SO	mg/m ³	≤ 0.30	<0.001-0.005	<0.001-0.019	0.001-0.023	0.002-0.025	0.001-0.010	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.03-0.12	0.06-0.09	0.04-0.12	0.03-0.12	0.049-0.092	
PM 10	mg/m ³	≼ 0.12	0.02-0.05	0.03-0.06	0.02-0.10	0.01-0.05	0.018-0.033	
Location 6: Charoenwat Village (A9)	•	•	•	•	<u>.</u>	<u> </u>	<u> </u>	
Nitrogen Dioxide: NO2	mg/m ³	≼ 0.17	0.002-0.036	0.004-0.100	<0.001-0.033	<0.001-0.055	0.001-0.030	
Sulfur Dioxide:SO	mg/m ³	≤ 0.30	0.012-0.038	0.001-0.066	<0.001-0.005	0.002-0.006	0.001-0.016	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.04-0.08	0.05-0.08	0.03-0.09	0.03-0.08	0.042-0.078	
PM 10	mg/m ³	≼ 0.12	0.02-0.05	0.03-0.07	0.02-0.06	0.02-0.06	0.028-0.053	
Location 7: Ban Ngio Temple (A10)			•	•	•			
Nitrogen Dioxide: NO ₂	mg/m ³	≤ 0.17	<0.001-0.041	0.002-0.029	0.001-0.028	<0.001-0.055	0.001-0.028	
Sulfur Dioxide:SO	mg/m ³	≤ 0.30	<0.001-0.027	0.004-0.083	<0.001-0.010	0.001-0.014	0.017-0.022	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.04-0.13	0.06-0.18	0.03-0.20	0.04-0.14	0.037-0.106	
PM 10	mg/m ³	≼ 0.12	0.02-0.07	0.03-0.10	0.02-0.08	0.02-0.07	0.036-0.085	
AMATA City Rayong Industrial Estate	:	:	•					
Location 1: Ban Wang Tanmon (A1)								
Nitrogen Dioxide: NO2	mg/m ³	≤ 0.17	0.001-0.035	<0.001-0.027	<0.001-0.037	<0.001-0.039	0.003-0.046	
Sulfur Dioxide:SO ₂	mg/m ³	≤ 0.30	<0.001-0.029	0.009-0.022	0.002-0.038	0.001-0.014	0.008-0.015	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.03-0.22	0.03-0.16	0.02-023	0.04-0.11	0.076-0.204	
PM 10	mg/m ³	≼ 0.12	0.02-0.11	0.03-0.12	0.01-0.09	0.03-0.05	0.037-0.080	
Location 2: Rat Atsadaram Temple (A	•	:	:	:	:			
Nitrogen Dioxide: NO	mg/m ³	≤ 0.17	0.001-0.018	<0.001-0.043	<0.001-0.035	0.003-0.053	0.003-0.048	
Sulfur Dioxide:SO	mg/m ³	≤ 0.30	0.005-0.033	0.001-0.010	0.009-0.028	0.002-0.007	0.013-0.028	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.08-0.18	0.05-0.15	0.04-0.14	0.05-0.08	0.055-0.096	
PM 10	mg/m ³		0.05-0.12	0.03-0.09	0.02-0.08	0.03-0.05	0.024-0.050	
Location 3: Ban Phusai School (A3)		:						
Nitrogen Dioxide: NO2	mg/m ³	≤ 0.17	<0.001-0.018	<0.001-0.029	0.001-0.033	0.002-0.017	0.005-0.016	
Sulfur Dioxide:SO	mg/m ³	≤ 0.30	0.002-0.011		<0.001-0.033		0.004	
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.02-0.073	0.03-0.17	0.02-0.22	0.03-0.05	0.070-0.23 ⁻	
PM 10	mg/m ³		0.02-0.08	0.01-0.08	0.01-0.10	0.02-0.03	0.033-0.091	
Location 4: PhananikhomTemple (A4		:	:	:	:	-		

Air Quality Monitoring in surrounding area of Industrial estate (Disclosure 305-7)									
	Unit	Standard	2014	2015	2016	2017	2018		
Nitrogen Dioxide: NO	mg/m ³	≤ 0.17	0.000-0.024	0.000-0.018	<0.001-0.018	0.011-0.052	0.002-0.056		
Sulfur Dioxide:SO ₂	mg/m ³	≤ 0.30	0.000-0.025	0.000-0.022	<0.001-0.014	0.006-0.086	0.001-0.027		
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.0038-0.07	0.015-0.085	0.013-0.089	0.043-0.185	0.033-0.130		
PM 10	mg/m ³	≤ 0.12	0.01-0.029	0.007-0.050	0.007-0.064	0.027-0.078	0.020-0.087		
Location 5: Ban Mapyangphon Health	Center	(A5)							
Nitrogen Dioxide: NO2	mg/m ³	≤ 0.17	<0.001-0.040	0.002-0.059	<0.001-0.061	0.019-0.061	0.003-0.079		
Sulfur Dioxide:SO2	mg/m ³	≤ 0.30	<0.001-0.054	0.000-0.019	0.001-0.017	0.010-0.038	<0.001-0.036		
Total Suspended Particulates: TSP	mg/m ³	≤ 0.33	0.05-0.152	0.016-0.046	0.021-0.210	0.069-0.218	0.035-0.172		
PM 10	mg/m ³	≤ 0.12	0.02-0.091	0.011-0.096	0.012-0.100	0.033-0.118	0.021-0.109		

5. Waste

Solid waste management (Disclosure 306-2)	Unit	2014	2015	2016	2017	2018
Amount of solid waste at AMATA waste segregation plant	Tons/Year	20,511.95	20,450.58	20,314.24	21,865.36	23,296.41
Amount of recyclable solid waste	Tons/Year	2,846.74	3,036.93	2,923.17	3,154.88	3,303.08
Amount of solid waste sent to RDF plant	Tons/Year	16,943.68	17,088.65	17,157.54	18,509.81	19,844.83
Amount of solid waste to landfill	Tons/Year	721.53	325	233.53	200.67	148.50

6. Environmental Compliance

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

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Feedback Form for Sustainability Report 2018

1.	Your basic inform	ation									
	Gender	E Female	Male								
	Age	below 30	30-50		over 50						
2.	Which stakeholde	r group do you belo	ng to?								
	Employees	Customers	Comn	nunities	Medias						
	Suppliers	Shareholders	Busine	ess Partner	Creditors						
	Government Agencies		Competitors								
	Other (Please	e specify)						
3.	How did you receive the sustainability report?										
	The Company	y's website	🗌 Semir	ar report	Company's	personnel					
	Visiting the C	ompany	Others (Please specify)								
4.	What is your obje	ctive in reading the	2018 sustair	ability report?							
	To gather information for deciding investments										
	For education	For education and research									
	To use as a g	To use as a guideline to create your own report									
	Others (Pleas	e specify)						
5.	How satisfied are	you with the Comp	any's 2018 s	ustainability rep	port format?						
Cor	npleteness of the re	eport 🛛 Hig	h [Moderate	Low	Should be improved					
Issu	e specification of t	he report 🛛 Hig	ih [] Moderate	Low	Should be improved					
Inte	resting presentation	n 🗌 Hig	ih [] Moderate	Low	Should be improved					
Rep	ort design	🗌 Hig	ih [Moderate	Low	Should be improved					
Eas	y understanding la	nguage 🛛 Hig	ih [Moderate	Low	Should be improved					
Ove	rall satisfaction	🗌 Hig	h [Moderate	Low	Should be improved					
6.	Additional recomm	mendations for impre	oving the Co	mpany's next ye	ear's report						
	Pleases	send this feedback f	orm to the a	ddress specified	d at the back cov	er or email to					

sustainability@amata.com AMATA Corporation PCL would like to thank you for your cooperation.



AMATA SMART CITY ACTIVATION



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