SET Awards 2024: Sustainability EXCENDED

ΑΜΑΤΑ

POSSIBILITIES HAPPEN



คุณวิกรม กรมดิษฐ์

ประธานกรรมการ และรักษาการประธานเจ้าหน้าที่บริหาร กลุ่มบริษัทอมตะ



คุณสัทธา วนลาภพัฒนา รักษาการประธานเจ้าหน้าที่กลยุทธ์ และผู้ช่วยประธานเจ้าหน้าที่บริหาร บริษัท อมตะ คอร์ปอเรชัน จำกัด (มหาชน)

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คุณชวลิต ทิพพาวนิช ประธานเจ้าหน้าที่บริหาร บริษัท อมตะ ยู จำกัด



ดุณพจนารถ หรี่จินดา รักษาการประธานเจ้าหน้าที่ ปฏิบัติการ บริษัท อมตะ ยู จำกัด



ประธานเจ้าหน้าที่เทคนิควิศวกรรม และประธานเจ้าหน้าที่บริหาร กลุ่มธุรกิจอสังหาริมทรัพย์ในประเทศไทย บริษัท อมตะ คอร์ปอเรชัน จำกัด (มหาชน)



คุณอัครเรศร์ ชูช่วย กรรมการผู้จัดการ บริษัท อมตะ ฟาซิลิดี้ เซอร์วิส จำกัด

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Climate Change

Circular Economy

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Creating Perfect Cities Where Possibilities Happen

About AMATA

"ALL WIN"

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

Sustainable City Opportunities Success For Everyone

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AMATA in CLMVT





Project information as of the second half of 2024

AMATA CITY CHONBURI and AMATA SMART CITY CHONBURI



AMATA CITY RAYONG

* Source: General information for Chonburi's local government organizations development planning, websites of municipalities and subdistrict administrative organizations, and official statistics registration systems of Department of Provincial Administration (Information as of 31 December 2023)

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OUR BUSINESSES (YE2023)

Revenue (Million Baht)

Business Portion 2023



Top 3 Strategic Challenges:

02

Generategic Challenges # 55

Climate Change

Strategic Challenge #1

Physical Risk from Climate Change 2023

Global Risks from World Economic Forum

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1	Cost-of-living crisis	1	Failure to mitigate climate change		Countries most affected by extreme weather events	
2	Natural disasters and extreme weather events	2	Failure of climate-change adaptation		(2000-2019)	P
3	Geoeconomic confrontation	3	Natural disasters and extreme weather	1	Puerto Rico	C. C.
			events	2	Myanmar	2
4	Failure to mitigate climate change	4	Biodiversity loss and ecosystem collapse	3	Haiti	
5	Erosion of social cohesion and societal polarization	5	Large-scale involuntary migration	4	Philippines	
6	Large-scale environmental damage incidents	6	Natural resource crises	5	Mozambique	
7	Failure of climate change adaptation	7	Erosion of social cohesion and societal polarization	6	The Bahamas	
8	Widespread cybercrime and cyber insecurity	8	Widespread cybercrime and cyber insecurity	7	Bangladesh	Equator
9	Natural resource crises	9	Geoeconomic confrontation	8	Pakistan	
10	Large-scale involuntary migration	10	Large-scale environmental damage incidents	9	Thailand	
				10	Nepal	
	Risk categories Economic Enviro	nmental Geop	olitical Societal Technological			

10 Voore

Climate Change Performance Index from German watch

https://www.weforum.org/publications/global-risks-report-2023/

2 Voors

https://www.germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf

Climate-related Impacts in Value Chain



Utilities, Facilities, Commercial

Climate-related Risks

Physical Risks

Impacts

maintenance costs for emergency

Increase operating and



Extreme weather events (i.e. strong wind, flood, heat)



response



- Increase flood protection expenses Increase medical expenses
- Raw water cost increase
 - Fines due to water supply contract
- Loss of reputation and trust



Opportunities



Water security to AMATA and surrounding communities







New products and services in circular water businesses

Drought in water-stressed areas due to unpredictable precipitation patterns



Rising mean temperatures

Chronic (Consequently)

Rising mean sea level enhances the severity of flooding



Material Topics 2023



Climate Change Strategies

Neutral City

Carbon

Adapt and increase our capability to effectively cope with the climate change effects.

Resilience City

Climate

Reduce greenhouse gas emissions from the operations to create a low carbon society

Develop climate-related products and services to increase competitive advantage

Climate-related

Products & Services

Water Strategies

- 1. Strive for water security by building internal reservoirs
- Reduce surface water dependency by utilizing treated water according to zero discharge principle
- 3. Choose only climate resilience location

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Overall EEC Water Consumption

(Agriculture, Household, Industrial Activities)



Climate Resilience City





https://www.researchgate.net/figure/Baseline-water-stress-map-in-Thailandadapted-from-WRI-aqueductwater-risk-atlas-42 fiq5 335329854

https://www.oecd-ilibrary.org/sites/91413186en/index.html?itemId=/content/component/91413186-en https://www.snohunakul.org/โครงการ/สถานการณภาคตะวนออก-พ-ศ-2567

Water Security Strategy (AMATA City Chonburi)

Gross Water Demand 27.2 MCM/year



8 Réservoirs

42.0 мсм (154%)

Water Reserved Goal 14 months (Reserved Capacity/ Monthly Gross Water Demand)

Performance

18 months

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Water Grid (Long Term Goal)

Connect Multi - Projects



Water Independence Strategy

Performance Water Reclamation System (since 2008) Reduce the proportion of raw water withdrawal to <u>60%</u>

Gross Water	Raw Water
Demand	Withdrawal
60.5 MCM/Year	36.5 MCM/Year
(2023)	(2023)

Saved raw water sourcing cost by 78.93 million Baht in 2023



Circular Economy

G Strategic Challenge #2

Global Initiatives on Circular Economy Lead Existing Customers to Reduce Utility Consumption







AMATA City Chonburi & AMATA City Rayong

> Existing Customers

1,321 Factories (As of 31 December 2023) Less Industrial Water Consumption (44 MB)

> Less Wastewater Treatment Fee (12 MB)

Less Treated Water Sent to Reclamation Plant

> Less Solid Waste (5 MB)

Financial Impact

Technical Collapse

Disrupt Design and Operation

Circular Economy Trends in Automotive Industry









Multiple Values by 'Potable Water Consumption per Vehicle Produced' 4.5 M3/Vehicle 3.5 -BMW -Tesla 2.5 Toyota 1.5 Industry Average 2018 2019 2020 2021 2022 2023 Potable Water Consumption per Vehicle Produced in M3

Circular Economy Trends in the Semiconductor Industry

SAMSUNG

- Use recycled plastic for all plastic parts in DX products by 2050
- Operate an e-waste collection system in all global sales countries by 2030 and work towards collecting 10 million tonnes (accumulated)

Lenovo

- 90% of plastic packaging will be made from recycled plastics for notebooks, desktops and workstations by FY 2025/26
- 60% of the materials will be recycled content and single use plastics will be reduced by 50 percent by FY 2025/26



- 100% recycled cobalt, tin, gold, and rare earth elements in select components and applications by 2025
- Remove plastics from our packaging by 2025



- 100% Waste recycle rate in 2030
- Reduce CO2 emissions from waste treatment to 2020 emission levels 2030



- Achieve zero waste to landfill in 2030
- Implement circular economy strategies for 60% of its manufacturing waste streams



 Build zero waste campuses that implement "zero landfill" policies

Circular Economy

Circular Economy (CE)

- Existing customers are increasingly focusing on CE practices
- New customers with CE policies see our utilities and CE practices as key investment factors

Financial Impact

 Loss of recurring income from existing customers

Financial Impact

 Loss of new customers due to unmet CE requirements

Opportunity

- Sell more CE products such as reclaimed water
- Initiate new CE services and expand to new areas including nearby communities

Opportunity

Attract customers who prioritize CE

Innovation Strategy to Uplifting Product & Service Quality



Innovation Strategy to Uplifting Product & Service Quality

Estimated Sales Volume of Premium Water



Long-term Targets Increase Recurring Income

Targets

- Offer New Product & Services
- Secondary Water Treatment Plant and Premium Grade Water
- Water Total Solution Provider

Uplift Product to Premium Water to Meet New Potential Demand

Industrial Transition

G Strategic Challenge #3

Existing Industry of AMATA



Solar

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Industrial Transition: Impact to Supply Chain

Automotive key players announced to reduce production capacity or exit from Thailand



Global FDI: 1H2024 (Green-field)



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Source: https://www.fdiintelligence.com/content/locations/global/the-1h2024-investment-matrix-83993

Industrial Transition: New Requirements

	Traditional Industry	Current Industry	Upcoming Industry NEW FDI Renewable Energy Project/Equipment Semiconductor Data Processing
5	0.1 MW/ 1 Rai	1 MW/ 1 Rai	3 MW/ 1 Rai Al Data Center 3X from Cloud DC
	7 CU.M./ 1 Rai	50 - 100 CU.M./ 1 Rai	335 CU.M./ 1 Rai

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Industrial Transition: New Requirements

aws

- World's largest cloud provider, **30%** global market share
- Largest corporate purchase
 of renewable
 power around the world
- 100% renewable energy by 2025, 5 years ahead of 2030 target



"Zero carbon energy mix, To power all data centers and facilities with **100% new** renewable energy generation by 2025"



"To operate **all of its data centers** and office campuses on carbonfree energy **24/7 by 2030**"

CloudHQ Where data lives.

"CloudHQ is committed to achieving net zero emissions by 2040"

"Green & Clean"

Innovation Strategy to Uplifting Product & Service Quality Climate-Related Products & Services

2023 Target

Renewable Energy Consumption in Operation 10% of Total Energy consumption

2023 Performance 7.62% of Total Energy Consumption

Solar-generated electricity in AMATA Industrial Estates





Long Term Target for Utilties (Self Consume)



Long Term Target for Electricity to Factory



Direct investment on Renewable Energy 80 MW





New Clean Energy Sources and Collaboration

MOU SIGNING CEREMONY

Collaborative Development and Supply of Hydrogen Energy for Industrial Decarbonization



Hydrogen Energy for BMW by AMATA NGD





ACNN 2023 Forum and AMATA's Waste Management Awards



Advancing Sustainability with Carbon-Neutral Network Rollout & Smart Manufacturing Seminar









Innovation Strategy to Uplifting Product & Service Quality

Amata Smart City New Economy Customers

Target 2023	300 rai	High Value Industries
Performance 2023	307 rai (3 Factories)	 Smart Electric & Consumer Products Printed Circuit Board

Economic Value Creation



Light & Medium Industry FDI/m2 from **\$500 - \$1000**



Data Processing FDI/m2 from **\$1,800 - \$2,800**



Semiconductor FDI/m2 from **\$2,500 - \$10,000**



2X – 4X Annual Productivity

(C) Innovation Strategy to Uplifting Product & Service Quality

TAIPEI SMART CITY Established JVC with Sinotech in 2021 Ready to attract investors in 2023

> **JAPANESE SMART CITY** In collaboration with Fujita and consortium

> > **NEW INTERSECTION**



2ND YOKOHAMA PROJECT The concept is to provide a liveable city that everyone can comfortably and safely work, learn, and interact.



HIGH-TECH MFG AREA

Expect to close the deal with 1st customer

Q2 2025

Jun 6th, 2024 Signing ceremony with Taiwanese partner

Sep 10th, 2023 Ribbon cutting ceremony of Amata Taipei Smart City Showcase

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บริษัท อมตะ คอร์ปอเรชัน จำกัด (มหาชน) มหาวิทยาลัยมหิดล ศูนย์ความเป็นเลิศด้านกาวิทยาศาสตร์ (องค์การมหาชน) 26 ลาคม 200



U.S. Embassy & Consulate in Thailand





The Integration of Technology and Innovation Platform for Laboratory. Life Sciences and Chemical Industry in Asia Pacific Region





AMATA , hotel nikko AMATA & VNU (BIO Asia Thailand organizer) concluded the deal to host the medical media event in AMATA

Location: hotel nikko AMATA/ Timing: 6th August & 11-13th September 2024

Top 3 Strategic Challenges:

Climate Change

Circular Economy

Industrial Transition

Strategic Priorities ประเด็นสำคัญเชิงกลยุทธ์

Wastewater Management

Waste Management

Climate Change



Product & Service Quality

Community Support & Development ESG Related Business Strategy กลยุทธ์องค์กร

> Responsible & Sustainable Consumption Strategy กลยุทธ์การบริโภคอย่างมีความรับผิดชอบและยั่งยับ

Corporate GOALS เป้าหมายองค์กร

Zero Waste / Zero Discharge/ Water Independence & Security

Climate Change Strategy

Climate Resilient City / Carbon Neutrality in 2040

Innovation Strategy to Uplift Product & Service Quality

กลยุทธ์ด้านการสร้างสรรค์นวัตกรรมเพื่อ ยกระดับคุณภาพผลิตภัณฑ์และบริการ High Value Sustainable Products & Services

Strategy for Enhancing Shared Value Creation and Collective Impact

กลยุทธ์ด้านการเพิ่มการสร้างคุณค่าร่วมและผลกระทบ เพื่อส่วนรวม Social License to Operate/ Quality of life for stakeholders





AMATA SUSTAINABILITY



Creating Perfect Cities Where Possibilities Happen

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Creating Perfect Cities where possibilities happen



POSSIBILITIES HAPPEN

VISION



World's Leading Industrial City Developer

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To provide reliable, sustainable and state-of-theart business estates

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

MISSION

Sustainability Governance Structure

Board of Directors							
Audit Committee Rem		nination & uneration mmittee	eration Governance		Executive Committee	Ň	Board Level
Sustainable Development Committee		Risk Management Committee (RMC)		Corporate Strategy Sustainability& Risk Management Dept.			Management Level
Sustainable Development Working Committee		Enterprise Risk Management Working Committee					
Governance & business development working team		Community, Society & stakeholder working team			nvironmental vorking team		Operational Level



Corporate Sustainability Management

การบริหารจัดการความยั่งยืนองค์กร



Policy & Key Strategies for Corporate Sustainability