ISKANDAR MALAYSIA
TOWARDS A STRONG METROPOLIS OF INTERNATIONAL STANDING

Seminar on City-to-City Collaboration for Zero Carbon Society

Kamisah Mohd Ghazali

Head of Resilient Environment

Iskandar Regional Development Authority (IRDA)

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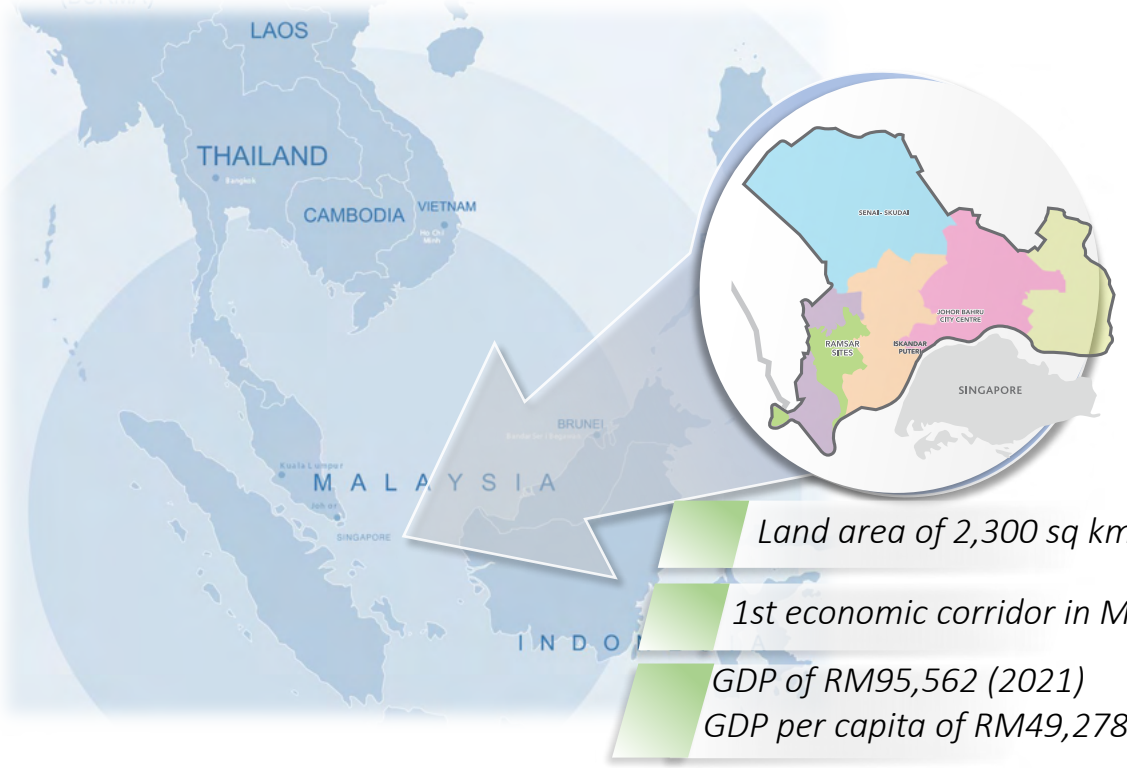
ISKANDAR MALAYSIA – A VISION TOWARDS STRONG AND SUSTAINABLE METROPOLIS OF INTERNATIONAL STANDING



Land area of 2,300 sq km

1st economic corridor in Malaysia

GDP of RM95,562 (2021)
GDP per capita of RM49,278 (2021)

PIONEERING LOW CARBON DEVELOPMENT IN MALAYSIA

- ✓ Iskandar Malaysia is the **pioneer city** in Malaysia to drive low carbon initiatives **since 2009**
- ✓ Iskandar Malaysia completed **the Low Carbon Development Cycle** from **Science to Policy**, Action and Monitoring.

CDP A LIST 2019 CLIMATE

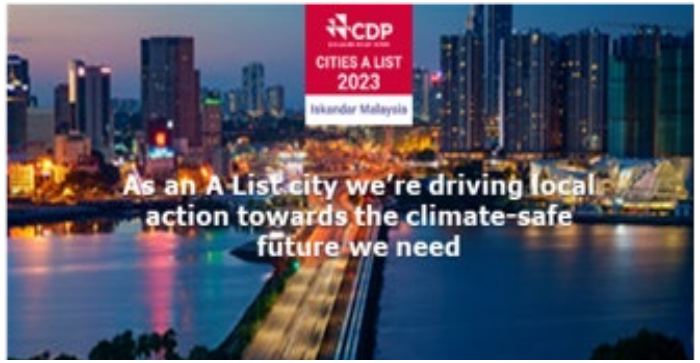
CDP A LIST 2020 CLIMATE

CDP CITIES A LIST 2022 Iskandar Malaysia

CDP CITIES A LIST 2023 Iskandar Malaysia

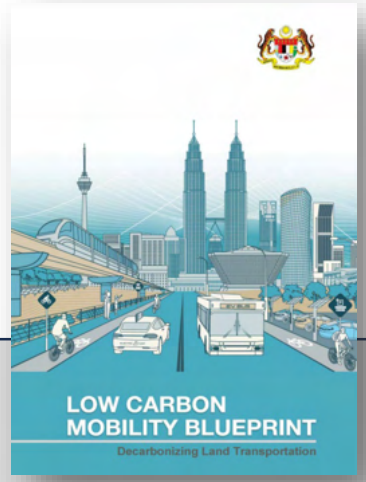
MEMBER OF GLOBAL COVENANT OF MAYORS FOR CLIMATE AND ENERGY (**GCOM**) SINCE 2017

GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

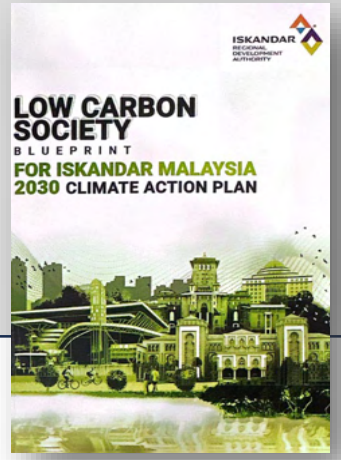


- Iskandar Malaysia has received **SCORE A: LEADERSHIP**; the highest band score in 2019, 2020 and 2022 for CDP Cities Reporting.
- Iskandar Malaysia one of 122 cities across the globe that is taking **bold leadership on environmental action** and transparency.

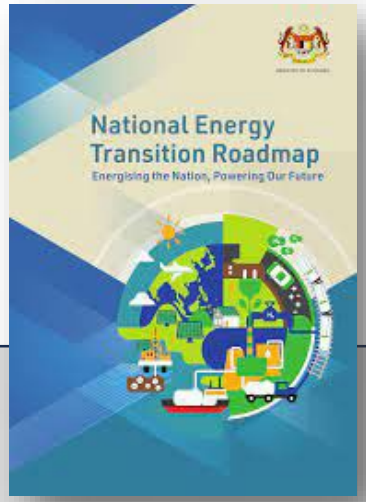
KEY PLANNING DOCUMENTS AT NATIONAL, STATE AND REGIONAL



Low Carbon Mobility Blueprint 2021-2030
2020

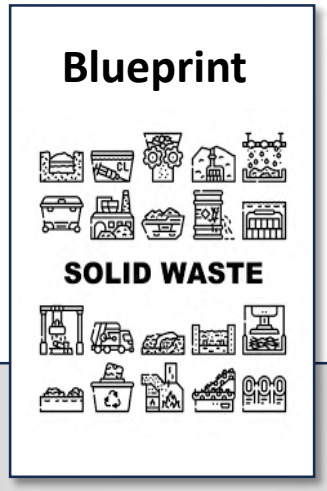


Low Carbon Society Blueprint for Iskandar Malaysia 2030 – Climate Action Plan
Nov 2022



Malaysia's Energy Transition Blueprint
June / Aug 2023

Comprehensive Development Plan iii Iskandar Malaysia
Aug 2023



Solid Waste Blueprint
* In progress

Policy Framework for Green Growth
Nov 2023

KEY PRINCIPLE OF RESILIENT AND FUTURE PROVE REGION

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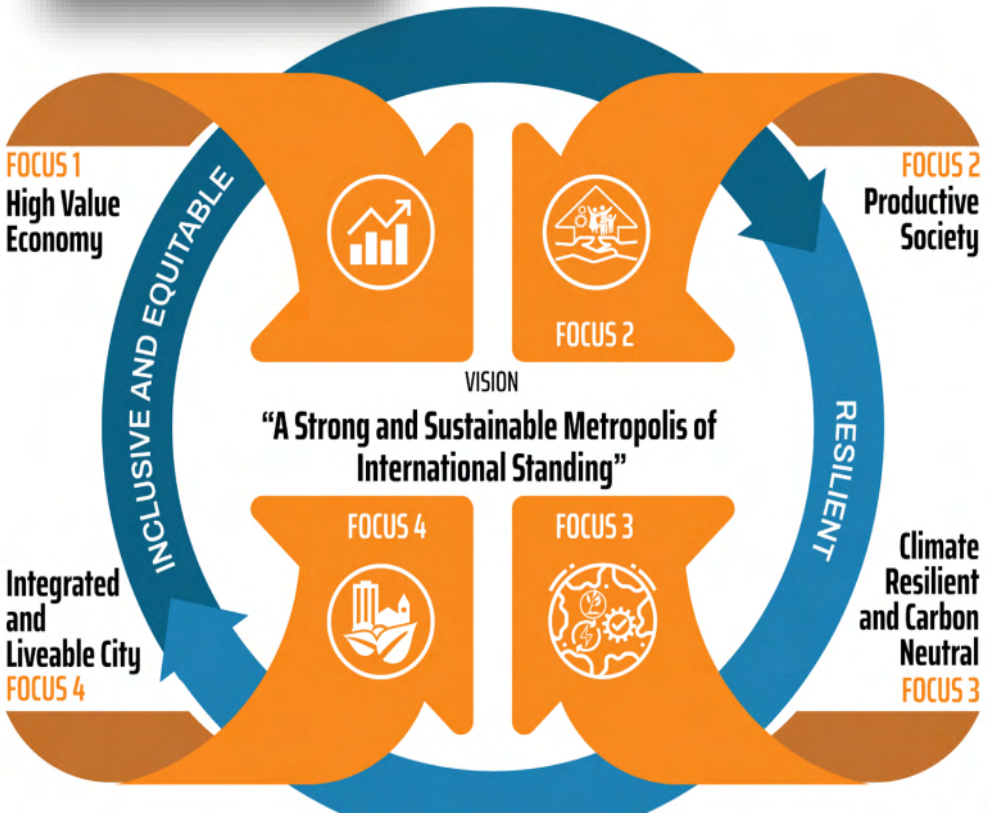
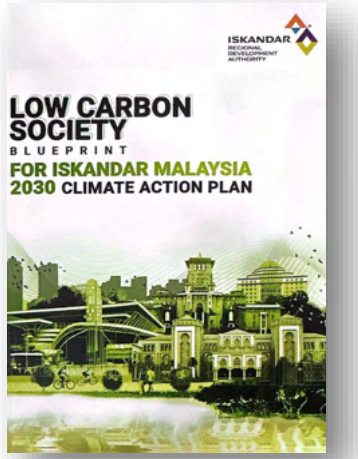
Comprehensive Development Plan iii Iskandar Malaysia 2022 - 2030





Low Carbon Society Blueprint for Iskandar Malaysia 2030 – Climate Action Plan

Climate Mitigation Target
Reducing the intensity of GHC emission by up to **70%** by 2030 compared to the 2010 level

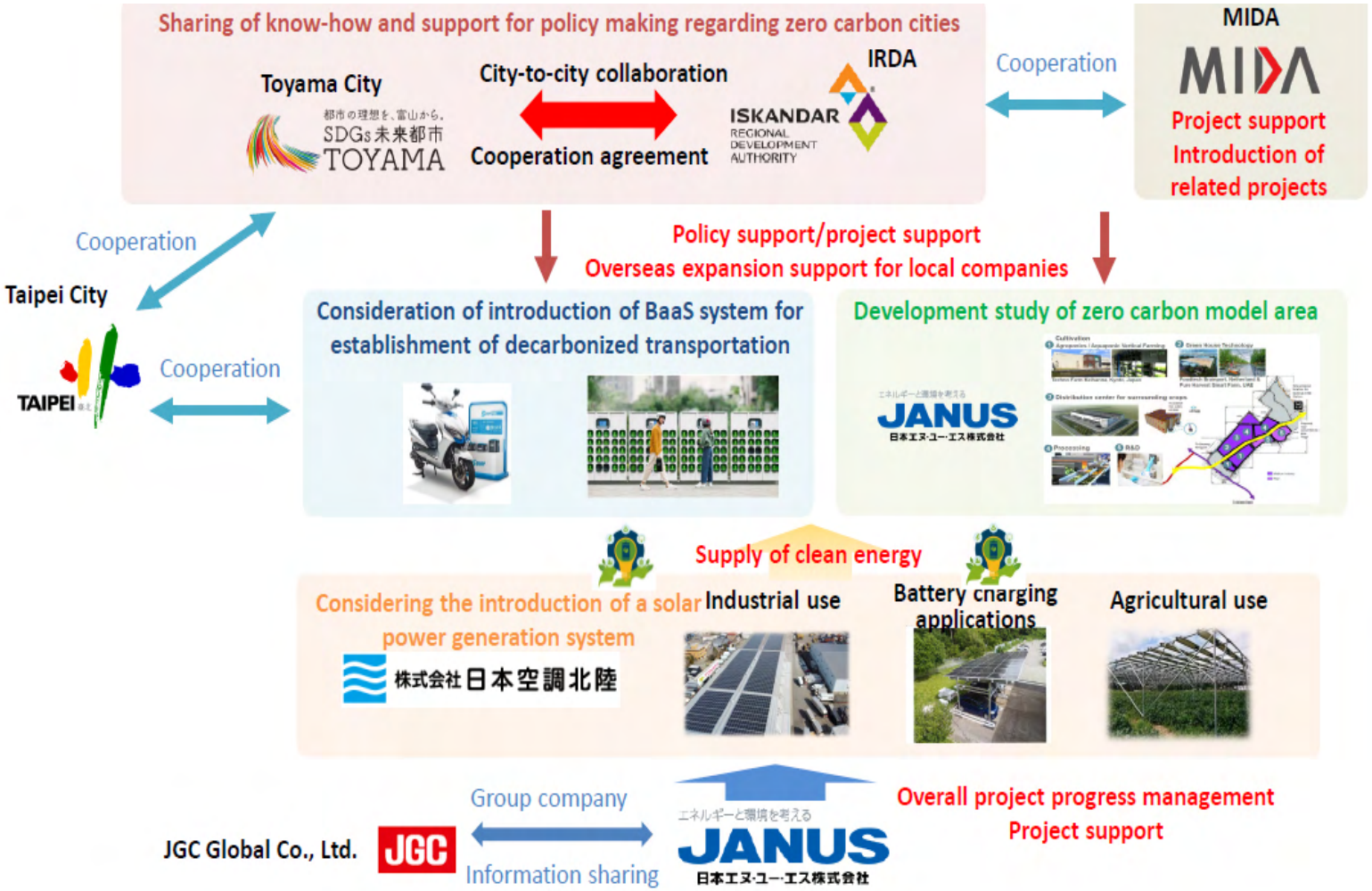
Climate Adaptation Goal
To develop cities and society that are resilient towards climate change

Vision	**To Be A Strong Sustainable Metropolis of International Standing**			1 Vision
Thrusts	**Green Economy** Competitive & agile economy which create opportunities for all Rakyat at local & international levels	**Green Environment** Sustainable design & planning for ecologically-friendly built environment & urban development	**Green Community** Resilience, creative & inclusive community with better awareness & more participative in green initiatives	3 Thrusts
	Thrust 1 Vigorous & Competitive Economy	**Thrust 2** Ecologically Friendly & Liveable Environment	**Thrust 3** Nourishing & Creative Community	
Climate Actions	Sustainable Smart Farming Green Transportation & Mobility Green & Renewable Energy Low Carbon Green Building & Infrastructure	Sustainable, Resilient & Liveable Cities Natural Environment & Habitats Sustainable Waste Management	Consensus Building & Education	9 Mitigation Actions 25 Mitigation Sub-Actions
	Green Sustainable Value Chain			61 Mitigation Measures
	Flood Resilient Cities			5 Adaptation Actions
	Sea Level Rise Resilient Cities			
	Erosion Resilient Cities			18 Adaptation Sub-Actions
	Drought Resilient Cities			
	Climate Resilient Communities			
SDGs	**Goals** 1, 2, 7, 8, 9, 11, 12, 13, 17	**Goals** 6, 11, 13, 14, 15, 17	**Goals** 3, 4, 5, 10, 11, 12, 13, 16, 17	17 SDGs 2030
Transformative Commitments	Sustainable and inclusive urban prosperity & opportunities for all	Environmentally sound & resilient urban development	Sustainable urban development for social inclusion & poverty eradication	3 New Urban Agenda

LOW CARBON SOCIETY BLUEPRINT FOR ISKANDAR MALAYSIA 2030 – CLIMATE ACTION PLAN

CITY-TO-CITY COLLABORATION : ISKANDAR MALAYSIA AND TOYAMA CITY (2023-2025)

The components project is illustrated as below:



2023-2025 years plan

Battery swapping- BaaS project

- Understanding the current situation and issues on 2-wheelers in the Iskandar Malaysia
- Conduct a feasibility study for BaaS project
- Develop action plans (roadmap) to support the BaaS
- Develop a Monitoring, Reporting and Verification (MRV) project in JCM model or other suitable schemes

Green field area project (Zero Carbon Farming Model)

- Understand the current situation and issues
- Identified a suitable site and partner
- Conduct a feasibility study with a demonstration project comprising smart technology (decarbonization project)
- Develop a Monitoring, Reporting and Verification (MRV) project in JCM model or other suitable schemes
- Replicate the project (if applicable) to other area in Iskandar Malaysia (seeking more support and collaboration)

Energy management project using Clean Energy

- Build an energy supply system suitable for the above two projects (BAAS and Zero Carbon Farming Projects)

Overall Milestones and Implementation Content

2023

- **Grasping the current situation**
- **Basic survey**

Goal

- ☐ **Assuming project target (target user group)**

Implementation content

- ☐ Survey of transportation policy
- ☐ Survey on the current situation in the transportation sector
- ☐ Investigation of traffic issues
- ☐ Precedent case survey

Setting targets for project

2024

Implementation of feasibility study

Goal

- ☐ Implementation of project evaluation
- ☐ Extraction of issues for realization

Implementation content

- ☐ Examination of business model and business scheme
- ☐ Economic evaluation
- ☐ Calculation of GHG emission reductions
- ☐ Issue identification

Implementation of project evaluation

2025

- Construction of implementation system
- Roadmap formulation

Goal

- ☐ Conclusion of MoU for implementation of demonstration project
- ☐ Roadmap formulation

Implementation content

- ☐ Search for business partners
- ☐ Encouraging business participation
- ☐ Roadmap formulation

Conclusion of MoU for implementation of demonstration project

2026

Demonstration project implementation

CITY-TO-CITY COLLABORATION : ISKANDAR MALAYSIA AND TOYAMA CITY TOWARDS DECARBONIZATION 2050

Accelerating the shift to EVs in Iskandar region by using motorbikes with replaceable batteries

IRDA (Administration)
- Policy and tax incentives
- Demonstration project
- Provision of land
- Promotion

Under the City-to-City Collaboration project, IRDA will implement a demonstration project by being the "First Penguin"

Public services and fleet vehicles

Post office, police, tourism, etc.

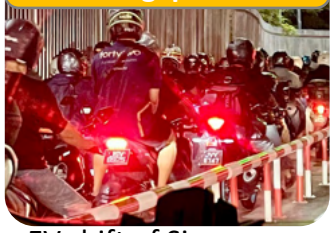
Delivery services of private businesses

Food delivery etc.

Policy and tax incentives	Implementation of demonstration project	Measures to stimulate purchasing motivation
Tax exemption, regulatory development, land provision	Introduction of solar power generation	Vehicle purchase subsidy

Private enterprises
- Manufacture and sales of BaaS model bikes
- Battery station installation

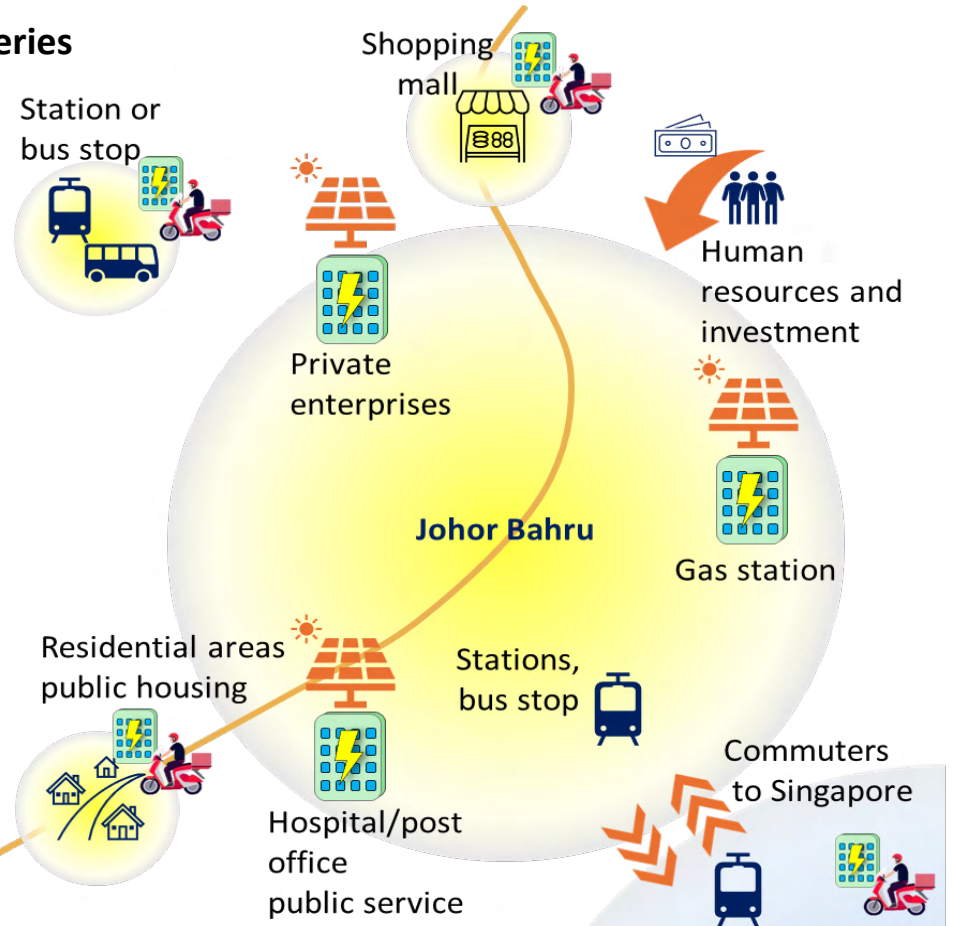
Commuters to Singapore



EV shift of Singapore commuters (50,000 units)

Iskandar local users

Domestic commuting
School transportation



- ✓ Achieving GHG reduction targets in the transportation field
- ✓ Improving the living environment by alleviating traffic congestion
- ✓ Improving the image of the city

CITY-TO-CITY COLLABORATION : ISKANDAR MALAYSIA AND TOYAMA CITY VISION OF GREEN FIELD AREA CONSTRUCTION

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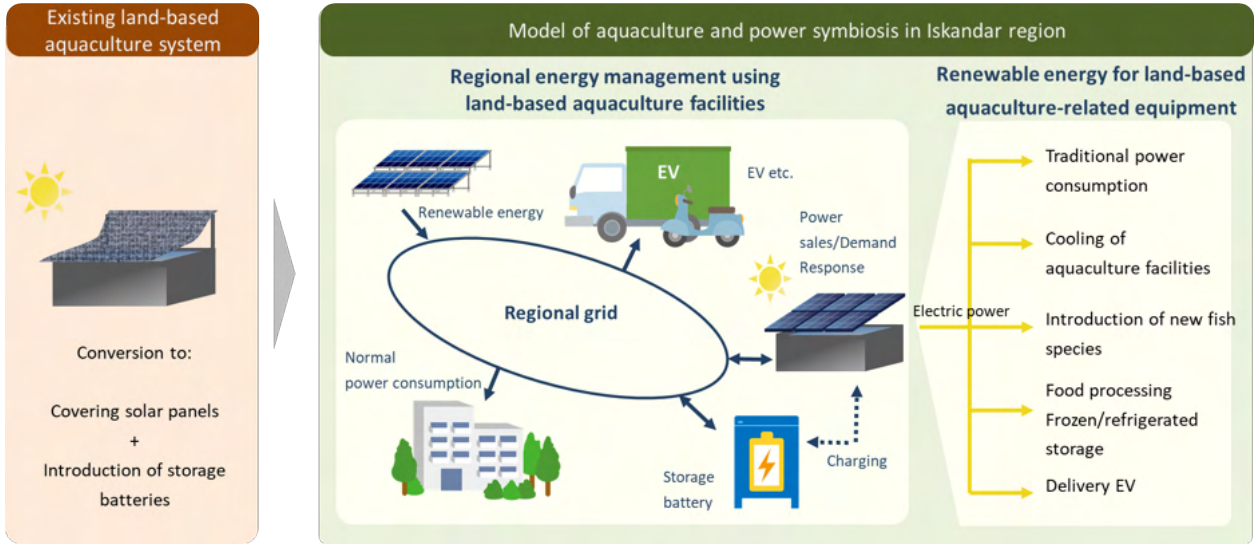
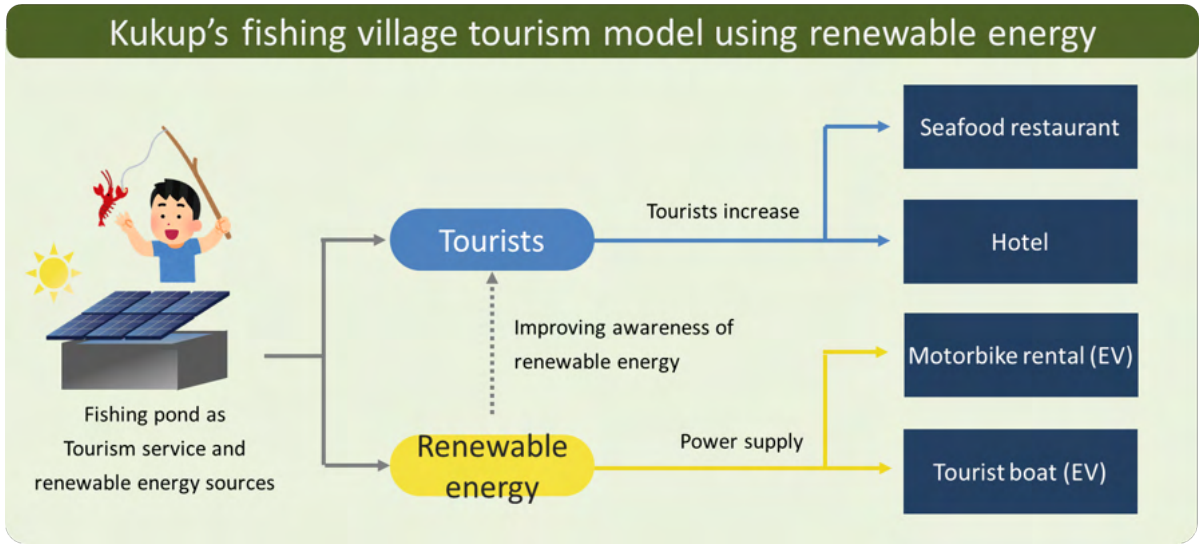
1. Pekan Nanas: Land-based aquaculture project model using renewable energy

- Introducing solar panels to existing land-based aquaculture facilities
- While utilizing electricity for land-based aquaculture facilities, consider introducing equipment that will contribute to income improvement and/or energy management for the entire region (surrounding factories, remote sensing technology, storage batteries, etc.)



2. Kukup area: Sustainable fishing village model using renewable energy

- Concept of fishing x tourism x environment
- Introducing renewable energy such as solar panel
- Introduction of EV bikes and sightseeing boats for tourism
- Implementation of experiential tourism services and environmental education



CITY-TO-CITY COLLABORATION : ISKANDAR MALAYSIA AND TOYAMA CITY KNOWLEDGE SHARING ON POLICY AND CITY PLANNING FROM TOYAMA CITY

- **Sharing experiences on transportation and environmental policies with IRDA and Pontian City Hall on:**
  - Land-based aquaculture facilities in Ryogoku
  - Inspection of EV stations and bikes in Taiwan
- **Introduction of Toyama City Eco-Town Plan**
  - New district development plans and ideas to improve environmental awareness among citizens, etc.
- **Introduction of Toyama City's shared cycle project "Aville“**
  - Concept of shared transportation policy, impact and cost after introduction, etc.

Lesson learned for IRDA

Understanding the crucial points/potential issues that local government should keep in mind when implementing projects in the future : the policy structure, incentives, cost, public-private partnership, maintenance, etc.

CITY-TO-CITY COLLABORATIONS BETWEEN ISKANDAR MALAYSIA AND KITAKYUSHU CITY

Industrial Symbiosis Concept & Pilot Model Execution

City of Kitakyushu ⟷ Cooperative Agreement LOU ⟷ **IRDA (Iskandar Regional Development Authority)**

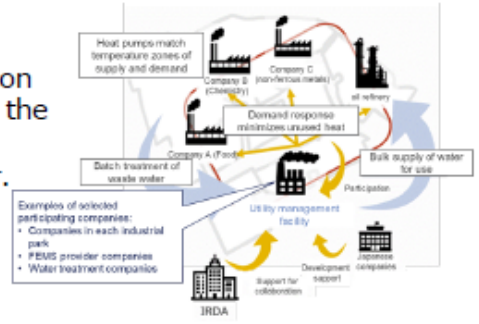
Provide Accumulated Know-Hows

Kitakyushu-IRDA Collaboration Project in 2022

Activity1

Create inter-industry collaboration projects for decarbonization of the industrial sector

Based on the status of waste heat and wastewater treatment in each company, a study will be conducted aiming at energy management for the entire industrial estate beyond the boundaries of industries and companies, as well as bulk supply and bulk treatment of waste water for use.
This year, a survey will be conducted on the status of waste water and waste heat generation in the candidate industrial parks, as well as on the status of infrastructure development, such as facilities and pipelines for use and waste water.
In addition, candidate companies will be selected, and a consortium will be formed and discussed to consider the formation of a pilot project.



Activity2

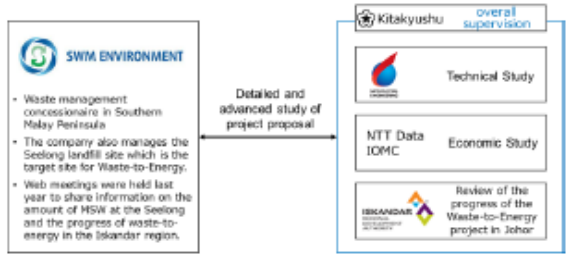
Introduction of waste-to-energy as a base-load power source for decarbonization of the consumer sector

Carry out waste quality surveys at the Seelong final landfill site, and scrutinise and upgrade the draft project plan, etc.

(1) Conduct a waste quality survey at the Seelong Landfill Site.

(2) Confirmation of the progress of the waste-to-energy project in the State of Johor, Malaysia.

(3) Scrutinise and upgrade the draft project plan.



Creation of pilot projects +

CITY-TO-CITY COLLABORATIONS BETWEEN ISKANDAR MALAYSIA AND KITAKYUSHU CITY

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Industrial Symbiosis Concept & Pilot Model Execution : Activity 1

Inter - Industry Collaboration

AME Development
i-Park @Senai Airport City
Develop & manage industrial parks

TPM Technopark
Wholly-owned of Johor Corporation (JCorp)

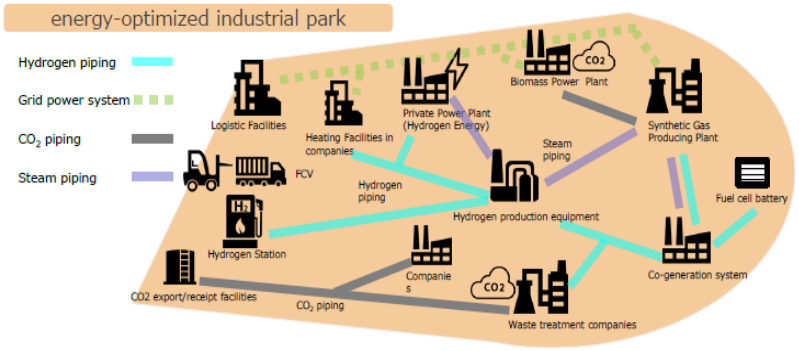
Phase 1
2022 - 2023

Detailed understanding & selection of candidate companies

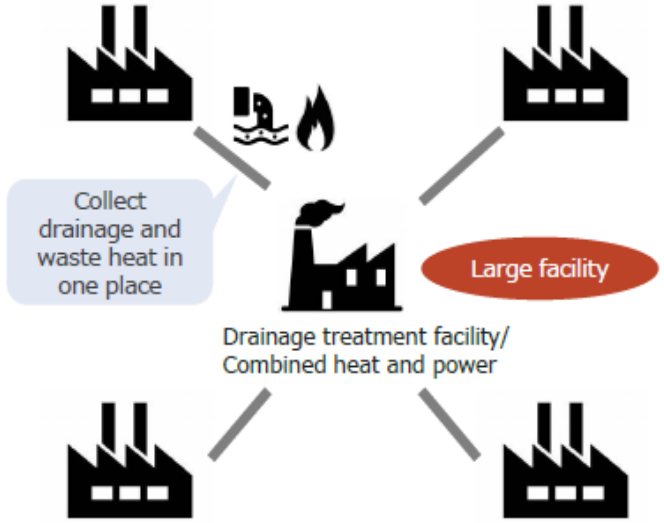
Phase 2
2023 - 2024

Discussions with candidate facilities

Networking Forum with companies at Tg Langsat Industrial Complex (Jan 2024)



Integrating and sharing facilities within an industry can make processing more efficient!



CITY-TO-CITY COLLABORATIONS BETWEEN ISKANDAR MALAYSIA AND KITAKYUSHU CITY

ISKANDAR REGIONAL DEVELOPMENT AUTHORITY

Industrial Symbiosis Concept & Pilot Model Execution : Activity 2

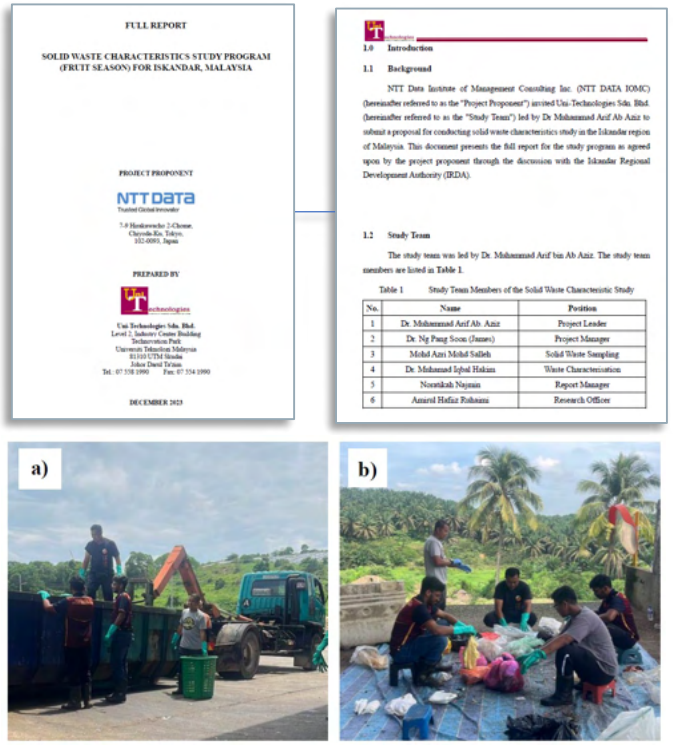
Creation of pilot projects +
Establishment of model areas that can be expanded horizontally within and outside of Iskandar Malaysia

Waste-to-Energy Development

SWM Environment

Appointed operator of Seelong Sanitary Landfill

Waste Analysis Survey at Seelong Landfill Site



a) waste sampling b) waste sorting

In the supply of primary energy in the Iskandar region, the proportion of grid electricity is overwhelmingly high; only a few renewable energy sources are installed, such as solar PV, there is no waste-to-energy.

The collaboration aims to consider upgrading business proposals with local companies (SWM Environment Sdn. Bhd.) to realize Waste-to-Energy as a base-load power source

CONCLUSIONS AND WAY FORWARD

1. The city-to-city collaborations provide IRDA with the needed technical assistance to:
   - reduce our carbon emission intensity through implementation of potential decarbonization, clean energy and circularity projects.
2. The city-to-city collaborations with Toyama and Kitakyushu:
   - Enhance the capacity of regional & local government officers in areas related to urban planning, transportation, and clean energy
   - Facilitate and enhance the inter-industry collaboration projects for the decarbonisation of the industrial sector.
   - Explore renewable energy for the decarbonisation of the consumer sector.
3. Implement the use of the Comprehensive Assessment System for Built Environment Efficiency (CASBEE) Iskandar as a tool for green building compliance guidance in Iskandar Malaysia. The collaboration with the Institute for Building Environment and Carbon Neutral for SDGs (IBECs) has been successful in promoting more green building adoptions and projects.
4. IRDA welcomes future collaborations and investment opportunities from Japanese counterparts.

ISKANDAR
REGIONAL
DEVELOPMENT
AUTHORITY

ありがとう
THANK YOU
TERIMA KASIH

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