

<Open Seminar: 25th Oct. 2018>

Seminar on City-to-City Collaboration for Creating Low-carbon Society

JCM City-to-City Collaboration with Yangon-city and DKI-Jakarta



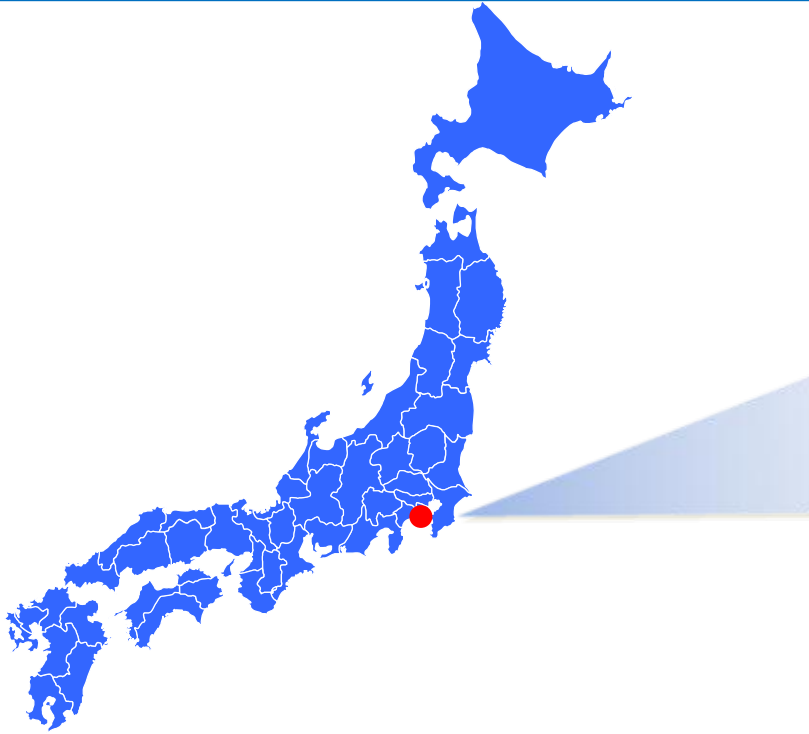
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Economic and Labor Affairs Bureau



KAWASAKI CITY

Kawasaki-city: Location



Population : 1,501,697
(As of Jun. 1, 2017)

Area : 144.35 km²



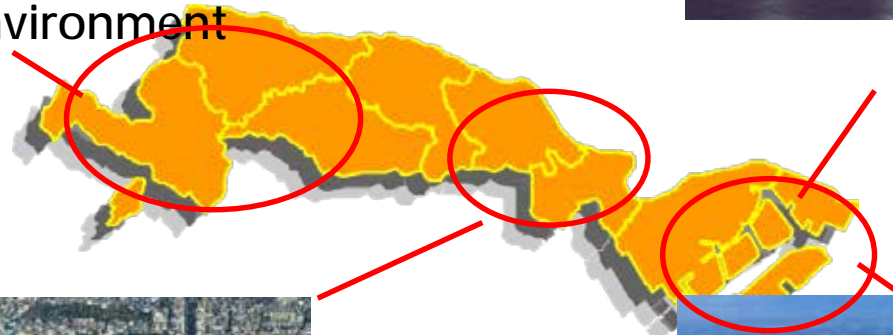
Various feature of the city



Rich natural environment



Industrial area

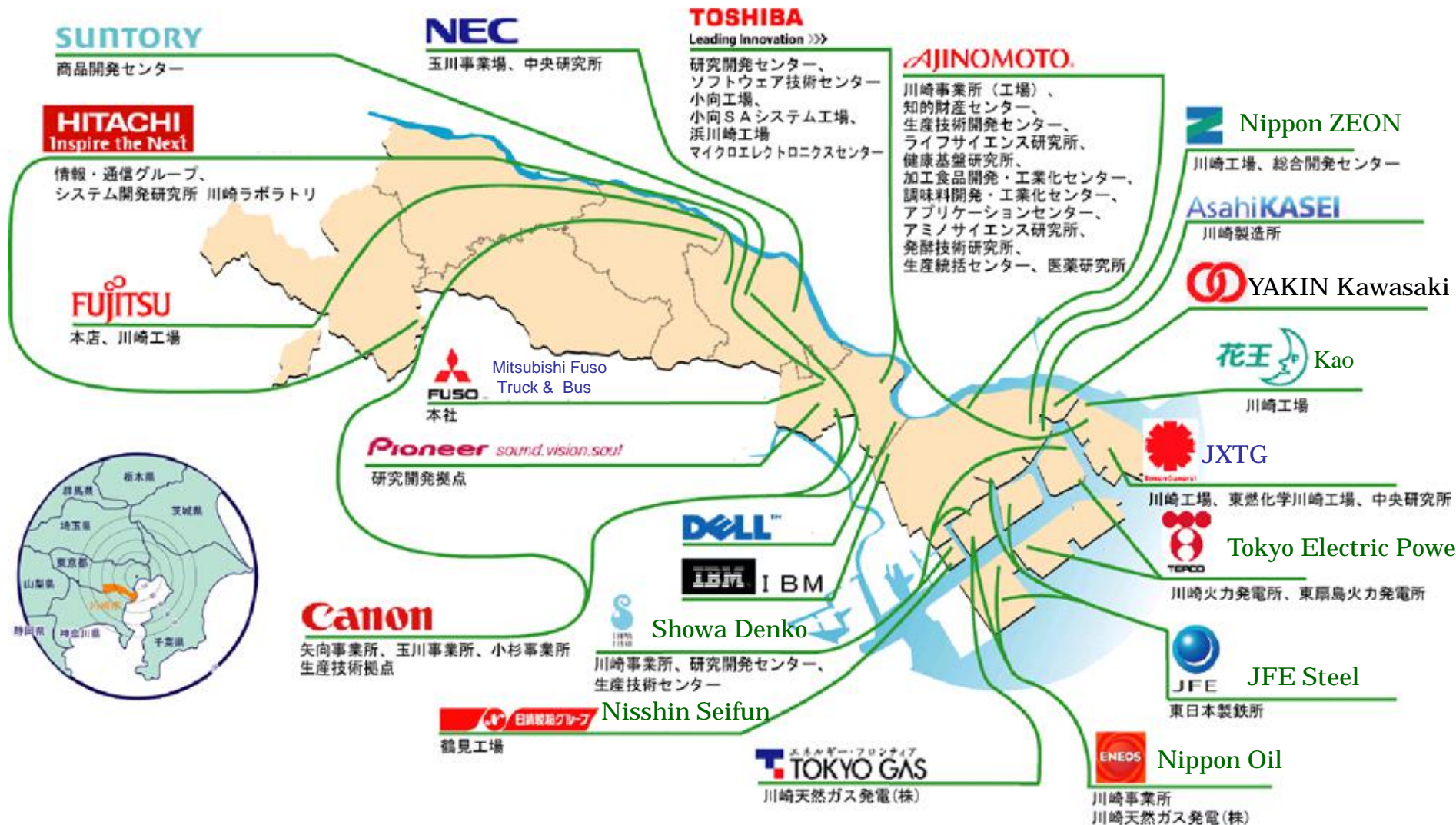


Commercial area



Kawasaki Port

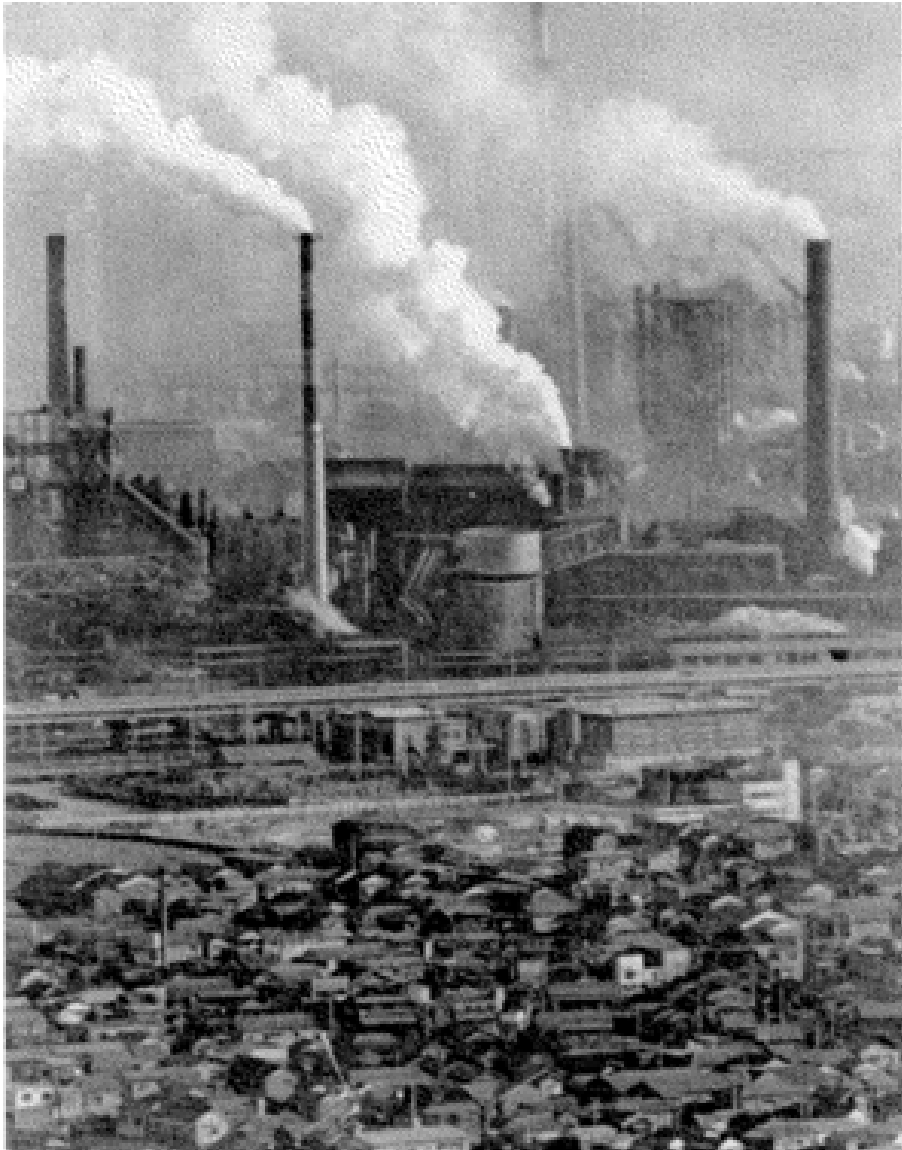
Major corporations



Number of Research & Development institutes : Over 400 facilities

Background of the city

Rapid Economic growth & Industrial Pollution in Kawasaki (1960s – 70s)



Air Pollution over Kawasaki Waterfront Area (1960s)



Current Landscape over Kawasaki Waterfront Area (2016)



Current Landscape of Tama-River (2017)



Our goal of City-to-city collaboration

Kawasaki city

To support Kawasaki's local business through environmental technology and knowledge transfer to partner city

Partner city

To reduce GHG and improve environmental problems through environmental technologies from various entities in Kawasaki

< our goal of City-to-city collaboration >

"Win-win relationship"

and

"Equal partnership"

JCM project-1: Utilization of renewable energy and energy saving in Danyingon vegetable market

Yangon, Myanmar



Kawasaki, Japan



Basic structure of JCM City-to-city collaboration project

[Objectives]

To contribute to **sustainable development** and realize **low carbon society in Yangon**, the study aims to **formulate prospective JCM projects collaborate with Kawasaki city and Japanese private entities**, which have high-efficiency and low carbon technologies.

Yangon

Potential sectors for low carbon project

[Energy]

[Waste management]

[Water supply & sewerage]

city-to-city
started from 2015

Kawasaki

Japanese private
company

**Nippon
Koei
(consulting)**

Study/support of JCM
project formulation
between Japanese and
Myanmar companies

Target sector

- 1) Low carbon industrial park
- 2) Low carbon building management system
- 3) Low carbon water supply/sewerage facilities
- 4) Project identification of Renewable energy/New energy

Technologies to be introduced

- a) High efficiency air conditioning facilities, energy saving fluorescent light, etc.
- b) High efficiency air conditioning facilities, energy saving fluorescent light, etc.
- c) High efficiency pumping system, low carbon technologies in water sector etc.
- d) Solar power, biogas, biomass, mini hydropower etc.

MOU between Kawasaki and Yangon (2016)

Memorandum of Understanding Between the City of Kawasaki, JAPAN and the City of Yangon, Myanmar on the City to City Collaboration

In order to promote city to city collaboration between Kawasaki and Yangon for achievement of low carbon city in Yangon and thus to contribute to the further prosperity of both, the City of Kawasaki and the City of Yangon hereby agree upon the following:

“Win-win relationship” & “Equal partnership”


economic exchange as well as develop cooperative framework based the idea of both cities are on win-win and equal relationship.

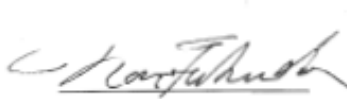
2. In order to achieve the aforementioned objectives, both parties shall cooperate on the following:

1. Excavating and supporting of low-carbon projects utilizing Joint crediting (JCM) scheme
2. Technical cooperation and information exchange for realizing low-carbon society

- 1) Excavating and supporting of low-carbon projects utilizing JCM scheme
- 2) Technical cooperation and information exchange for realizing low-carbon society of Yangon
- 3) Supporting creation of new business in a field of environment

March 15th, 2016


H.E U Hla Myint
Mayor of Yangon


Mr. Norihiko Fukuda
Mayor of Kawasaki

August 2015: Start of city-to-city collaboration

October 2015: 1st Visit to Yangon-city

December 2015: Discussion on Draft MOU at Yangon-city

January 2016: Workshop on City-to-city collaboration at Yangon-city

March 2016: Concluding MOU between Kawasaki city and YCDC



Workshop for city-to-city collaboration at Yangon

Outline of the project:

“Utilization of renewable energy and energy saving in Danyingon vegetable market”

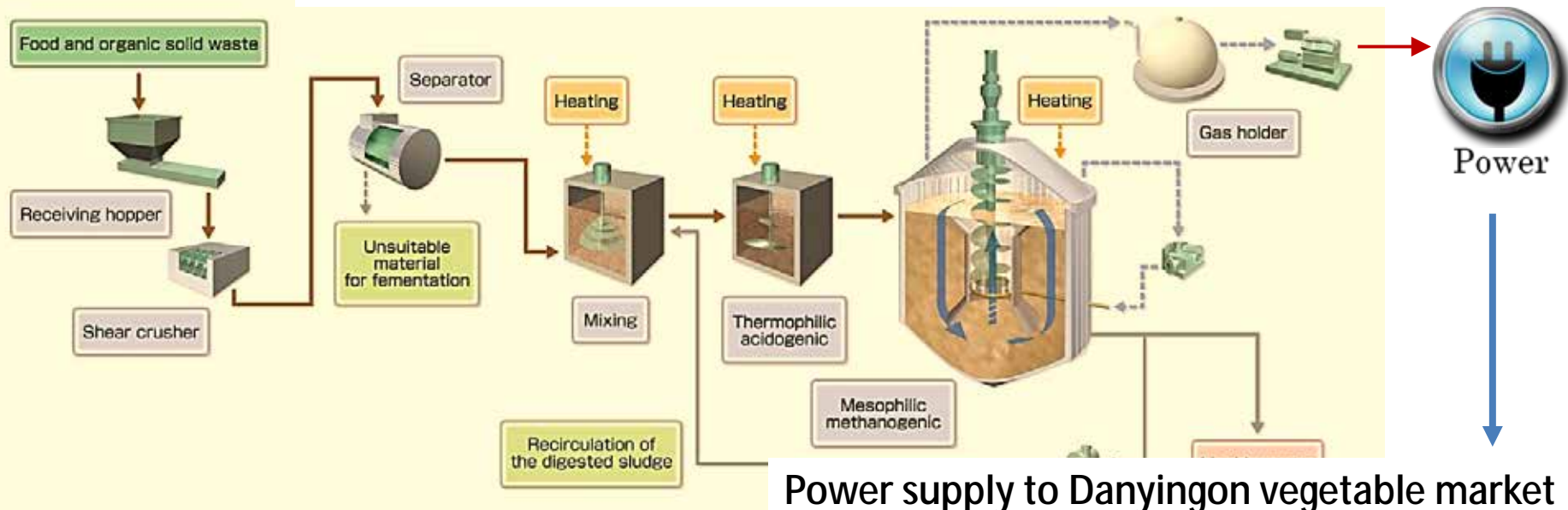
- The project aims at generating electricity using biogas produced from organic waste of Danyingone vegetable market constructed and operated by Dagon group.
- As using electricity generated by biogas at the market, expected to reduce CO₂ emission and CH₄ emission from open dumping sites.

Introduction technology

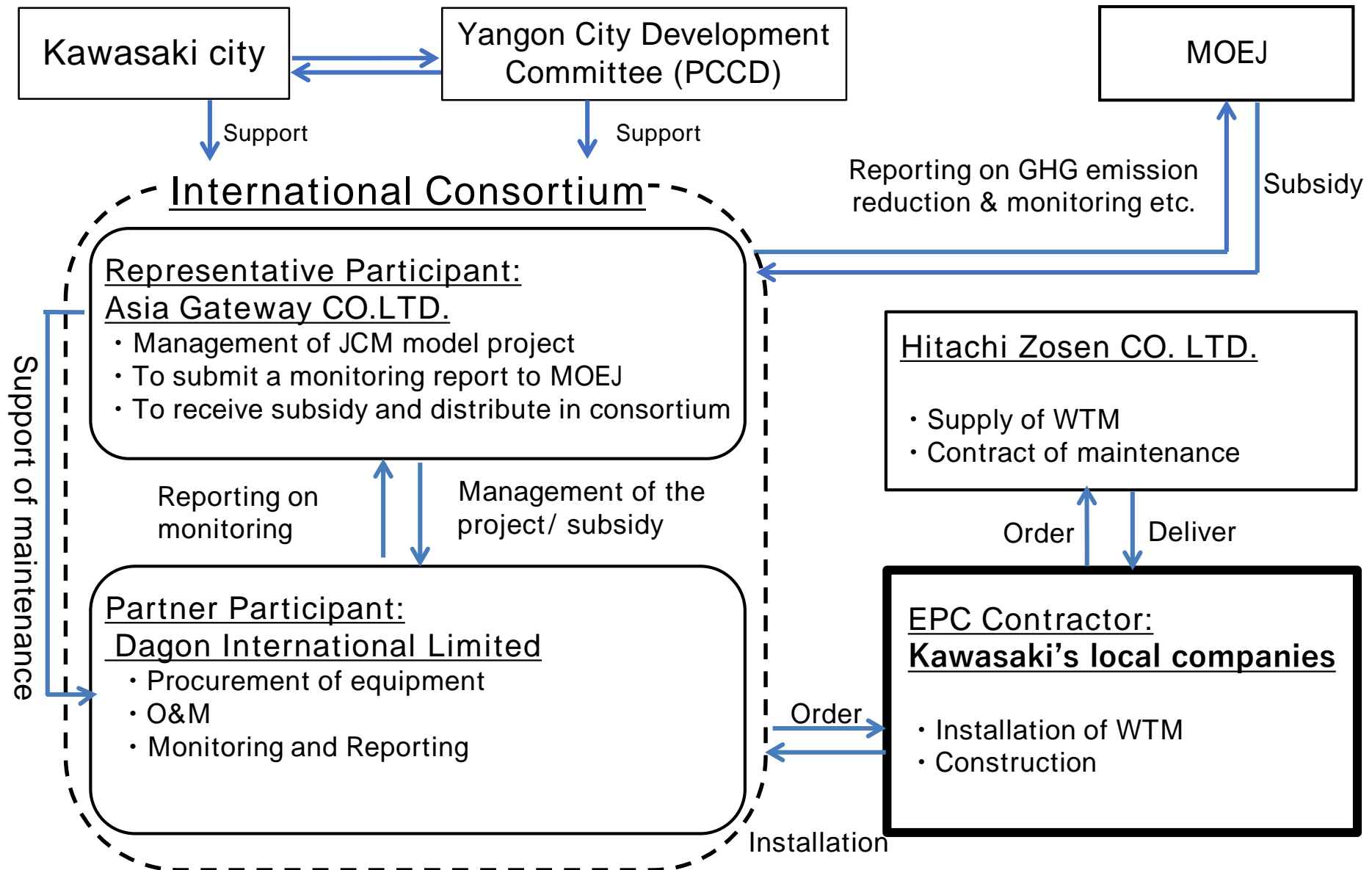
Methane fermentation system (WTM* system)

- By using Circulating methane fermentation process developed by Hitachi Zosen, a leading environmental engineering company in Japan, the high-speed methane fermentation can be carried out without adding water to organic waste.
- Hitachi Zosen's methane fermentation system has many advantages such as energy recovery efficiency and reduction of waste water treatment cost compared to conventional ones.

*Water needless Two-phases Methanation system developed by HiZ



Project scheme



JCM City-to-city collaboration activities in Yangon - 1



Discussion with PCCD of YCDC

JCM City-to-city collaboration activities in Yangon - 2



Discussion with Dagon group

JCM project site - 1



Danyingone vegetable market

JCM project site - 2



JCM project site - 3



Taking samples of organic wastes at Danyingone vegetable market

JCM project -2: Promotion on Green Innovation through JCM City-to-city collaboration with Jakarta (green building & green industry)

DKI-Jakarta, Indonesia



Kawasaki, Japan



Basic structure of JCM City-to-city collaboration project



DKI-JKT

Governor

BAPPEDA

Overall
commitment
between cities

Kawasaki city



Mayor

International economic
affairs office

City planning office
Environmental office

Implementatio
n of city-to-city
collaboration
activities,
based on the
basic policy

Support of low carbon
urban development with
public and private entities

Support of Kawasaki entities
on Indonesian business
through JCM scheme etc.

Indonesia public entities

Indonesia private entities

Factories/building in JKT city

Collaboration
between private
entities

Member entities of Kawasaki
Green Innovation Cluster

Kawasaki private entities

Japanese private entities

JCM City-to-city collaboration activities in DKI-Jakarta

Main Activities

1. Identification of target sectors for FY2018's collaboration between DKI-JKT and Kawasaki
2. Business matching to formulate JCM model project.

Meeting with DKI-JKT

- ▶ **Nov. 2017:** Kick-Off meeting with DKI-JKT
- ▶ **Dec. 2017:** 2nd meeting with DKI-JKT
- ▶ **Jan. 2018:** 3rd meeting with DKI-JKT
- ▶ **Feb. 2018:** 4th meeting with DKI-JKT and Business Matching

Business Matching in DKI-JKT

- ▶ Participants: DKI-JKT (BAPPEDA etc), Kawasaki city, Private companies (Japan, Indonesia), JCM secretariat in Indonesia (TOTAL 65 people)



Presentation by Kawasaki city



Presentation on Green Building regulation



Business matching session

JCM City-to-city collaboration activities in DKI-Jakarta

Priority Sectors in DKI-JKT

► The following priority sectors were selected with DKI-JKT

Green
Buildin
g

Green
Industr
y

Renewable
Energy

Solid
Waste

Sustainabl
e City

**Selected by MOEJ for
JCM model project formulation**

- Collaboration to solve these environmental issues
- Transferring knowledge/ experiences from Kawasaki city to DKI-JKT

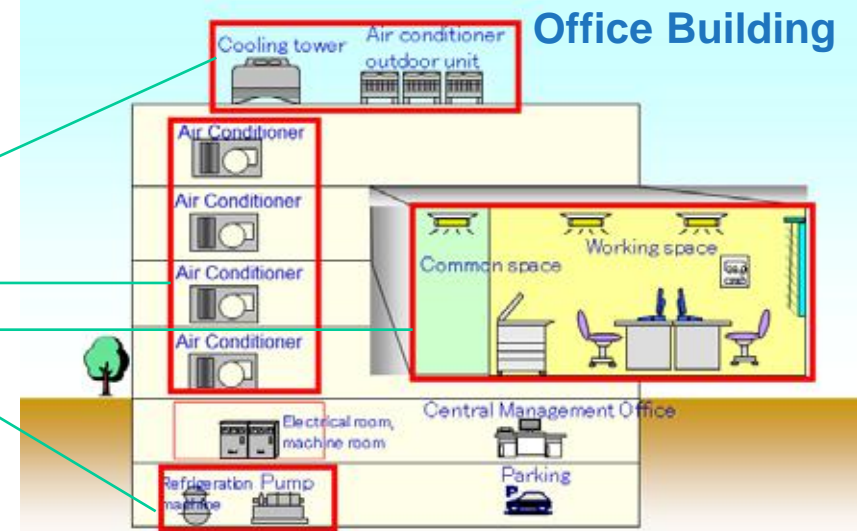
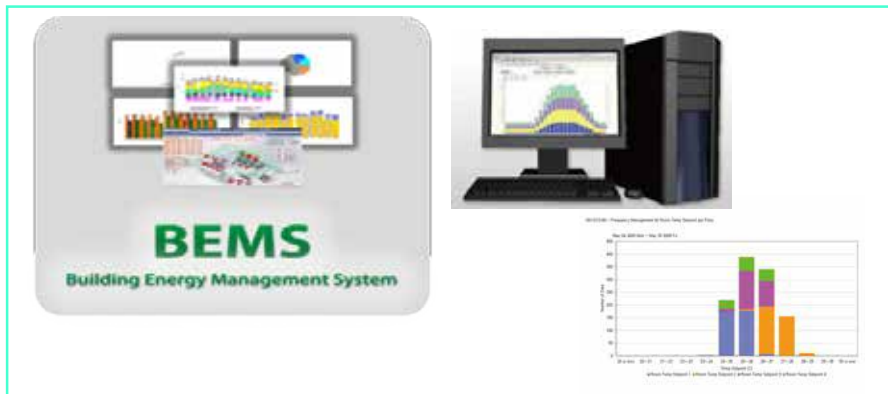


JCM model project formulation on “Green building”

- ▶ **Installation of air conditioning energy-saving technologies into the office buildings (Approx. 10 buildings)** in central DKI-Jakarta.
- ▶ The technologies will be provided by **PT. Azbil Berca Indonesia** (local subsidiary of Azbil Corporation), a leading company on building automation business.

**Introduction technology = BEMS
(Building Energy Management System)**

A system realizing effective energy management and optimum facility control



Source: Azbil Berca Indonesia

Project scheme on “Green building”

International Consortium (Green Building)

Representative Participant

Tokyo Century Corporation

- ▶ Order BEMS etc.
- ▶ Reporting on monitoring

- ▶ Lease Contract
- ▶ Management of the project and subsidy

Partner Participant

Buildings in DKI-JKT
(World Trade Center etc.)

Reporting GHG emission
reduction & monitoring,
Application of subsidy

**Ministry of the
Environment, Japan**

Subsidy

Order of equipment
Design, Installation
of equipment



PT. Azbil Berca Indonesia

JCM model project formulation on “Green industry”

- ▶ **Providing a heat exchange technology into factories** in DKI-JKT
- ▶ The solutions will be provided by **MDI Corporation** (an engineering company of heat existing system, located in Kawasaki city)
- ▶ This project aims **to realize Green Industry in DKI-JKT**

Introduction technology = Heat exchange

○ Installation of heat exchange technologies

- ▶ **Providing consultation service** for high efficiency heat exchange according to a client's needs or purpose.
- ▶ **Design of equipment** for installation heat exchange technologies

○ Consultation service for heat exchange

- ▶ **Comprehensive consultation service related to “heat”** (e.g. air-conditioning system in factories or houses)



Image of technologies
for heat exchange

Project scheme on "Green industry"

International Consortium (Green Industry)

Representative Participant

Asian Gateway Cooperation

► Reporting on
monitoring

► Management of
the project and
subsidy

Partner Participant

Factory in DKI-JKT

Reporting GHG emission
reduction & monitoring,
Application of subsidy

Subsidy

**Ministry of the
Environment, Japan**

Order of
consultation and
equipment for
energy saving

Consultation
service on energy
saving or heat
exchange system
solution



MDI Corporation
(located in Kawasaki city)

Base of discussion : SDGs (Sustainable Development Goals)



- ▶ Priority issues of DKI-JKT are relative to SDGs.
- ▶ Kawasaki city has set a policy to take actions actively for SDGs contribution.
- ▶ Kawasaki city and DKI-JKT can collaborate to solve the priority issues by following SDGs action plan of DKI-JKT (tentative).

Image of using SDGs

Realization of sustainable green innovation



Sustainable city



We can also contribute to SDGs



17 PARTNERSHIPS FOR THE GOALS



City-to-City Collaboration

Priority Sectors

Each activities will be followed to SDGs action plan of DKI-JKT



JCM

7 AFFORDABLE AND CLEAN ENERGY



Renewable Energy

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Green Industry

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Solid Waste

Image of future development on city-to-city collaboration



Realization of sustainable green innovation

MOEJ Programme

JCM city-to-city collaboration between DKI-JKT and Kawasaki city in phase-2 (FY2018)

1) Green Innovation actions

- ▶ Organization of Business Matching
- ▶ Knowledge transferred to achieve the goal
- ▶ Awareness-Raising on global warming prevention
- ▶ Capacity Building, Site visit to Kawasaki

2) JCM project formulation



JCM model project

JCM city-to-city collaboration in phase-3 (FY2019)

Other Programme

JICA Programme

JICA technical assistance

JICA grassroots prj.

Others

Other project scheme



Thank you for your attention.