

COP 23 Japan Pavilion,
9th November 2017

Urban Development of "FutureCity" Yokohama and The City-to-City Collaborations



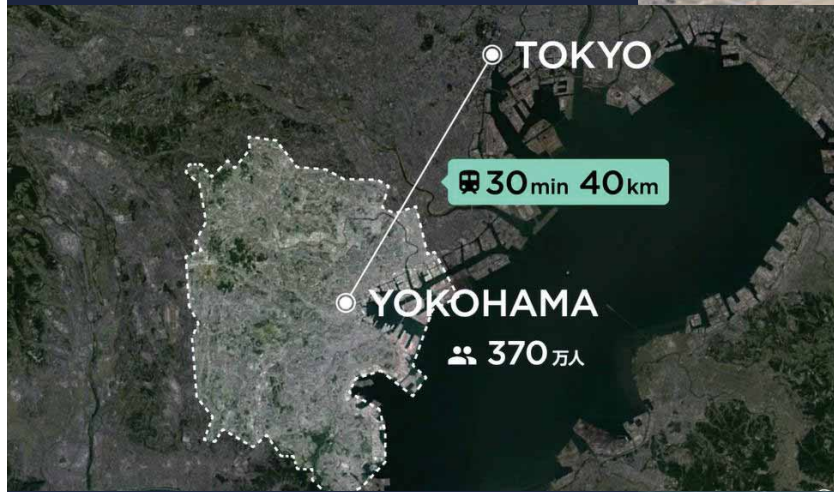
Yokohama

Population
3,730,000

**Number of
households**
1,646,676

Area
435.21km²

Nominal GDP
JPY12.5050 trillion
USD 150.5 billion



1859 Port of Yokohama Opened

Initially : Small Village
→Yokohama became Japan's international port town.

1923 Great Kanto Earthquake

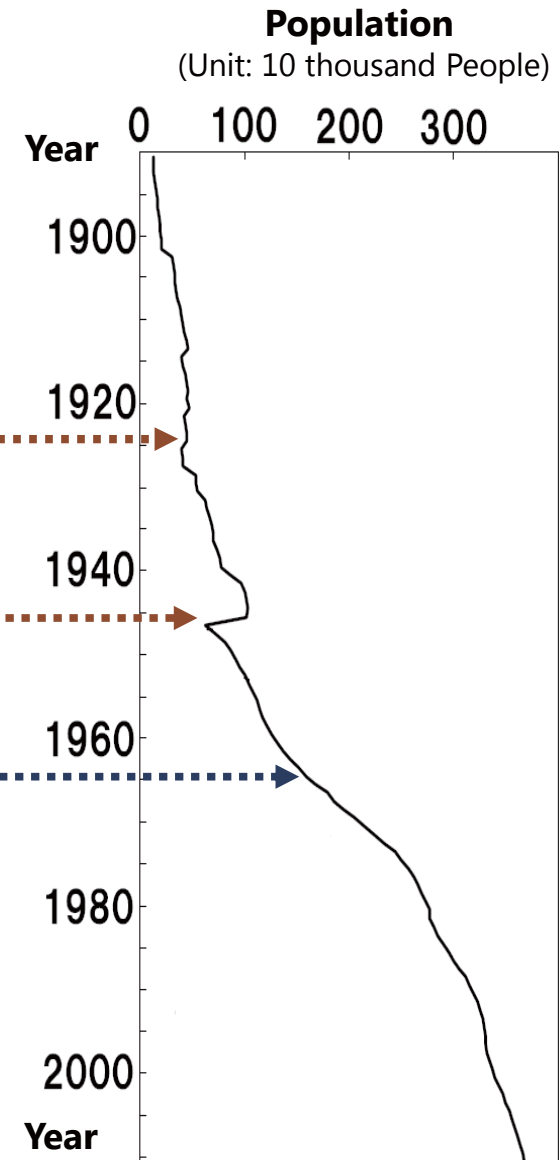
Yokohama sustained devastating damage, but through the recovery efforts, the fundamental framework for today's urban area was developed.

1945 Bombing of Yokohama

Key areas in central Yokohama were occupied by the US forces.

1965- Economic growth

Migration from rural areas →urban sprawl
→ **Rapid deterioration of residential environment**



Due to Rapid Growth



Materials from the Archives Office of the City of Yokohama

Yokohama's "5 Major Challenges"

- Environmental disruption
- Waste
- Roads and Traffic
- Water Resources
- Public Areas



Toward Sustainable Development – At Present



Source: Port and Harbor Bureau, the City of Yokohama



Source: Environmental Planning Bureau, the City of Yokohama



Source: Road and Highway Bureau, the City of Yokohama



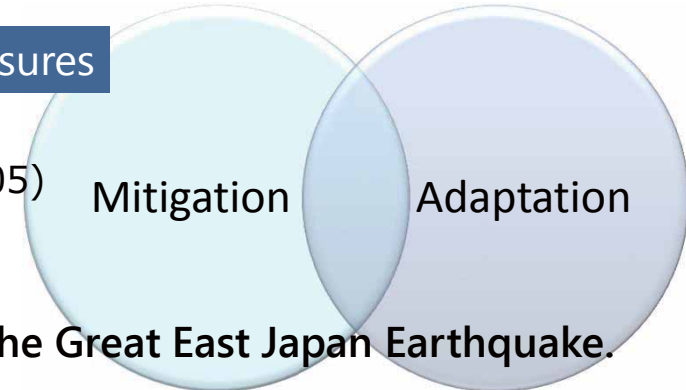
Source: Resources and Waste Recycling Bureau, the City of Yokohama

Action Plan for Climate Change Countermeasures



Yokohama City Action Plan for Global Warming Countermeasures

Target : 80% reduction by 2050 (Base year: 2005)
(Yokohama is a member of 2050 pathway platform)

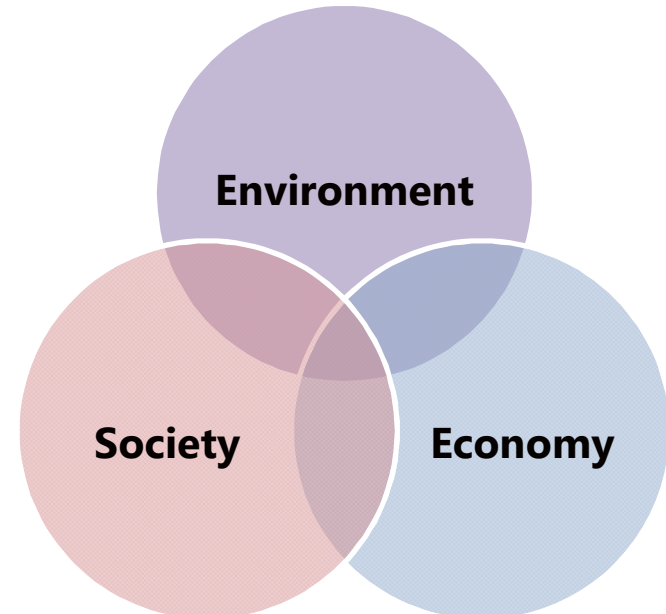
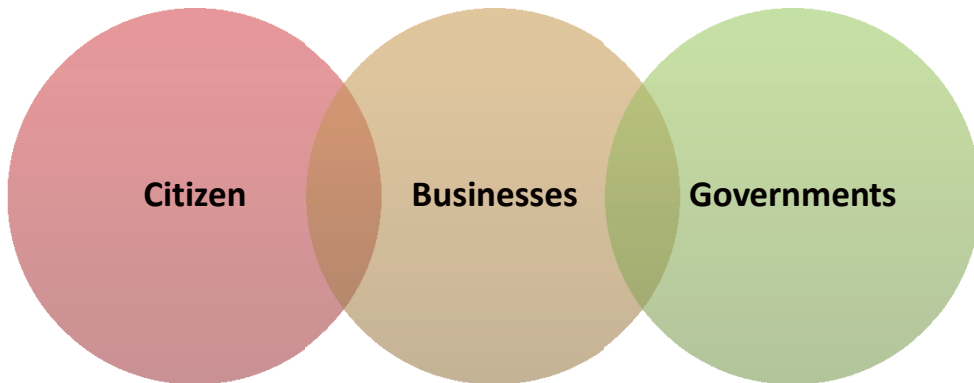


Revised 2014 : consider changes in the situation caused by **the Great East Japan Earthquake**.
2018: consider the effectuation of **Paris Agreements**, trends in various countries, etc.

Yokohama City Climate Change Adaptation Policy

FutureCity Yokohama

Established .2016: **Citizens, companies and government cooperate** to promote various actions.



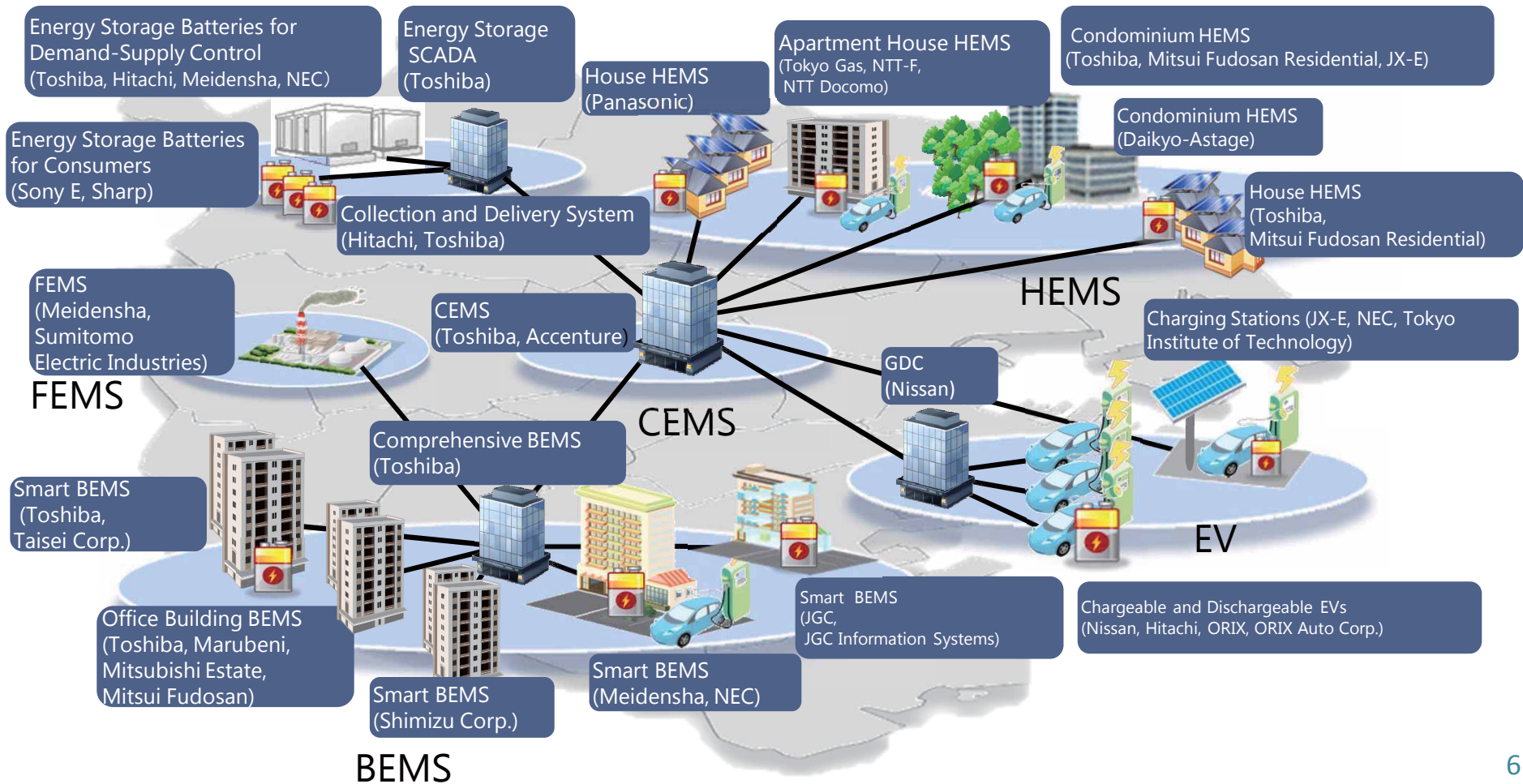
Yokohama Smart City Project (YSCP)



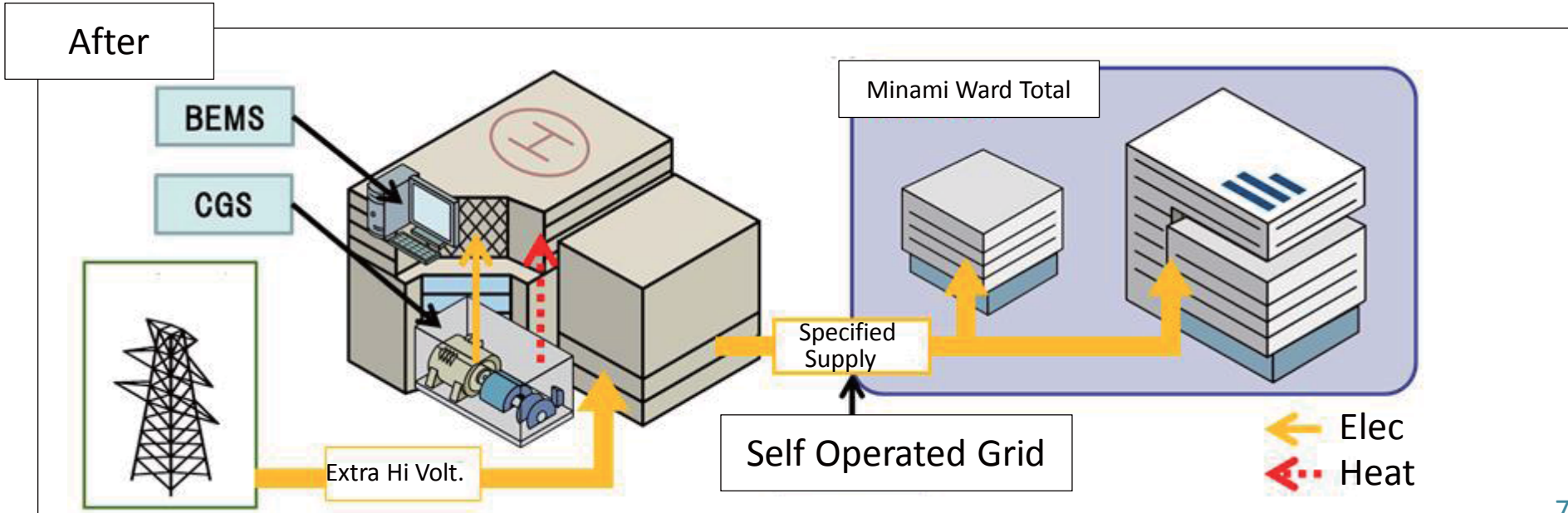
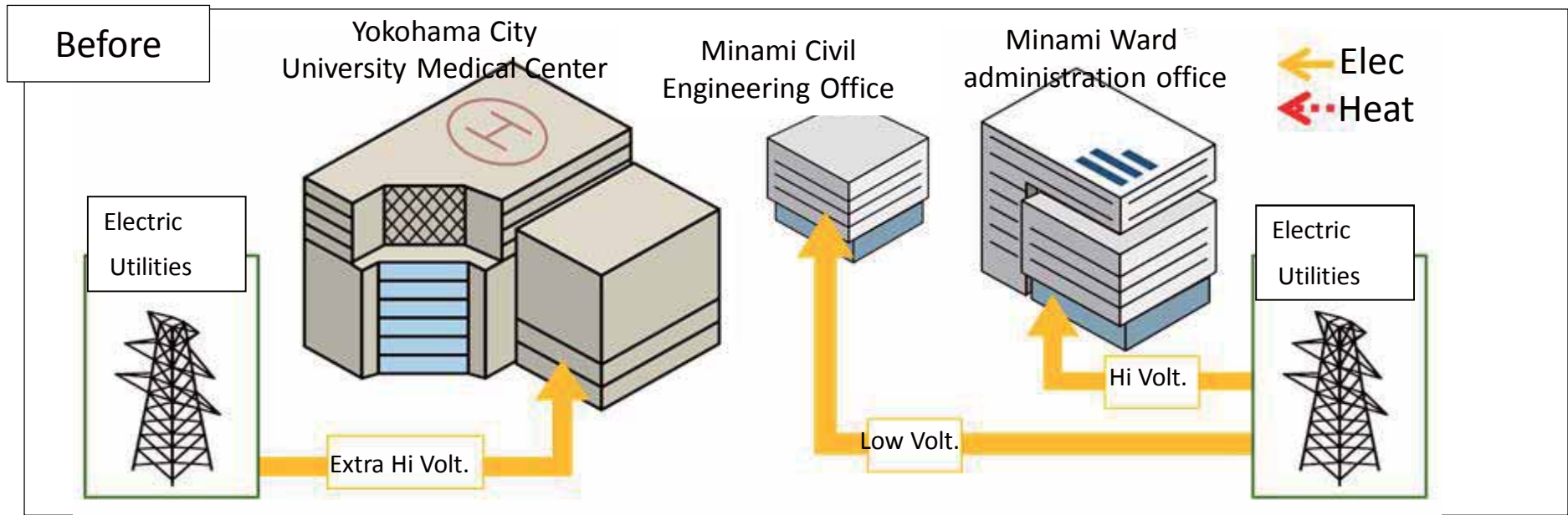
Goal (~2013) / Result (2010~2014)

HEMS (Home energy management system) (4,200/4,000) PV (37MW/27MW) EV (2,300/2,000)

Energy Storage SCADA

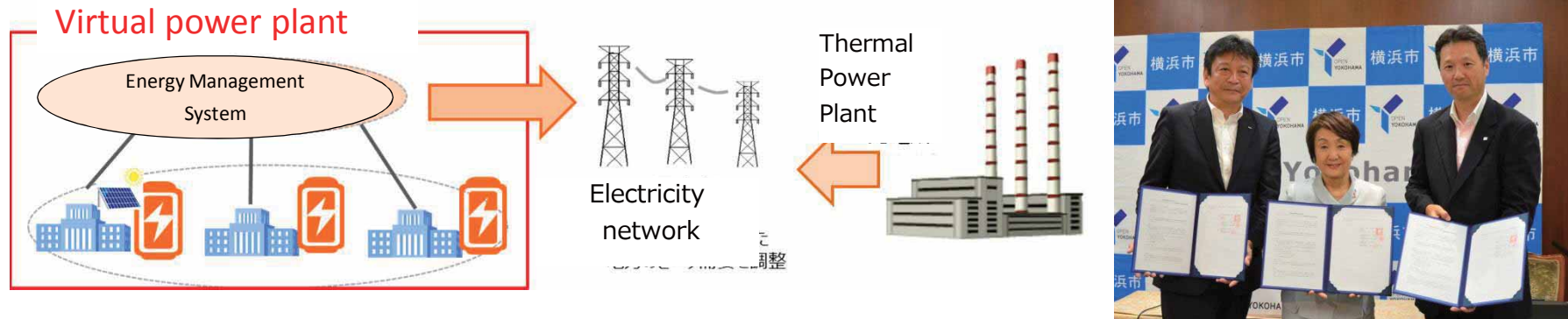


Energy Management based on specified supply



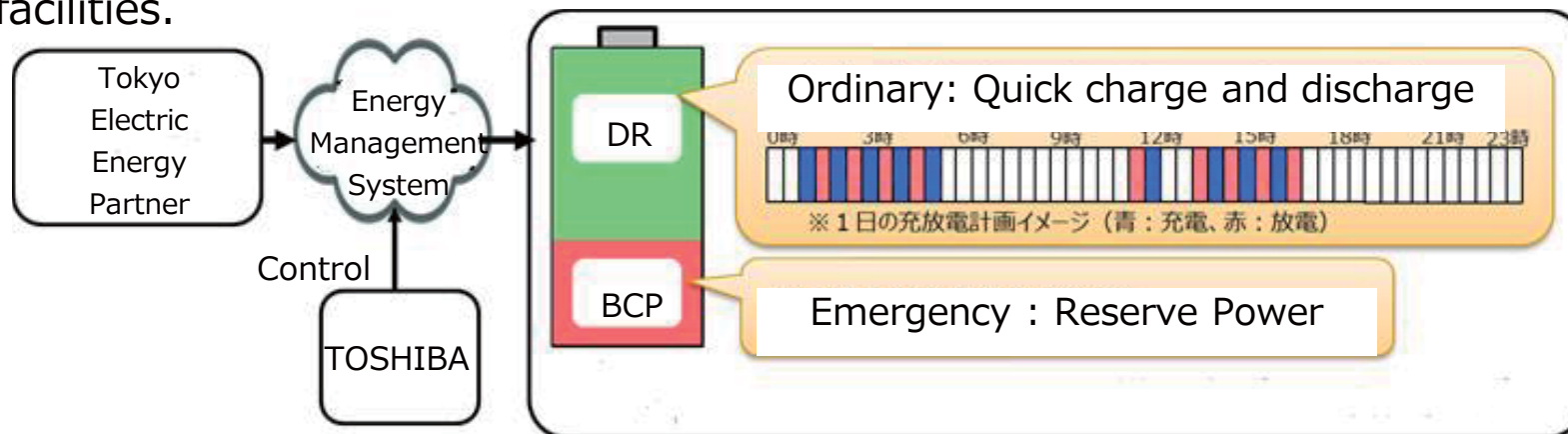
Virtual Power Plant Project

Contract the agreement to construct Virtual Power Plant among Toshiba, TEPCO and Yokohama City on July 6th 2016



Description of Project Term: July 6th 2016 ~ March 31th 2018

Install the storage batteries at elementary school and junior high school in Yokohama City, which are 18 places and specified as local preventing disaster facilities.



Use of Hydrogen

Main Indices (FY2020)

Fuel cell vehicles in use	2,000
Hydrogen stations outfitted	10
Home fuel cells in use	40,000



○ Encouraging the spread of fuel cell vehicles



○ Spreading stationary fuel cells

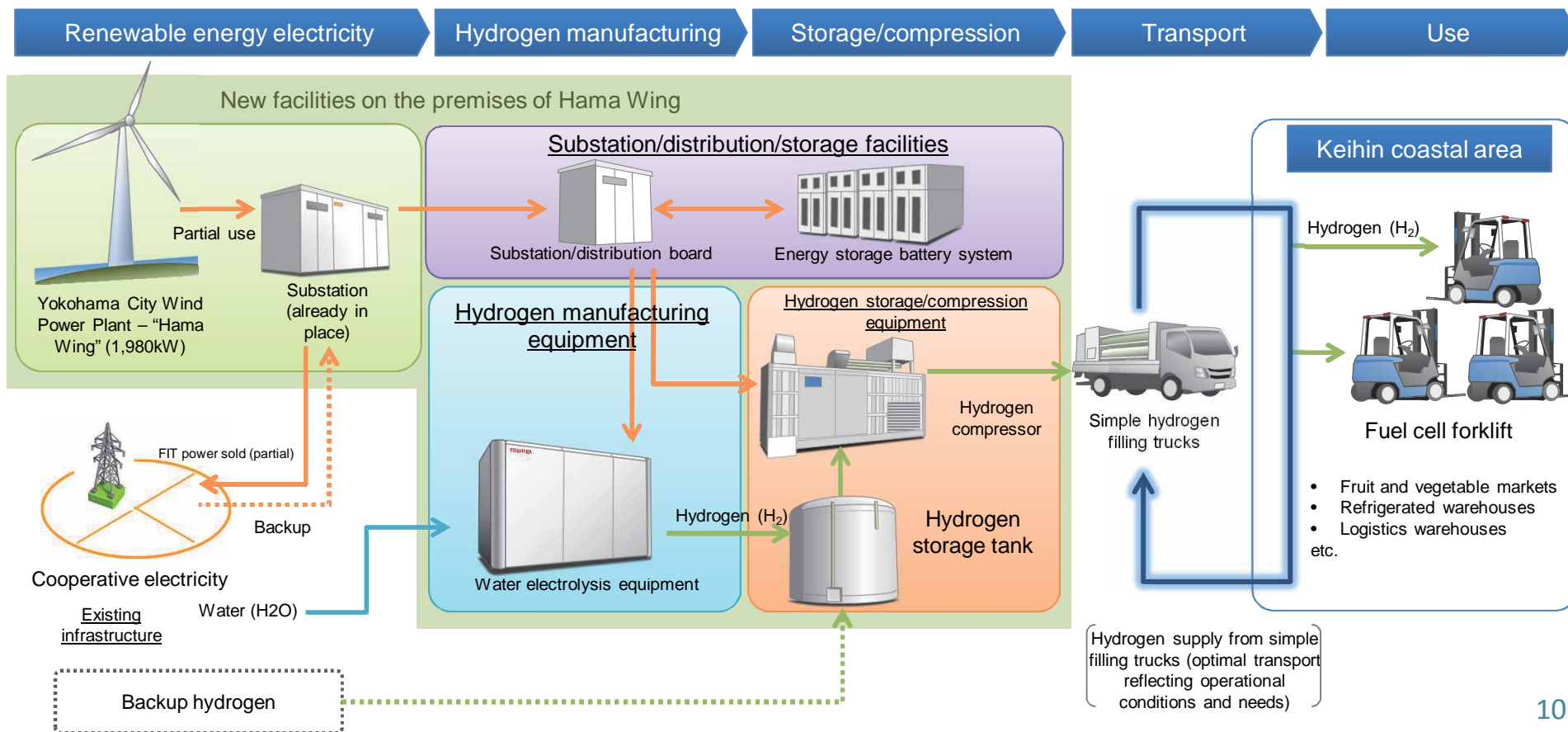


○ Encouraging installation of hydrogen stations

Low Carbon Hydrogen Pilot Project

We are considering introducing this technology in the Keihin coastal area through a partnership between related companies and municipalities.

- In addition to CO₂-free hydrogen manufacturing using electricity generated by the Yokohama City Wind Power Plant, we will launch an initiative to build and demonstrate an integrated system from storage to transport to use.
- Our aim is to contribute to future regional development and global warming countermeasures.



Y-PORT Project

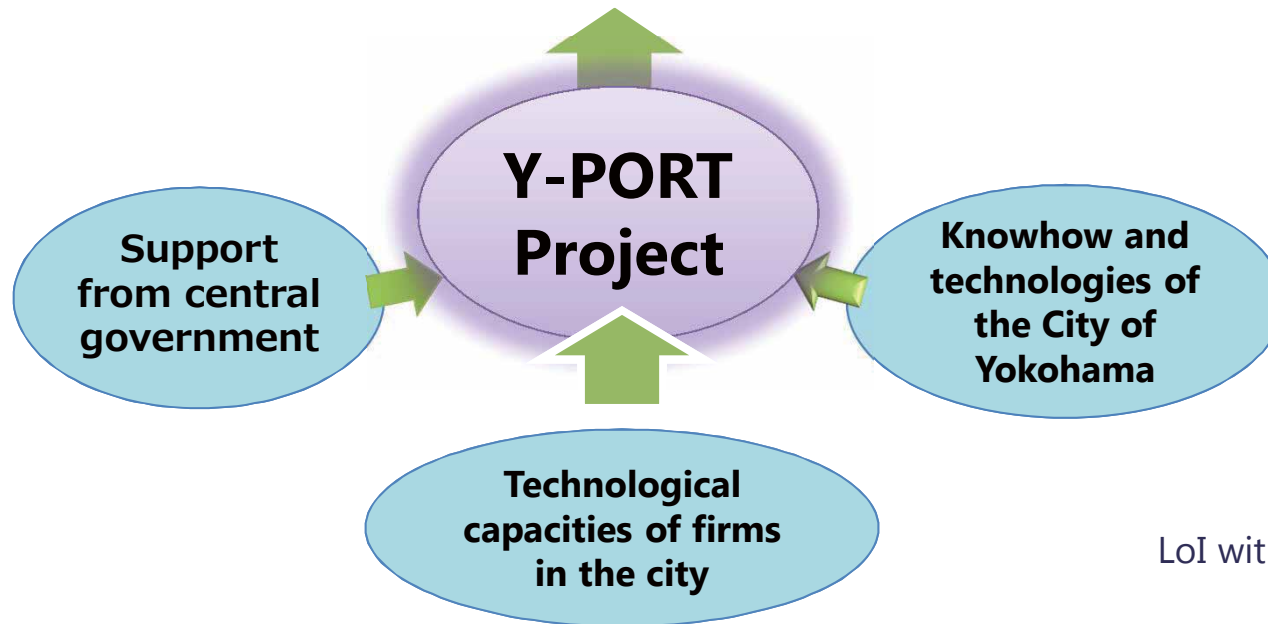


Yokohama

Partnership of Resources and Technologies

It is essential to provide **not simple products but solutions** through combining technologies and knowhow of **the public and private sectors**

Enhancement of international technical cooperation



MOU with JICA

横浜市とアジア開発銀行との連携に関する
Memorandum of Understanding on Collaboration
between Asian Development Bank and City of Yokohama



MOU with ADB



LoI with the City of Batam in May, 2015

4 Master Plans Yokohama has worked together



Bangkok, Thailand

- Bangkok Master Plan on Climate Change



JICA

- JICA Report
- “ Technical cooperation project on the Bangkok master plan on climate change 2013-2023 in the Kingdom of Thailand “ (1)<http://libopac.jica.go.jp/images/report/P1000025878.html> (2)<http://libopac.jica.go.jp/images/report/P1000025879.html>

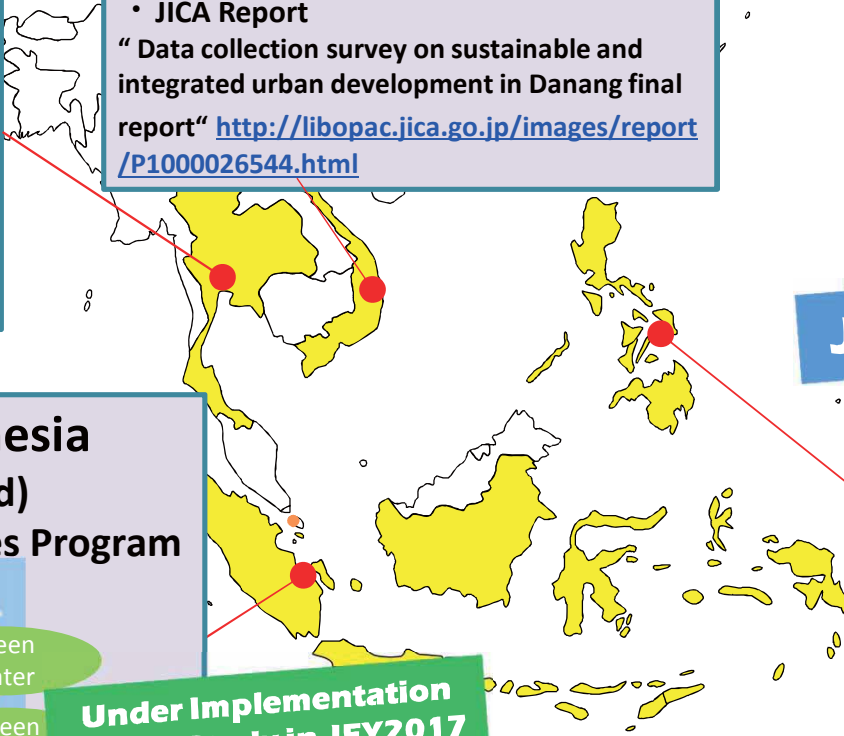
Da Nang City, Vietnam

- Da Nang Urban Development Forum (Making Urban Development Action Plan)



JICA

- JICA Report
- “ Data collection survey on sustainable and integrated urban development in Danang final report “ <http://libopac.jica.go.jp/images/report/P1000026544.html>



Cebu City, Philippines

- Mega Cebu Roadmap 2050



JICA

- JICA Report
- “The Roadmap study for sustainable urban development in Metro Cebu final report “ <http://libopac.jica.go.jp/images/report/P1000022002.html>

Batam City, Indonesia

- Project Mapping (planned) based on Batam Green Cities Program



Under Implementation in JCM Study in JFY2017

JCM Project as a schemes

Making Master Plans and Action Plan

Bangkok Master Plan
on Climate Change
2013-2023



Capacity buildings
through working
together for city's
plans



BMA



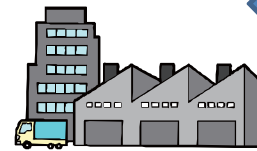
Yokohama

Implementation with Private Sector

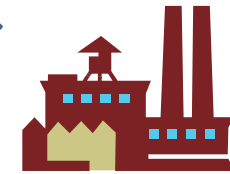


Project Implementation
for Sustainable Urban
Development

(JCM Finance)



Public/Business



Business

Flagship Projects of City to City Collaboration



JCM

Da Nang City, Vietnam

Introduction of high efficiency pumps in the water purification plant by Yokohama Water Co., Ltd.



JICA

Energy-saving consulting services for factories, hotels and other buildings by Osumi Co, Ltd.



Yokohama City

Cebu City Philippines

JICA



Efficient septage sludge dewatering process by Amcon INC.

MOEJ



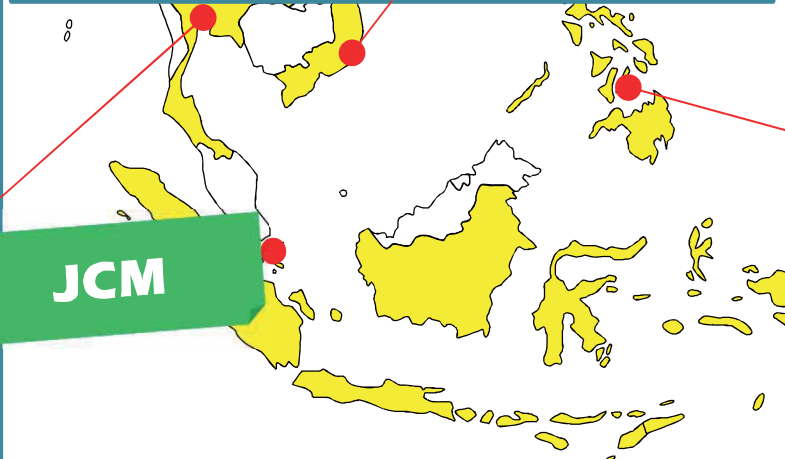
Commercial plant for waste plastic recycling by GUUN Co., Ltd.

Bangkok, Thailand



Rooftop solar power systems and advanced EMS for power supplies in Factories by Finetech CO. Ltd.

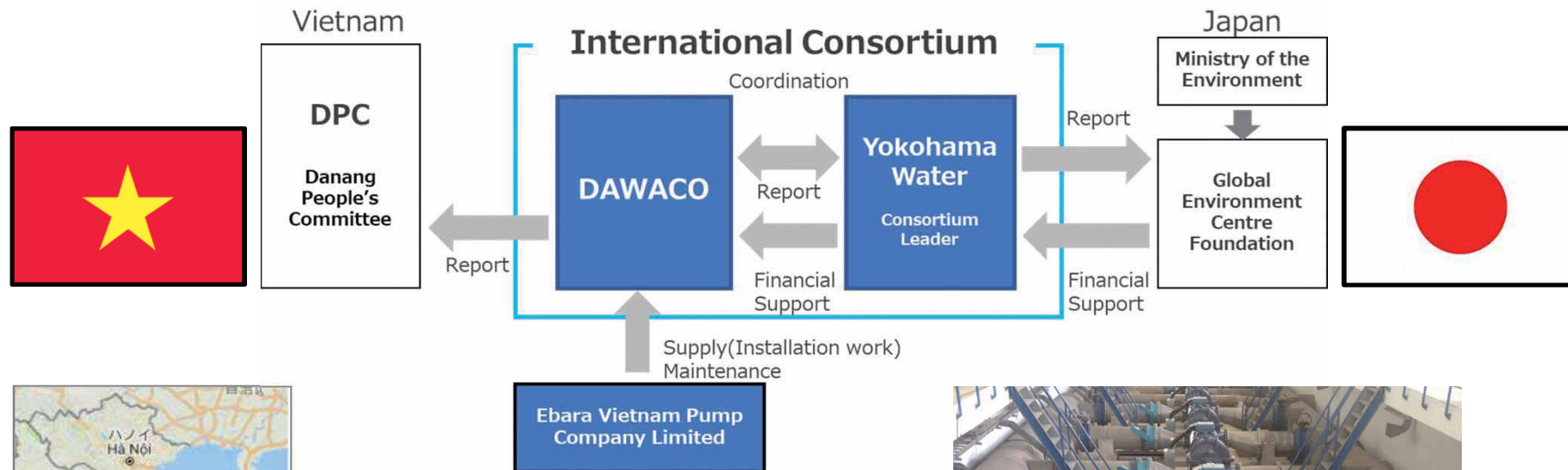
JCM



JCM Project 2016 in Danang, Vietnam



Introduction of high efficiency pumps in the water purification plant



【Location Map】



2017.9.22 Opening Ceremony



Replacement of high efficiency water pumps



Aiming further achievements: Batam City

