

Yokohama's City to City Collaboration on Circular Economy and Sustainability

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***Solid Waste Management
of Yokohama
3R Dream (Slim)***



Achievements of “Yokohama G30” followed by 3RDream

- ◆ **Problem:** Waste emissions increasing faster than population
- ◆ **Target:** Cut waste emissions by 30% by 2010 (from 2001 level)

Full separation of waste

Started in 2003

Collection/recycling of used products

- ◆ **Target achieved 5 years ahead of schedule**
(about 40% reduction as of 2009)
- ◆ **Effects of reduction**
 - Saved ¥110 billion it would have cost to replace two incineration plants
 - Saved ¥3 billion in running costs
 - Equivalent to a 47% cut in CO₂



Taking every opportunity to enlighten, explain and encourage

- Explanatory meetings for citizens (more than 11,000 times).
- Campaigns at all stations; events; etc.

The Yokohama Strategy

~Waste Sorting by Citizens~

Before G30 Plan : 7 types



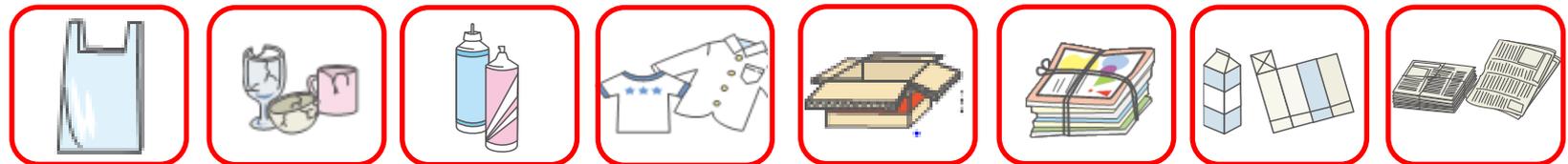
Burnable waste



Basing on G30 Plan: 15 types

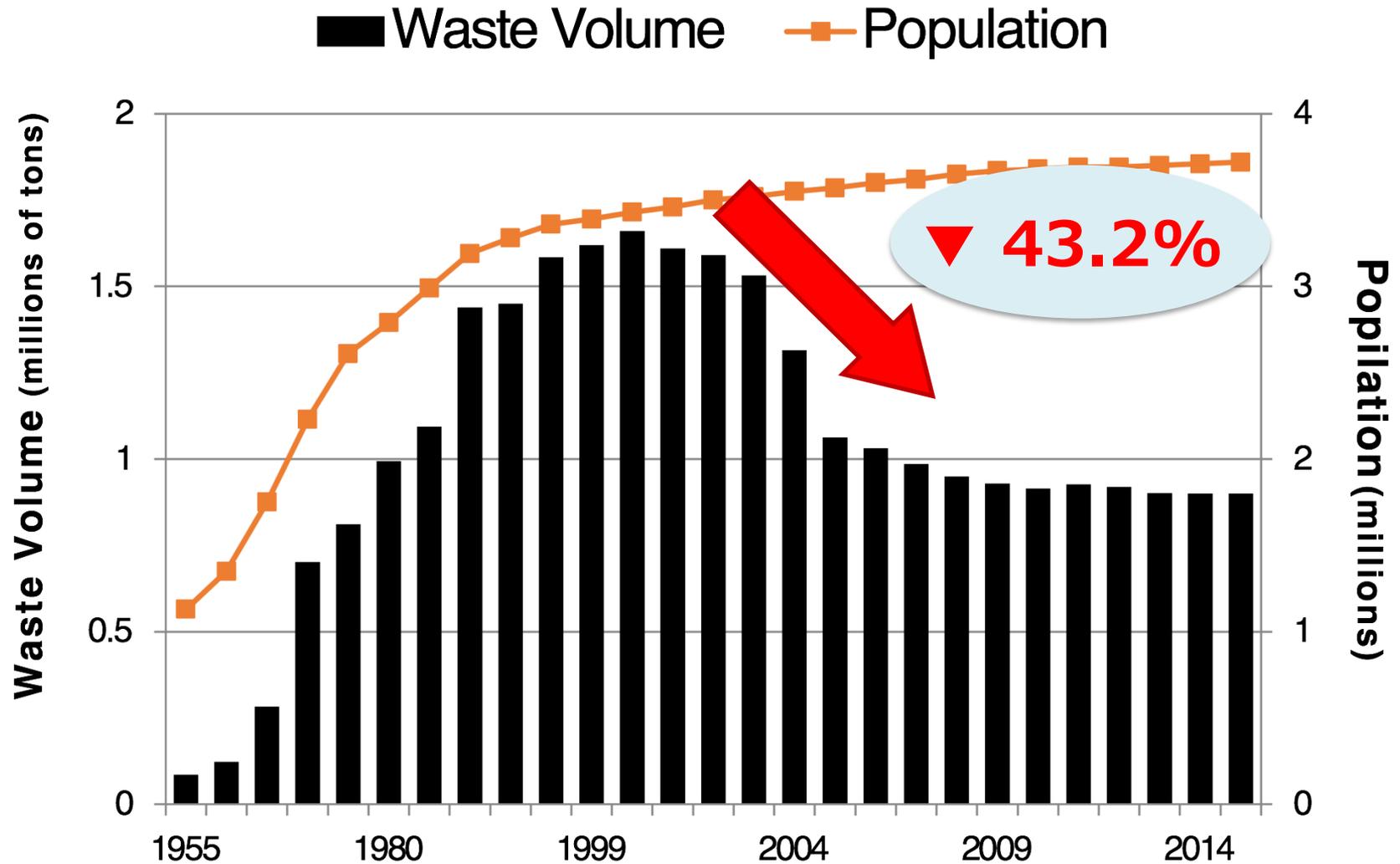


Burnable waste



New categories

Transition of population and the total amount of waste



The Yokohama Strategy

～Raising Citizen Awareness～



Briefing Sessions
About **11,000**

Early-Morning Instructions
About **3,300**



The Yokohama Strategy

～Raising Citizen Awareness～

Environmental Awareness Classes



The Yokohama Strategy

~Raising Citizen Awareness~

Administrative data



AI



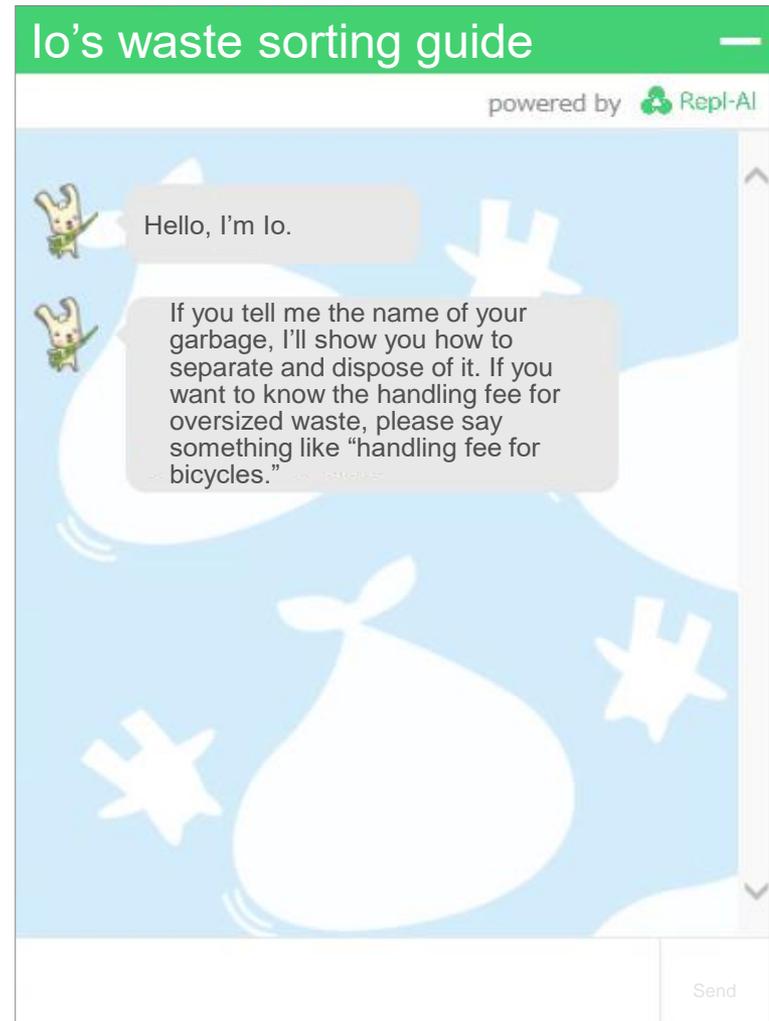
A chatbot that utilizes AI
“lo’s waste sorting guide”

(Demonstration tests began in March 2017, and full-scale introduction began in April 2018)

Effects

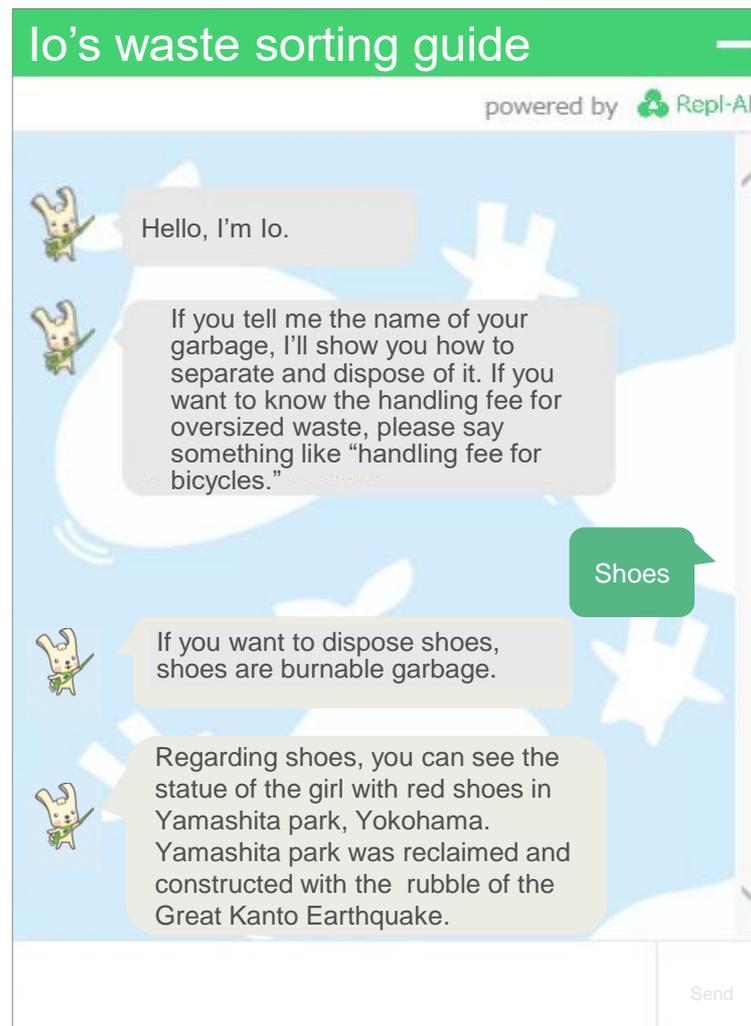
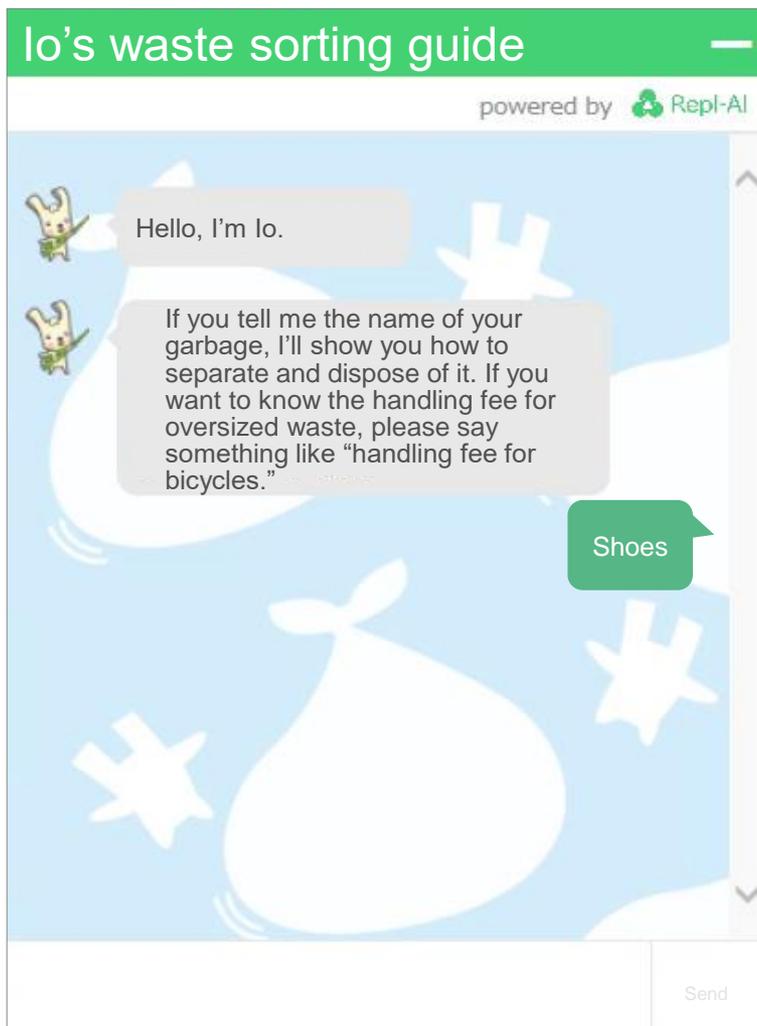
(Actual results in FY2020)

- 980,000 cases of use per year
- Users at night: 30%



The Yokohama Strategy

~Raising Citizen Awareness~



Yokohama's Further Challenges ~Beyond the waste sorting~



Sort household waste even further

Use reusable bags instead of plastic shopping bags



Reduce food waste

Reduce leftovers at cooperating restaurants



Drain kitchen waste before throwing it out

Dry chopped wood and cut grass



【Yokohama 3R Dream Plan】



Y-PORT Project

-Transferring Yokohama's Experiences -

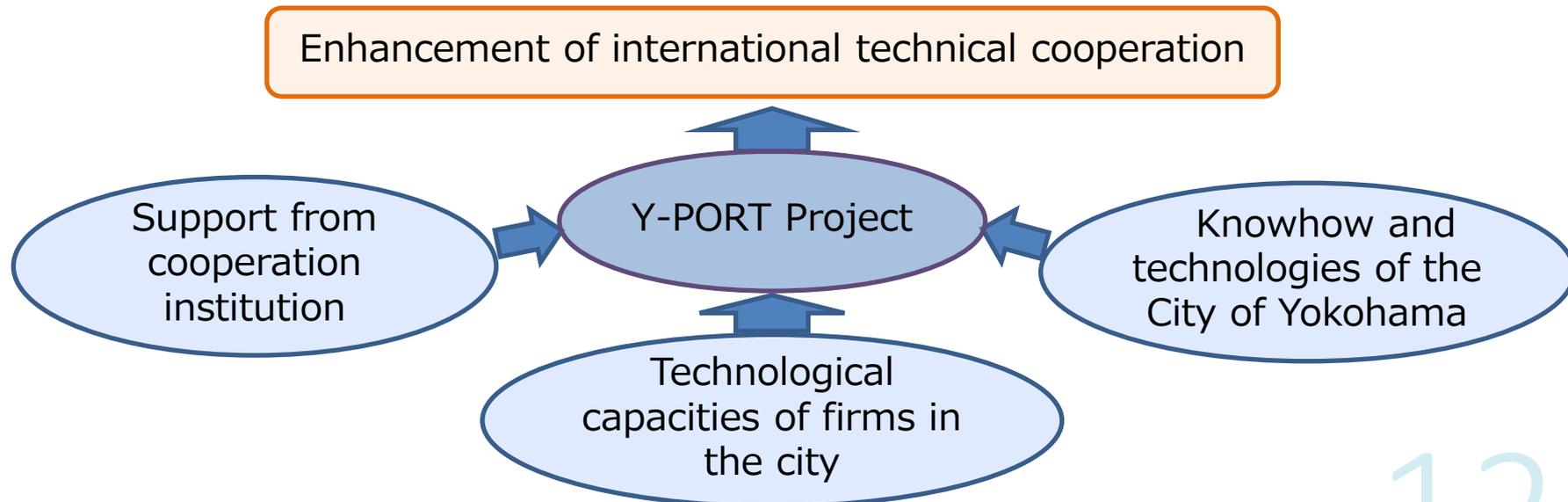


Yokohama's International Technical Cooperation (What is Y-PORT?)

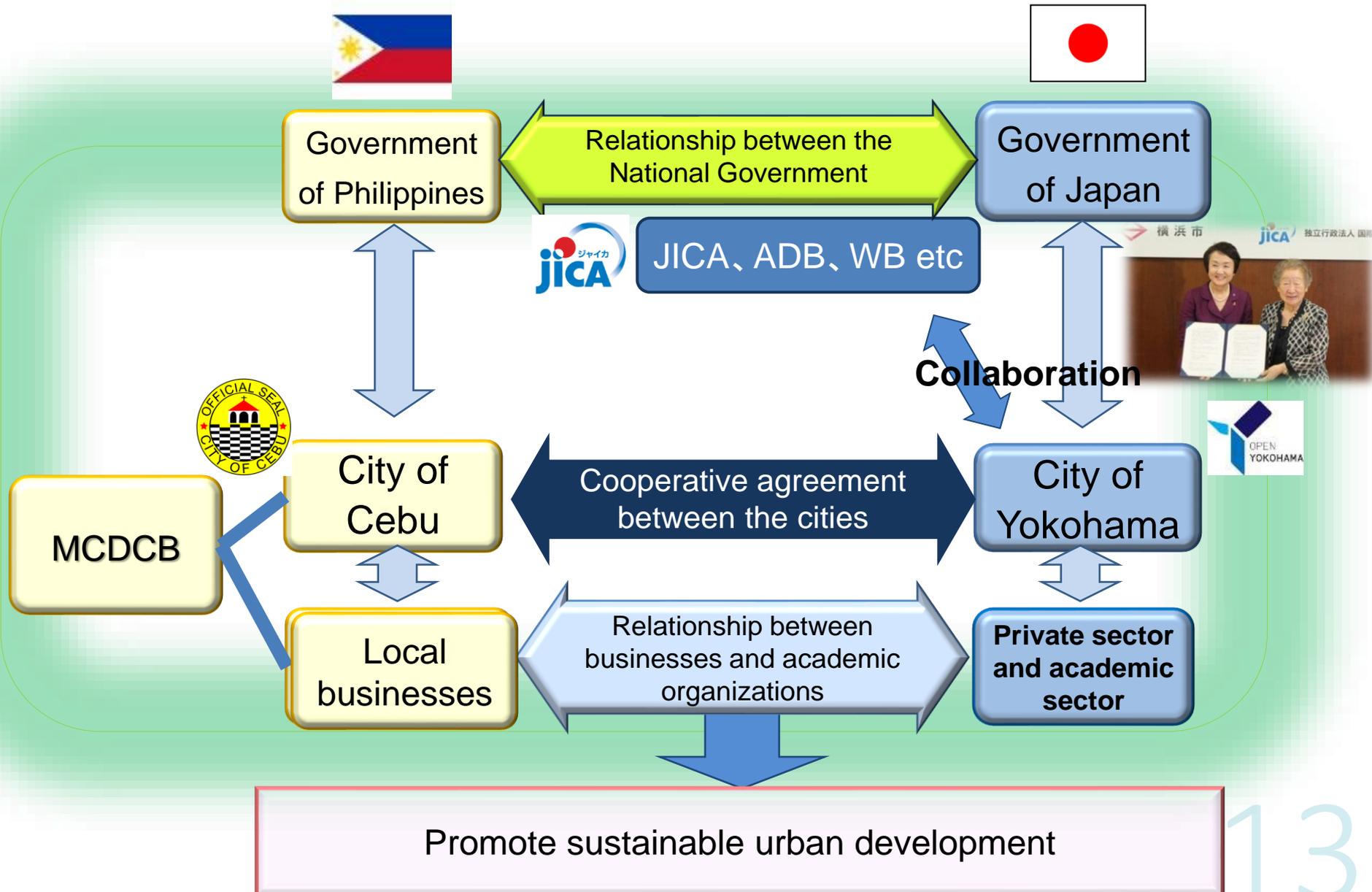
Yokohama Partnership of Resources and Technologies

International technical cooperation based on public-private partnership and drawing on the resources and technology of Yokohama

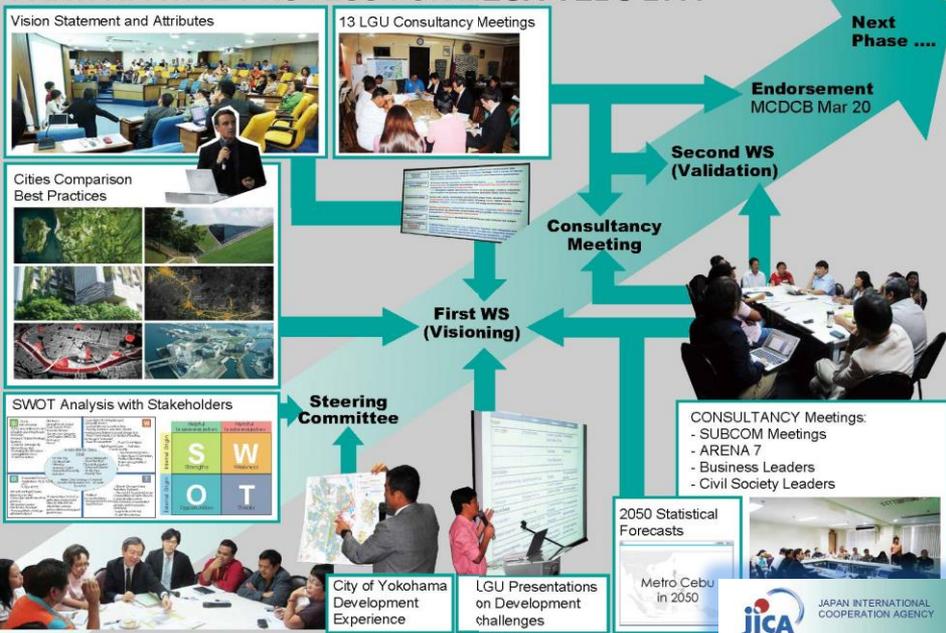
- It is essential to provide not simple products but solutions through combining technologies and knowhow of the public and private sectors



Framework of Cooperation with Cities



PARTICIPATIVE PROCESS FOR MEGA CEBU 2050



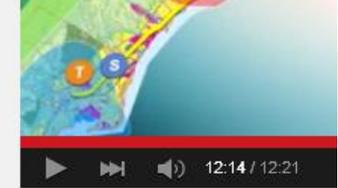
MEGA CEBU VISION 2050

FORMULATION OF SUSTAINABLE URBAN DEVELOPMENT VISION FOR METRO CEBU

Mega Cebu Roadmap 2050

<https://www.youtube.com/watch?v=nyF6sAtMcZ8>

<https://www.youtube.com/channel/UCPsclvV7g8OWli8mBrVDcPA> (MEGA Cebu)



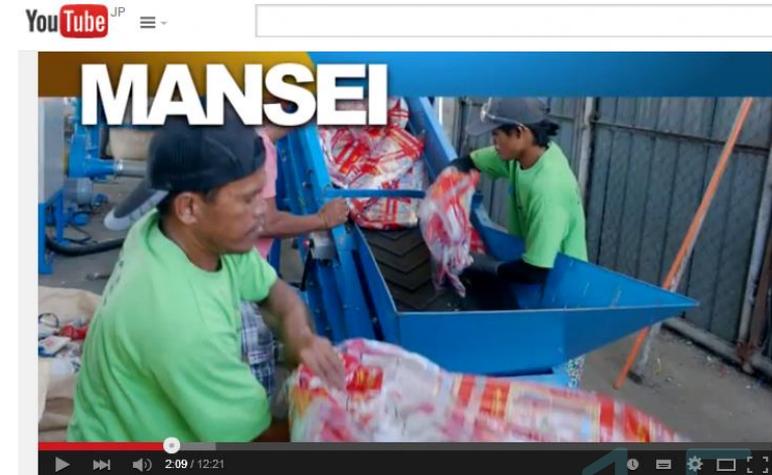
Mega Cebu Roadmap for a Sustainable Urban Development for Metro Cebu



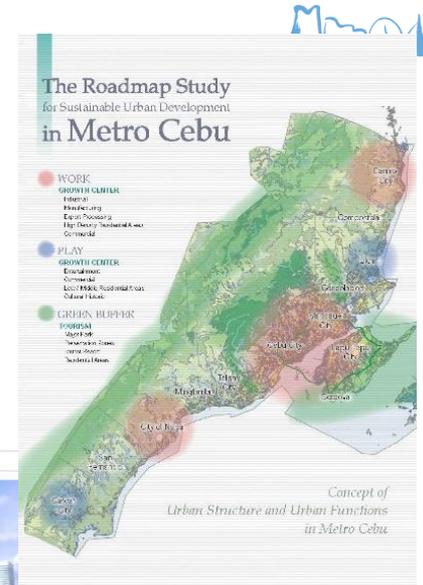
Mega Cebu Roadmap for a Sustainable Urban Development for Metro Cebu



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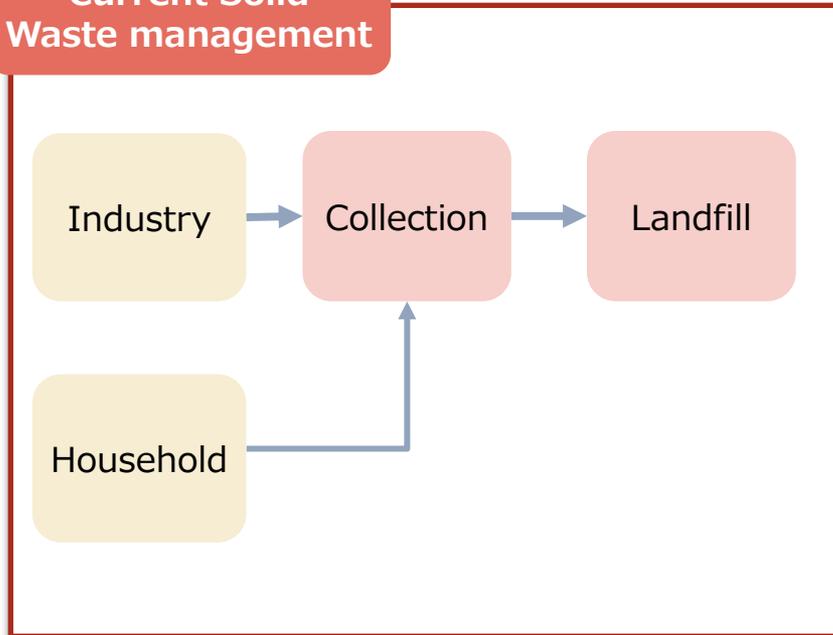
A Prioritized Issue in Cebu (SWM)



Solutions for Solid Waste Management in Metro Cebu

Benefits of the Transition to Sustainable Waste Management

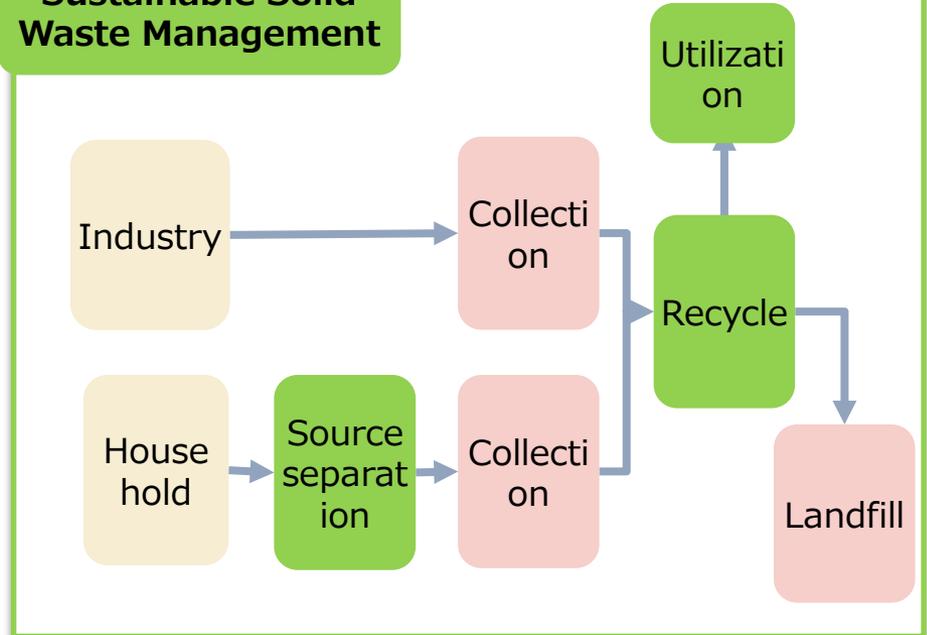
Current Solid Waste management



Risks of Continuing the current the practice

- ✓ Exceeding the Landfill Capacity
- ✓ Accumulation of Environmental Impact
- ✓ Low utilization of resources
- ✓ Economical Loss
- ✓ Unlimited increase of waste volume from industry/household due to low incentive for waste minimization

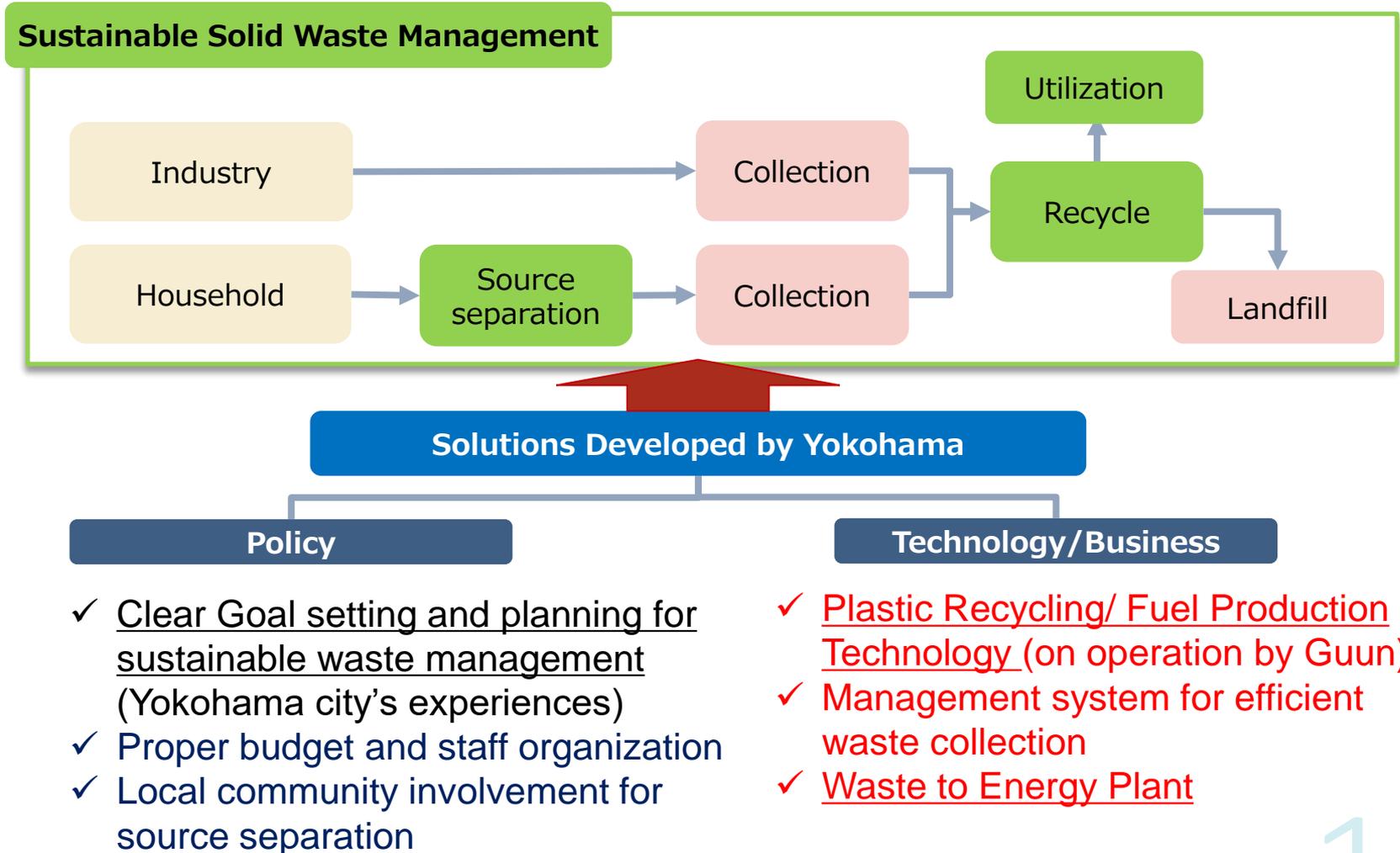
Sustainable Solid Waste Management



Benefits of Introduction of Sustainable Practice

- ✓ Waste minimization by source separation
- ✓ Utilization of resources and reduction of GHG emissions by recycling
- ✓ Job creation by recycling industry
- ✓ Minimization of Social Cost

Solutions Developed by Yokohama to Support the Transition



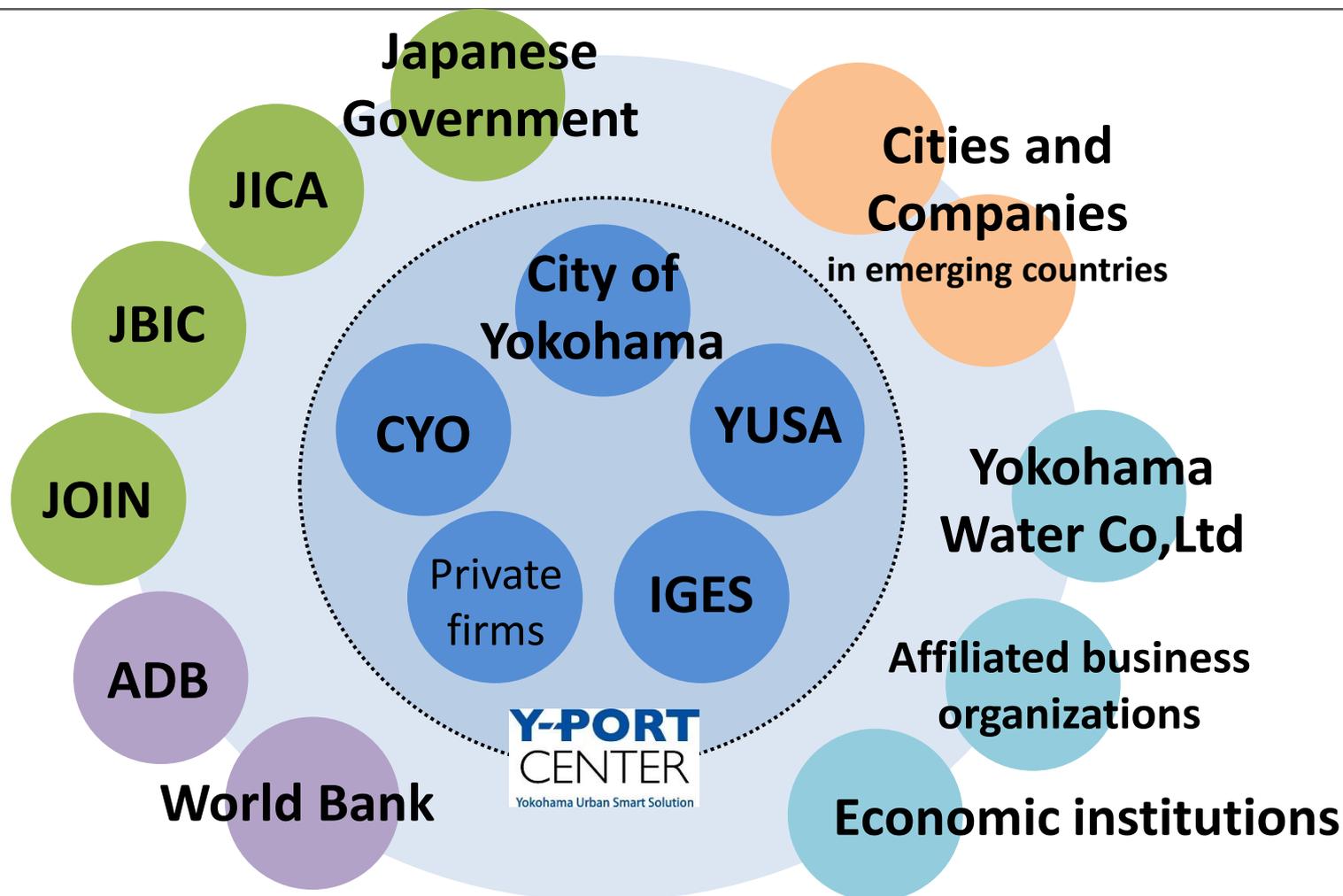
Y-PORT Project in Solid waste Management

Guun's waste plastic recycling plant in Cebu

(Inaugurated in May 2017)



Establishing a knowledge hub 《Y-PORT Center》



- providing best available urban solutions through dialogue
- gaining support from the government of Japan and donor agencies

YUSA Member Companies

 株式会社オオスミ	 カーボンフリーコンサルティング株式会社	 株式会社グーン	 株式会社Sansei	 JFEエンジニアリング株式会社
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 有限責任あずさ監査法人	 株式会社エランビタル	 株式会社環境性科学研究所	 関西電力株式会社	 管清工業株式会社
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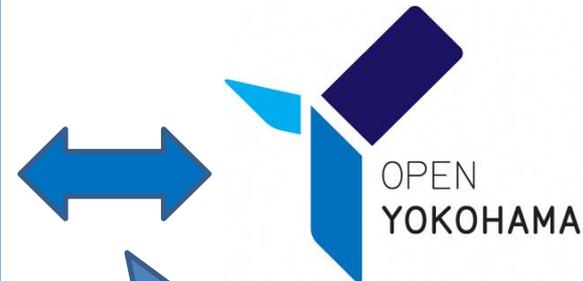
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 日揮グローバル株式会社	 株式会社日新	 日本電気株式会社	 前澤工業株式会社	 株式会社まち未来製作所
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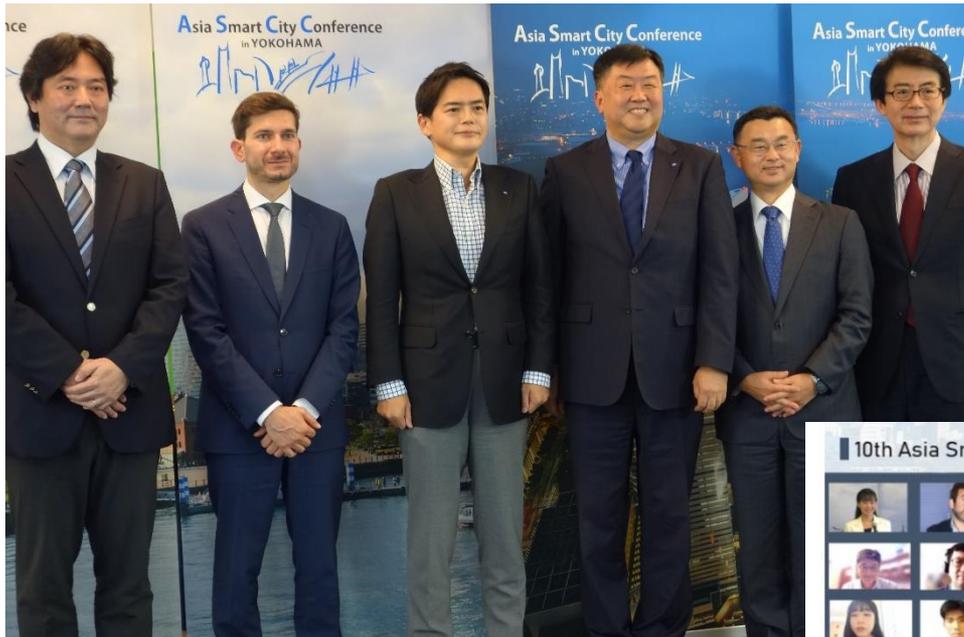
City of Yokohama



Cooperation Agreement between YUSA and City of Yokohama, 2017

Asia Smart City Conference organized by Yokohama

The 10th Asia Smart City Conference October 26-28, 2021



- Leaders of Asian cities
- International Organizations
- Japanese Government
- Private companies



●URL <https://yport.city.yokohama.lg.jp>



Y-PORT事業の紹介



横浜発都市ソリューションの開発



事業化事例



企業の皆様との取組



シティプロモーション



Y-PORT資料庫



ご相談窓口・アクセス



Project Cases



Recycling waste plastic as fuel and establishing circular economy



Y-PORT CENTER – Knowledge hub for smart city management

Please visit our web site:

• <https://yport.city.yokohama.lg.jp/>

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International Affairs Bureau

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Providing Smart Urban Solution to Cities through PPP and Dialogue

Y-PORT CENTER

Yokohama Urban Smart Solution

Government of Japan
Japan International Cooperation Agency
JICA
Japan Fund for International Cooperation
City of Yokohama
Yokohama Project Office
Y-PORT CENTER
Private firms in Yokohama
Yokohama Water Co., Ltd.
Yokohama Urban Smart Solution
Yokohama Urban Smart Solution

Establishing a knowledge hub for smart city management

The City of Yokohama, in collaboration with international research institutions, faculty members, and participating firms in Yokohama, has established the Y-PORT Center to provide smart urban solutions to cities in Asia and the world. The Center actively seeks further collaboration with other operating global think tanks and urban service providers.

What Y-PORT Center offers

1. Providing best available urban solutions and practical smart city management knowledge to cities in emerging economies.
2. Co-creating urban solutions through dialogue with private firms with cutting-edge technologies, ideas, and global networks.
3. Enhancing communication with and gaining support from the government of Japan and local agencies in the area of smart urban development.

Innovative Urban Solution Developed by Yokohama

Towards comprehensive support to cities in emerging economies

Background and Goal

- The City of Yokohama has established Y-PORT Center to provide smart urban solutions to cities in Asia and the world. One of the main objectives of Y-PORT Center is to co-create and provide "best available" smart urban solutions through dialogue with private firms in Yokohama with cutting-edge technologies, cities in emerging economies, and global think tanks.
- For the past few years Y-PORT Center has been undertaking city-to-city collaboration with cities in emerging economies including Cebu (Philippines), Da Nang (Vietnam), Bangkok (Thailand) and Batam (Indonesia).
- During the fiscal years 2016 and 2017 in particular, the City of Yokohama conducted site-visits, technical seminars, and business matching seminars with over of 71 Japanese firms in Da Nang (Vietnam), Batam (Indonesia), Metro Cebu and Cagayan de Oro (Philippines). Through these initiatives the City of Yokohama and participating private firms undertook intensive dialogue with city officials, technical experts, and firms in these cities. Through these dialogues, integrated smart urban solutions have emerged in the form of innovative "packages" based on the high quality technologies of the private sector and urban management expertise of the City of Yokohama.

Yokohama Urban Solutions

- Support from the Japanese Government and Development Organizations
- Technical capacities of private firms in Yokohama
- Knowledge, experience, and expertise of the City of Yokohama

This brochure will provide a prototype concept for these smart urban solutions provided to cities in emerging economies by the City of Yokohama and private firms. The target areas of work are: (1) waste separation and recycling promotion, (2) wastewater treatment systems, (3) green buildings and factories, (4) smart energy management, (5) efficient mobility, and (6) disaster prevention/reduction. We believe that with further refinement based on respective local social, economic, and financial conditions, these prototypes can serve as "best available" integrated infrastructure packages.