



DEVELOPING A LOW CARBON SOCIETY UNDER COLLABORATION BETWEEN BANDUNG AND KAWASAKI

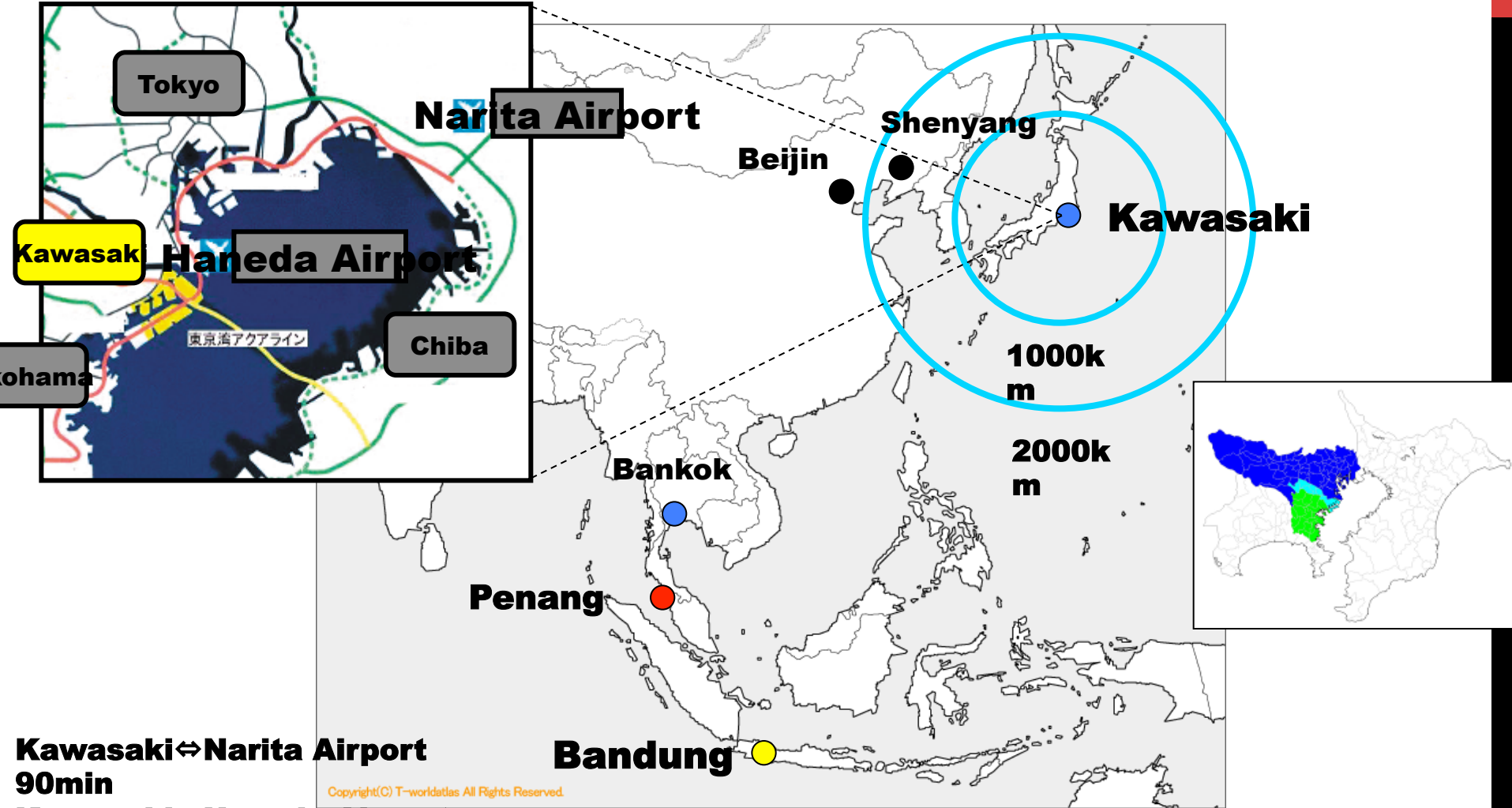
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6th High Level Seminar on Environmentally Sustainable Cities
10 February 2015, Johor Bahru, Malaysia

LOCATION OF KAWASAKI CITY



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Kawasaki ↔ Narita Airport

90min

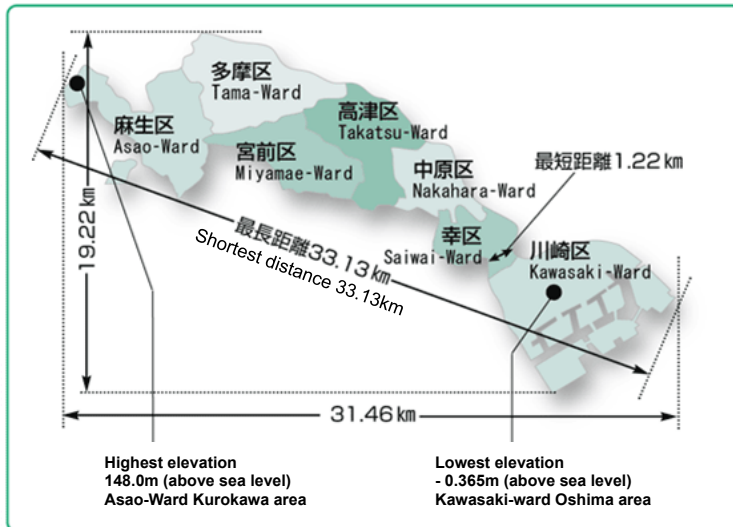
Kawasaki ↔ Haneda Airport

20min

PROFILE OF KAWASAKI CITY



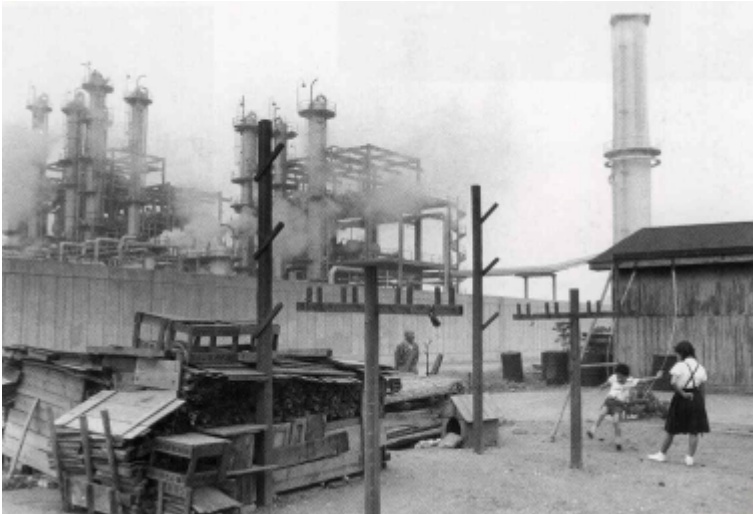
Kawasaki City, called “Industrial City Kawasaki” was developed as a city of manufacturing; recently, the city is transforming drastically into a city of high-tech technology and industry, a base for industrial technology and research & development, which leads Japan.



Population	1,450,097 people (Jan.1,2014)
Area	144.35 Km ²
Gross production of the city	5244.0 billion yen
Major Industries	Manufacturing Service Transportation · Service
Major manufacturing industries	General machinery Metal products Electric
Developing industries	New manufacturing technology Info / telecommunication Environment Welfare Lifestyle / culture

EXTENSIVE AND SERIOUS KOGAI PROBLEMS IN KAWASAKI CITY

- As the core of Kawasaki City, Keihin industrial area towed a high economic growth in Japan. On the other hand, it triggered rapid environmental degradation. Serious pollution include air pollution and water contamination.
- Many surrounding residents showed chronic bronchitis and bronchial asthma symptoms due to atmospheric pollutant discharged from factories and vehicles.



Kawasaki coastal industrial area in the 1960s



View of coastal area in the early 1970s

TECHNOLOGIES AND KNOW-HOWS OBTAINED THROUGH ANTI-POLLUTION MEASURES

Initiatives of businesses

- Aggressive investment in anti-pollution measures
- Development of technology and know-how for preventing pollution
- Training of technicians and engineers in pollution prevention

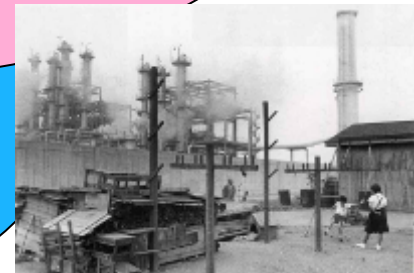
Initiatives of residents

- Promotion of corporate and government anti-pollution measures through various activities including registering of complaints and filing petitions
- Cultivation of a heightened awareness of the environment among residents

- Establishment of a pollution victim relief system
- Signing of air pollution prevention agreements with 39 factories
- Establishment of anti-pollution local government ordinances
- Introduction of a monitoring system

Initiatives of government

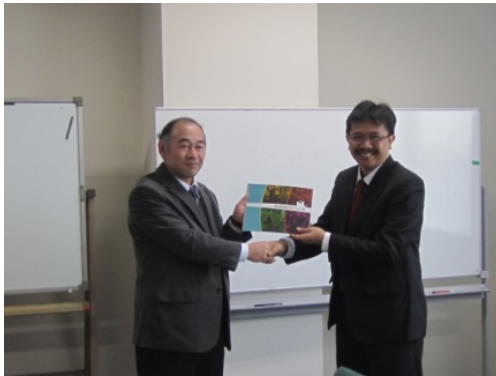
Realization of a dramatic improvement in the atmospheric environment



Accumulation of superior environmental technology and know-how in the course of implementing various anti-pollution measures

BACKGROUNDS

- ① Collaboration between Bandung and Kawasaki City through UNEP/ IETC “Eco-Town Project” and Asia Pacific Eco-Business Forum since 2006.
- ② Mayor Ridwan Kamil’s “**Eco-Village Proposal**” presented to Kawasaki City in Feb 2014.



Exchange of Eco-Village Proposal (Feb. 2014)



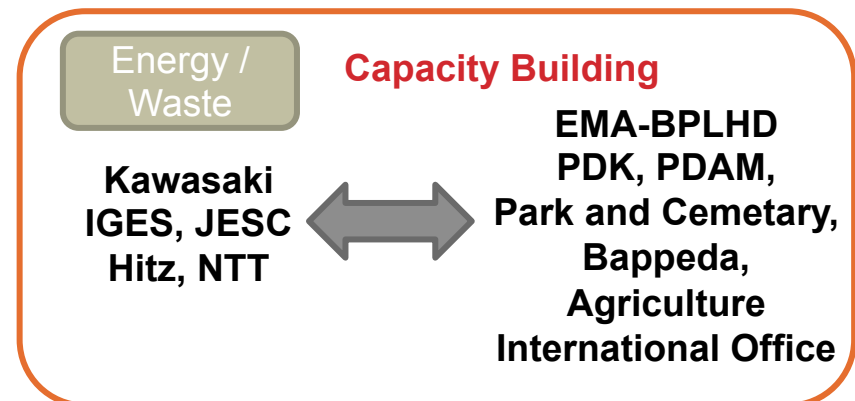
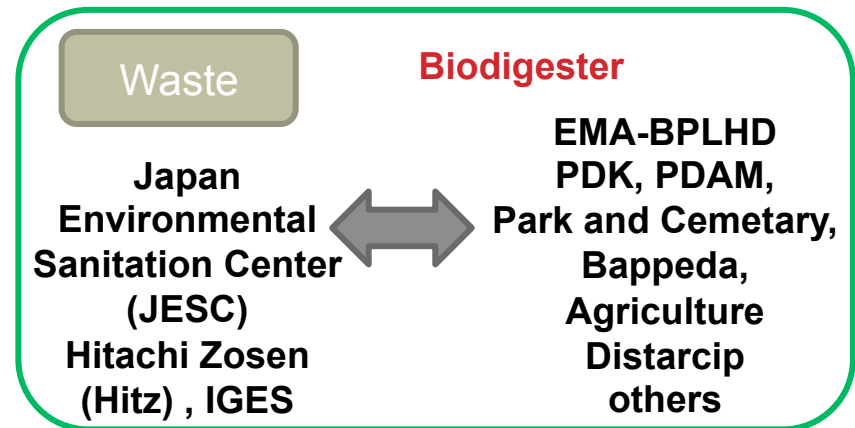
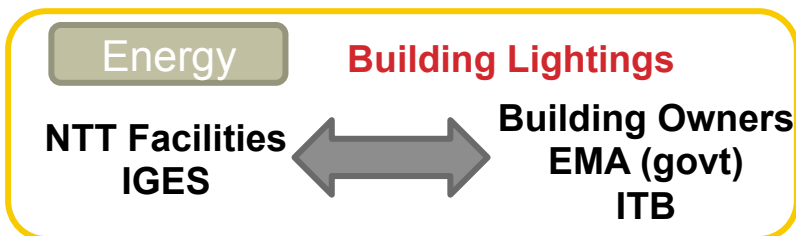
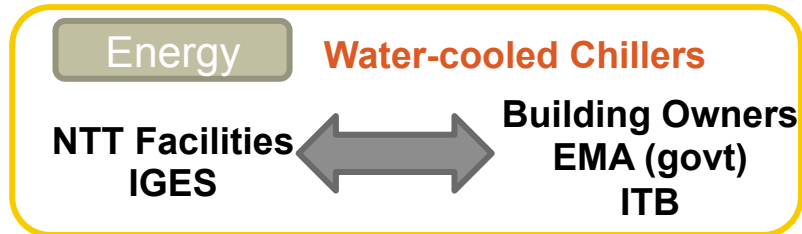
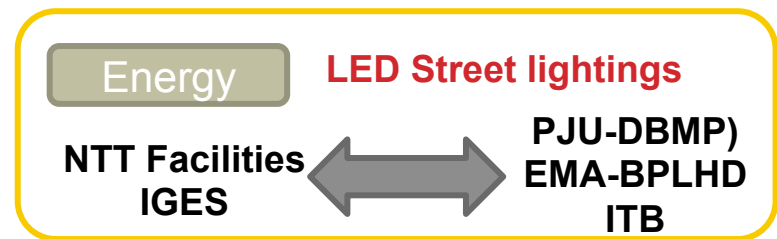
Bandung Eco-Village

NEEDS FOR COLLABORATION

No	Priority areas	Specific needs
1	Promotion of environment awareness, mainly on segregation of solid waste	<ul style="list-style-type: none"> • knowledge on how to educate school children and citizens on good waste separation, awareness raising on environmental issues
2	Air Pollution	<ul style="list-style-type: none"> • Monitoring system • knowledge on how to monitor and regulate air pollution effectively
3	Water Pollution	<ul style="list-style-type: none"> • Monitoring system • knowledge on how to monitor and regulate water pollution effectively
4	Solid waste management	<ul style="list-style-type: none"> • knowledge on detailed steps to materialize waste master plan (develop action plan) • knowledge on how to support private sector into waste management • knowledge on how to gather and analyze data for efficient solid waste management
5	Environmental Technology	<ul style="list-style-type: none"> • Technologies in the areas of solid waste, energy, air pollution, water pollution
6	Climate change	<ul style="list-style-type: none"> • knowledge on how to effectively perform eco-office and expand the initiative city-wide (starting from government buildings) • knowledge on how to use renewables in energy supply (waste to energy, solar)

Source :; EMA

F/S STRUCTURE



OVERVIEW OF ACTIVITIES FY2014

I. KICK-OFF WORKSHOP AND SITE SURVEY (AUG 2014)



Kick-off workshop
Aug 2014



Waste site survey
Aug 2014



Energy site survey
Aug 2014

II. FIELD SURVEYS & STAKEHOLDER MTGS (AUG – JAN 2015)



Waste site survey



Waste stakeholder
mtg



Field survey –
building roof top



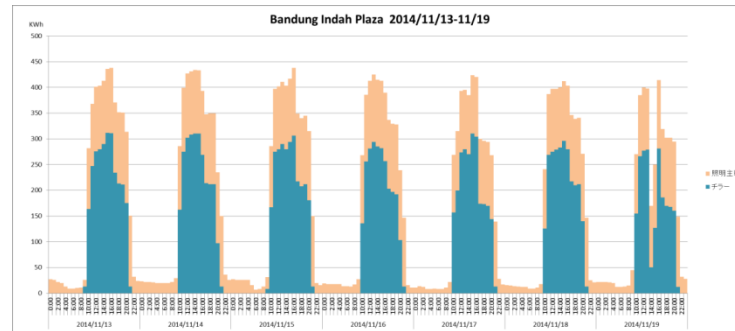
Discussion w/
Building owner

OVERVIEW OF ACTIVITIES FY2014

III. SAMPLING AND MONITORING (AUG – JAN 2015)



Hitz waste sampling

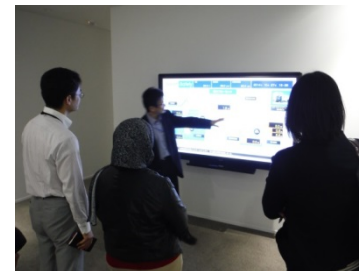


NTT energy monitoring

VI. SITE VISITS IN JAPAN - EXAMPLES



Hitz constructed biodigester plants (2) in Niigata



NTT Energy Efficient building



Toshiba Science Museum on energy

OVERVIEW OF ACTIVITIES IN FY2014

V. WORKSHOPS – PEER LEARNING



Waste Separation
Workshop in Bandung
Oct 2014



JCM Workshop in
Yokohama (Asia Smart
City Week Oct 2014)



Waste Management
Workshop in Kawasaki
Dec 2014

■ List

- Site survey 8 times (waste 5, energy 3)
- Bandung Workshops 3 times (kick-off, wrap up, waste ws)
- Training in Japan: 4 times
- Invited officials 13 people (waste 8, energy 5)
- Site visits in Japan: 6 sites (waste 4 sites, energy 2 sites)
- Kawasaki Training W/S: Policy, Regulation, Planning, Public outreach etc.

CAPACITY DEVELOPMENT FOR LOW CARBON CITY DEVELOPMENT

- 21-23 July Participation in **JCM workshop** (ISAP organised by IGES) and
Site visit on waste related companies located in Kawasaki
- 27-30 October Participation in **JCM Seminar** (Yokohama Smart City Week) and
Site visit NTT Facility and TOSHIBA
- 1-4 December **Site visit on Biodigester facilities** and
Training workshop on waste management in Kawasaki

TRAINING WORKSHOP ON WASTE MANAGEMENT: SHARING KAWASAKI'S EXPERIENCES FOR BETTER WASTE MANAGEMENT

Date: December 4th 9:30-17:00

Location: Kawasaki Environmental Research Institute
City of Kawasaki



TRAINING WORKSHOP ON WASTE MANAGEMENT: SHARING KAWASAKI'S EXPERIENCES FOR BETTER WASTE MANAGEMENT

Participants

□ Bandung City: 7 persons

- PDK
- PDAM
- EMA
- Agriculture
- Park and Cemetery
- ITB

□ Kawasaki city:

□ Japan Environment and Sanitary Center

□ Institute for Global Environmental Strategy

TRAINING WORKSHOP ON WASTE MANAGEMENT: DETAILED INPUTS FROM KAWASAKI CITY

- Waste management on **Business Waste**
(legislations, regulations, outreach)
- ✂ covers food waste recycling law for businesses

- Waste management on **Household waste**
(history, waste collection and segregation, planning)

- Kawasaki's efforts for **Awareness Raising of citizens**

SCALING LOW CARBON DEVELOPMENT

Rekap Wawancara dan Kuesioner Ke SKPD "Citra Perumahan dan Perumahan Kota Bandung - Biogas dan RTSA" Citra Perumahan dan Perumahan, Jl. Ardra, No.1 A, Bandung, Jawa Barat, Indonesia 14 Januari 2015	
Narasumber :	1. Eka Rella Piyina (Citra Perumahan dan Perumahan)
Pewawancara :	1. Nurulita Akbar (ITB) 2. Adhara Herika Lestari (ITB)
Discussion:	<p>1. Fase Pembangunan dan Pengembangan Proyek</p> <ul style="list-style-type: none"> Citra Perumahan dan Perumahan (CitaPerun) dan Citra Perumahan sebagai penerima manfaat dari proyek biogas untuk hasil pupuk cair sehingga bisa menekan biaya operasional. Dihasilkan pupuk cair didapatkan secara gratis. Land owner harus jelas, siapa yang memiliki lahan (dihasilkan oleh pemerintah atau dilanda perumahan), kemudian diarahkan ke mana (informasi: CitaPerun karena ada TA dan lain-lain) karena untuk produksi waste biogas. Sehingga sudah lahan kota dan juga lahan serta memiliki lahan yang juga kecil. Di Bandung (sekitar dengan Dago) juga sudah punya konsep sendiri (eco-labir). Secara support sudah ada dari walikota, teknologi yang ramah lingkungan sudah baik, teknologi diarahkan bisa gratis, output bisa dimanfaatkan juga, dan bisa diikat menjadi pengantar gas LPG. Tantangannya untuk proyek biogas dari RTSA yaitu proses produksi dengan sempat beres, juga harus ramah lingkungan yang berarti memberikan impact kecil pada lingkungan di sekitarnya, manfaatnya jelas sehingga masyarakat pasti menerima. Poin atau isu lingkungan pasti dibarengi manfaat. Lahan juga terbatas, CitaPerun juga mau dan melalui pertemuan, sehingga perlu diinformasikan impact kepada masyarakat dan bisa kompasial terkait dengan pengalihan sampah melalui pemukiman warga. <p>2. Stakeholder</p> <ul style="list-style-type: none"> Target user: CitaPerun dan Citra Perumahan Kota Bandung, sekiranya hasil pupuk cair diberikan gratis Regulator: Ada di UU lingkungan hidup, Perda (berkaitan sampah, lingkungan hidup), Perda pengelolaan STS, RTA bisa sebagai regulator Pengawas: BPU Hal dan kewajiban meeting-stakeholder yaitu sesuai topik meeting-stake: STS (Struktur Organisasi Tera Laksana) meeting-stake STS dan citra terdapat terkait Koordinasi literasi literasi harus besar, supaya bisa ada terdapat kepedulian

Surveys (Bandung) Page 5 of 11



RPJMD 2018-2018 Climate Change Action Plan (Bandung)

Analysis on issues for scaling technology and knowledge transfer

1. Build Capacity

- What are existing and needed capacities?
- How can needed capacities be built?
- What processes can help build these capacities?
- What processes can consolidate existing capacities?

2. Engage Stakeholders

- Who are the key actors and organizations?
- What are their interests and resources?
- Is there sufficient coordination and communication?
- What are possible points of contention and how might they be reconciled?

3. Mobilize Resources

- What are the main sources of funding?
- Are these sources sufficient or are outside resources needed?
- What is the funding cycle?
- What about other human and technological resources besides funding?

4. Share Learnings

- How will performance be assessed?
- What processes and mechanisms are in place for sharing performance and experiences?
- Do existing processes and mechanisms reach all necessary stakeholders?
- How can they reach other cities?

What: Biogas, LED street lightings
To whom: Bandung City Government relevant sections

Thank you for attention!!

