

● No.1 “City to city cooperation towards sustainable urban development”

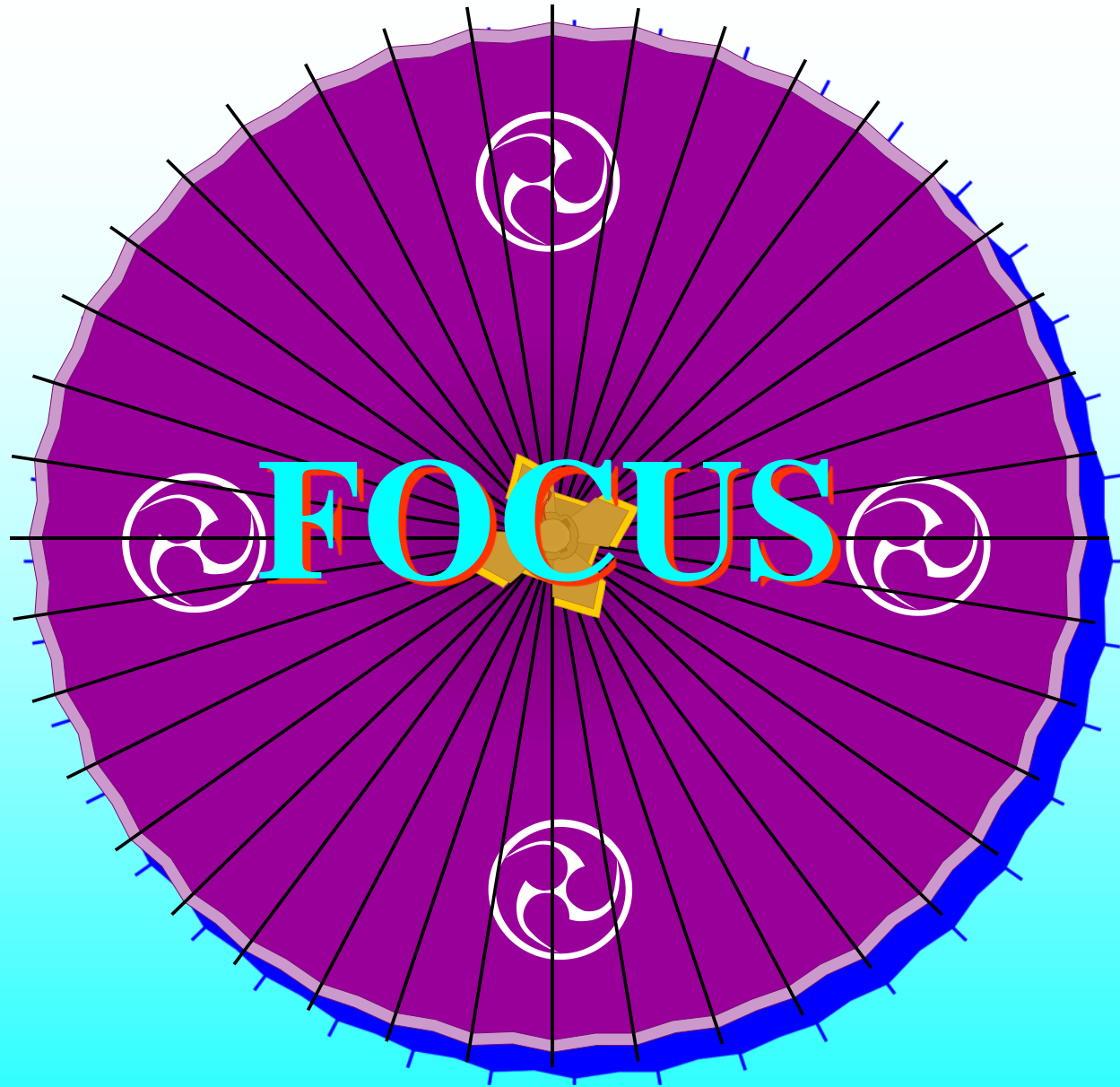
	City/Organization	Title	Name
1	Bangkok	Chairman of Advisers to Governor of Bangkok	Dr. Vallop Suwandee
2	Da Nang	Vice Chairman	Mr. Nguyen Ngoc Tuan
3	Kitakyushu	Chief Executive, Environment Bureau in charge of International Environmental Strategies	Mr. Kengo Ishida
4	Penang	Town Planner Director	Mr. Roslan Ramly
5	Phnom Penh	Deputy Director of Administration	Mr. Huot Hay
6	Yokohama	Director of Development Cooperation Department, International Affairs Bureau	Mr. Toru Hashimoto
7	Asian Development Bank	Director General, Sustainable Development and Climate Change	Ms. Maria Carmela Dinglasan Locsin
		Technical Advisor, Urban and Water Sector	Mr. Vijay Padmanabhan
8	C40 Cities Climate Leadership Group	Regional Director for Southeast Asia and Oceania	Ms. Milag San Jose-Ballesteros
9	Cabinet Office, Japan	Counsellor, Office for Promotion of Overcoming Population Decline and Vitalizing Local Economy in Japan	Mr. Masaaki Takabatake
10	Cabinet Secretariat, Japan	Counsellor	Mr. Naoto Hisajima
11	Fira Barcelona	International Director, Smart City Expo World Congress	Mr. Luis Gómez
12	ICLEI - Local Governments for Sustainability	Director, ICLEI Japan Office	Mr. Takashi Otsuka
13	Japan International Cooperation Agency	Executive Technical Advisor to the Director General	Mr. Toshiyuki Iwama
14	JFE Engineering Corporation	Deputy General Manager, Global Business Development	Mr. Gen Takahashi

15	World Bank	Senior Officer, Tokyo Development Learning Center	Mr. Daniel A. Levine
16	Yokohama City University	Director, Global Cooperation Institute for Sustainable Cities	Prof. Masazumi Ao

**The 4<sup>th</sup> Asia Smart City Conference**

**Yokohama**

**October 18 – 21, 2015**





# City to City Collaboration towards Sustainable Urban Development

*Dr. Vallop Suwandee*

*Chairman of Advisors to the Governor of Bangkok*

*Bangkok Metropolitan Administration: **BMA***





**M.R. Sukhumbhand Paribatra**  
**The Governor of Bangkok**





**Technical supports on devising**  
***The Bangkok Master Plan on Climate Change***  
**2013 - 2023**

**Numerous technical site visits for BMA officials**  
**Technical and Policy Dialogues on**  
***transportation, alternative energy, LEV,***  
***building energy management system,***  
***waste-to-energy incineration facilities,***  
***separated wastewater collection system,***  
***low-carbon technology mission, etc.***



# Rationales of City to City Development



## Prevalent Issues and Inevitable Crisis

### Water, Energy , Food Nexus

- 7 billion of population worldwide today. A forecast of 9 billion in 2050 with 6.7 billion of inhabitants living in cities
- By 2030 the demand of food, water and energy will rise by 35%, 40% and 50% respectively
- Water, energy and food resources are becoming increasingly scarce, while the growing amount of solid waste is becoming a threat
- With existing production methods and consumption patterns water, energy and food supplies will not be sufficient by 2030



# Rationales of City to City Development



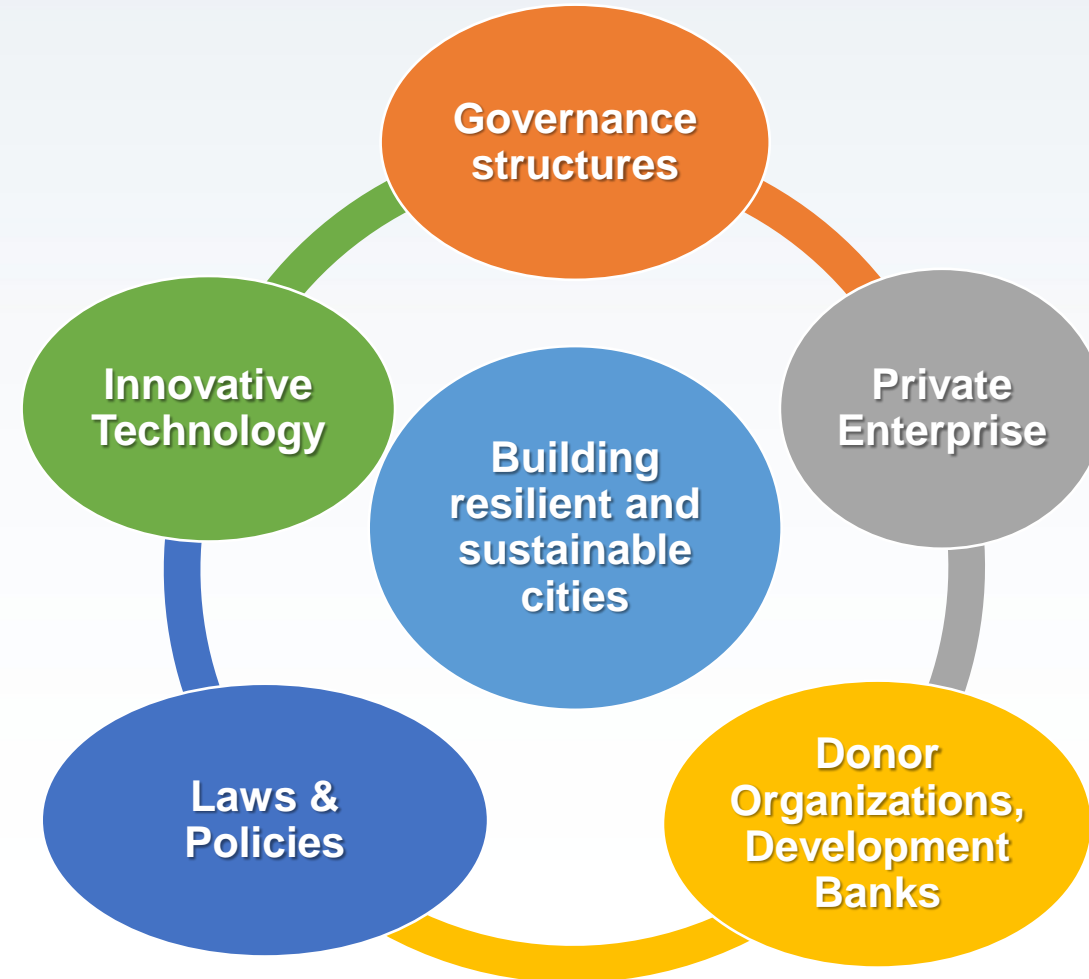
- Different states of development, resources and endowment should be regarded as assets rather than liabilities.

# The Making of Cities Sustainable Economically, Socially, Ecologically



## Creating resilient structures and becoming resilient in the midst of :

- Climate change
- Increasing density of population
- Increasing scarcity of resources
- Epidemics
- Social unrest

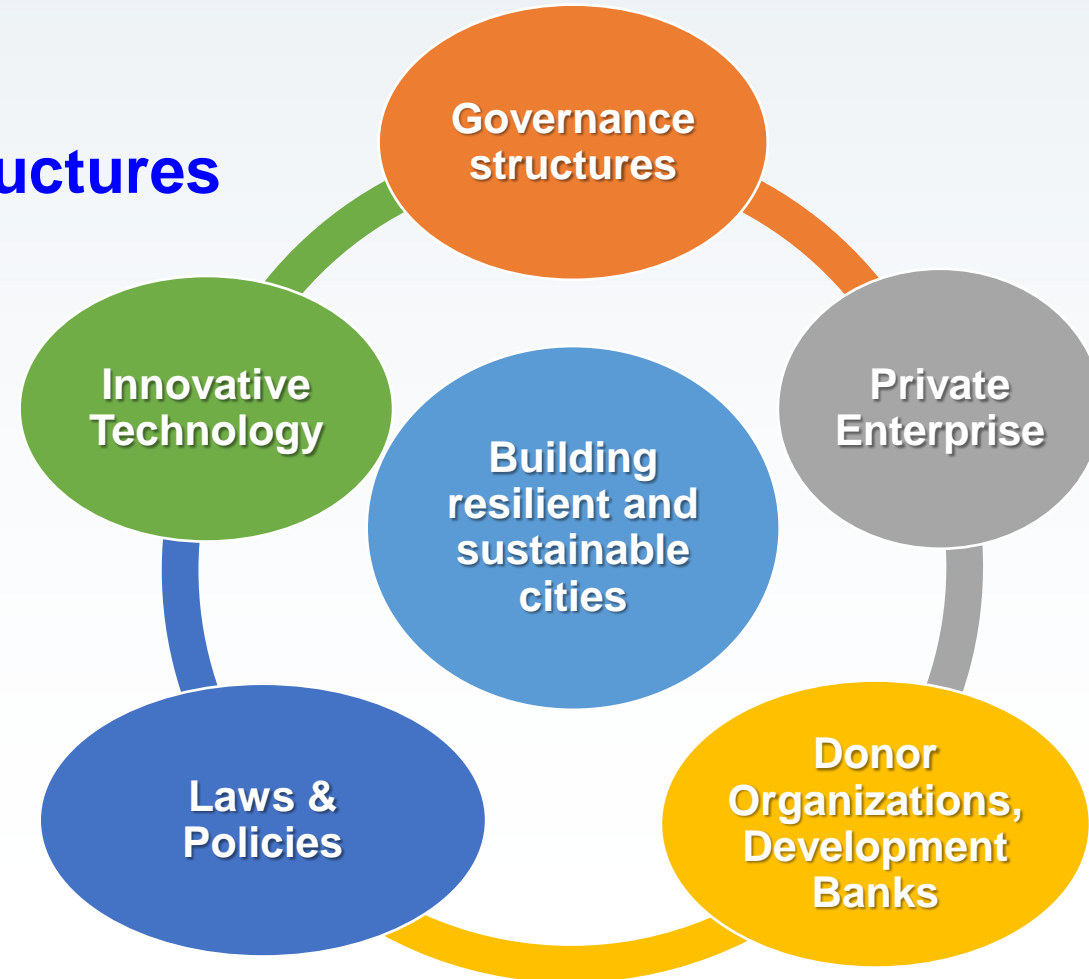


# The Making of Cities Sustainable Economically, Socially, Ecologically



## Creating resilient structures and becoming resilient with the following strategies :

- Establishing appropriate infrastructures
- Inducing appropriate social infrastructures to instill awareness, accountability, and cooperative efforts among public



# Possible Modalities of Bilateral City to City Cooperation



- **Introduction of innovative technologies**
- **Implementation of integrated urban planning**
- **Creation of task forces in cities**
- **Utilization of multi level approach**
- **Inducement for participation of private sector, civil sector, communities**
- **In-depth study of demonstration projects**
- **Devising of vulnerability mapping with “mixed approach”**

# Technical advantage to undertake multilateral cooperation among cities



- **National dialogue forums**

- local dialogues at national and sub-national based on case studies

- **Learning among city colleagues**

- mutual learning from all successful and unsuccessful experiences
- experience sharing
- learning and adapting appropriate technologies
- working group meetings on institutionalized Nexus
- studies via websites and tele conferences

- **Clustering/horizontal integration**

- local governments could cooperatively solve their problems
- joint planning and implementation of investment projects
- organizational structures for clustering through flexibility of city adm.



The participation of all stakeholders is required to overcome these urgent and critical problems under the slogan

**“Together We Build  
BANGKOK 2032”**



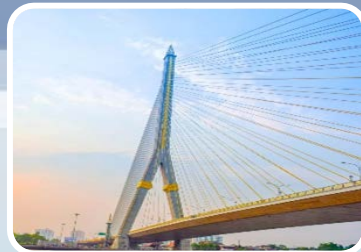
*Thank You  
for  
Your Kind  
Attention*





The participation of all stakeholders is required to overcome these urgent and critical problems under the slogan

**“Together We Build  
BANGKOK 2032”**



***Thank You  
for Your Kind Attention***



# Kitakyushu's Involvement in Large-Scale JCM Project Development

## Promotion of low-carbon development of entire cities using intercity cooperation

**Surabaya, Indonesia: 2<sup>nd</sup> largest city in Indonesia with a population of 3 million**

**<FY 2013- 2015> Low Carbon City Planning Project in Surabaya, Indonesia**

**Target areas: Energy, waste management, transportation, water resources**

**Participating Japanese companies: 13**



Green Sister City agreement signed (Nov 2012)

**Haiphong, Viet Nam: Major port city in Viet Nam with a population of 1.9 million**

**<FY 2014, 2015> Green Growth Promotion Plan of the City of Hai Phong**

**Target areas: Low-carbon city planning, energy, waste management, conservation of Cat Ba island**

**Participating Japanese companies: 10**



Sister city agreement signed (Apr 2014)

**<FY 2014, 2015> GHG Emissions Reduction Project in Iskandar (Pasir Gudang)**

**Target areas: Waste-to-energy, energy savings and industrial waste recycling in Industrial Estate**

**Participating Japanese companies: 4**



Consultation with Mayor of Pasir Gudang City (Feb 2015)

**Rayong Province, Thailand: Major heavy chemical industrial zone in Thailand with 2 large industrial parks**

**<FY 2015> GHG Emissions Reduction Project in Rayong Province**

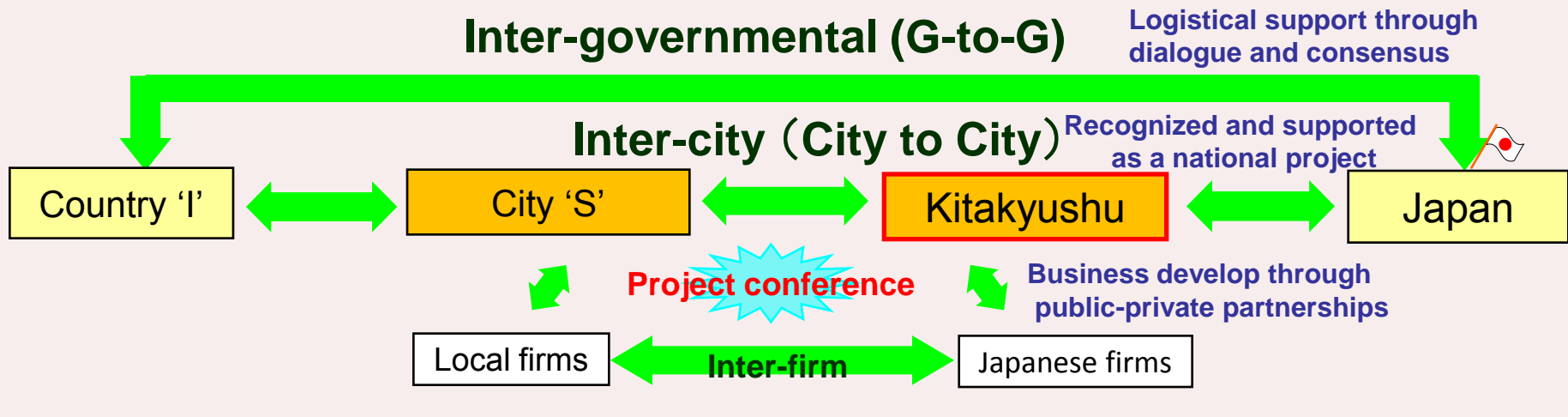
**Target areas: Waste-to-energy project, energy savings, total recycling of industrial waste at Industrial Zone**

**Participating Japanese companies: 4**



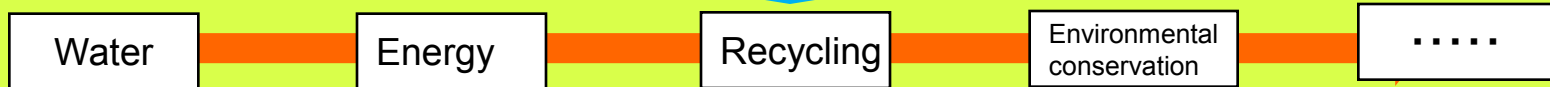
MOU signed with Department of Industrial Works (Dec 2014)

# Creating a platform for inter-governmental & inter-city cooperation



## [ development of a green city master plan ]

Kitakyushu model activities



Consensus-building between the public, industry, government, and other stakeholders

Private financial institutions

Public financial institutions / public and private funds

Financial assistance

Public financial assistance

Support from public and private funds

Social system development

Project discovery

Project development

(feasibility studies & demonstrations)

Commercialization

(including fundraising)

Whole city Exportation

# Green Growth Promotion Plan of the City of Hai Phong

Hai Phong is aiming to create a Green Port City through self-implementing actions



**Hai Phong's Actions**

Residents

Government

Businesses

Settling on Broad Policies concerning Green Growth by Hai Phong City

Green Growth Promotion Plan of the City of Hai Phong

- ✓ Vision
- ✓ Basic policies
- ✓ Specific measures
- ✓ Pilot projects

**Hai Phong Green Port City**



The mayor of Hai Phong City was received this plan by the mayor of Kitakyushu on May of 2015

**Kitakyushu Model  
(Experience, Know-how)**

# Pilot Projects in “Green Growth Promotion Plan”

Waste	① Separation and composting of household waste
	② Waste Heat Recovery Power Generation & Utilization of Industrial Waste
	③ Recycling of E-Waste
Energy	④ Energy savings and introduction decentralized energy systems in factories & buildings
transportation	⑤ Introduction of low-emission buses
	⑥ Promotion use of public transportation
Cat Ba Island	⑦ Development of comprehensive resource recycling system
	⑧ Energy saving and introduction of renewable energy & EV buses in Cat Ba Island
Water & Sewage, Rainwater Drainage	⑨ U-BCF expansion project
	⑩ Handicraft village wastewater measures
	⑪ Introduction of sewerage registry system
Environmental Protection	⑫ Restoration of Tay Nam canal
	⑬ Development of air and noise monitoring systems
Green Production	⑭ Installation of high-efficiency furnaces in foundries
	⑮ Promotion of green agriculture



**Paris**, France



**Chicago**, U.S.A.



**Stockholm**, Sweden



**Kitakyushu**, Japan



**“Green Growth in Kitakyushu, Japan ”  
issued by OECD in 2013**

*Once a polluted industrial zone,  
Kitakyushu is now a modern industrial city  
pursuing green growth.*

The OECD report is being made on ground that Haiphong City is positioned as the Green Gross City in Asia.

**We are aiming at the expansion of green cities in Asian countries.**

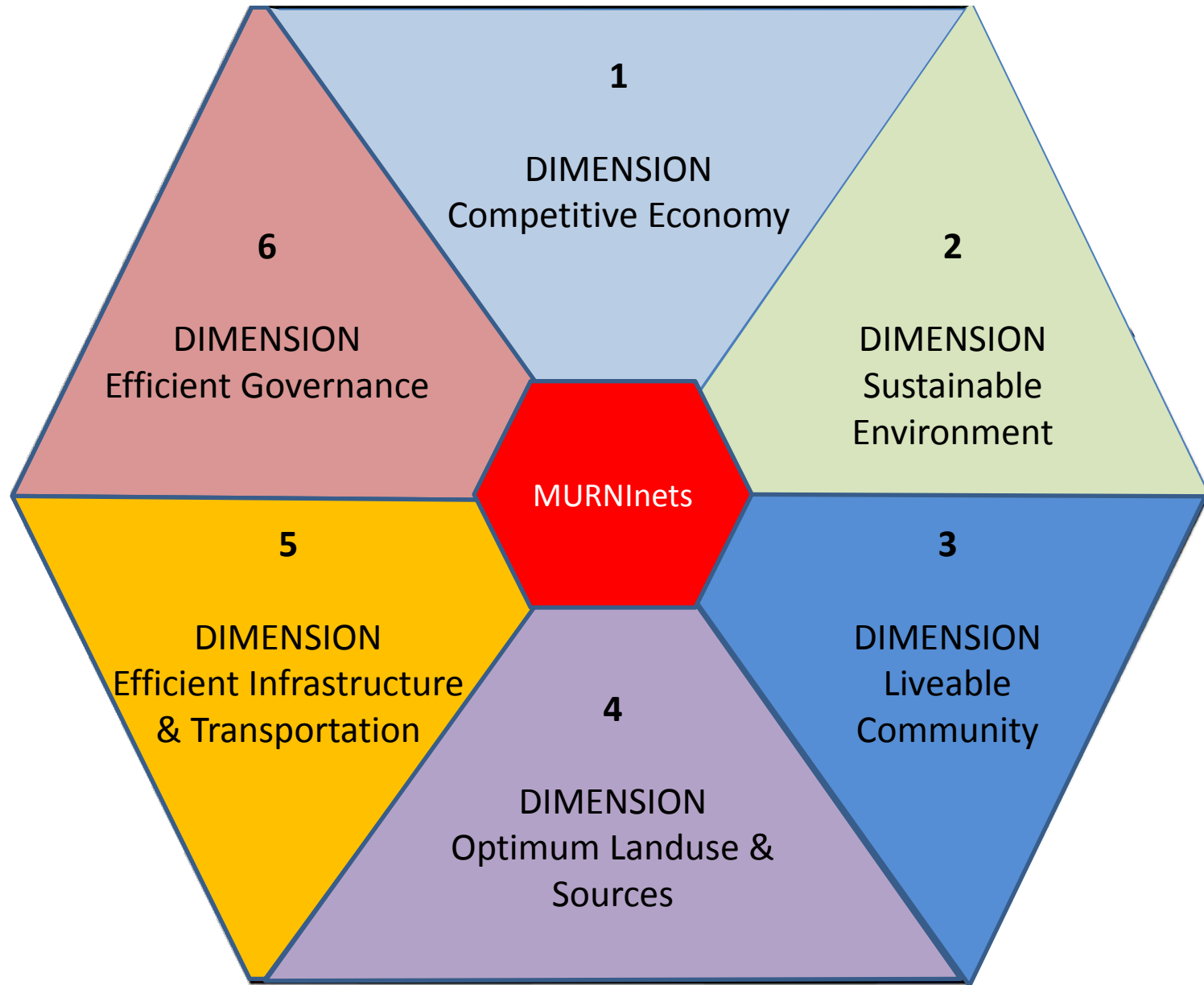
# @ MURNInets - INTRODUCTION

- ❑ Developed in 2002 by Town And Country Planning Department
- ❑ Initiative by Malaysia Government to evaluate urban sustainable through the Urban Indicators;
- ❑ Revised in 2011; &
- ❑ New system applied in 2012

## @ MURNInets - OBJECTIVES

- ❑ To evaluate level of sustainable in the urban areas through the Urban Indicators;
- ❑ To indicate urban strength and weaknesses according/referring to the indicators;
- ❑ To suggest improvement methods on improving urban sustainable; and
- ❑ To have MURNInet as measurement tools to evaluate various roles/functions including:-
  - ❖ management,
  - ❖ technical,
  - ❖ political objectives,
  - ❖ public participation; and
  - ❖ monitoring implementation of action plan.

# @ MURNInets - FRAMEWORK



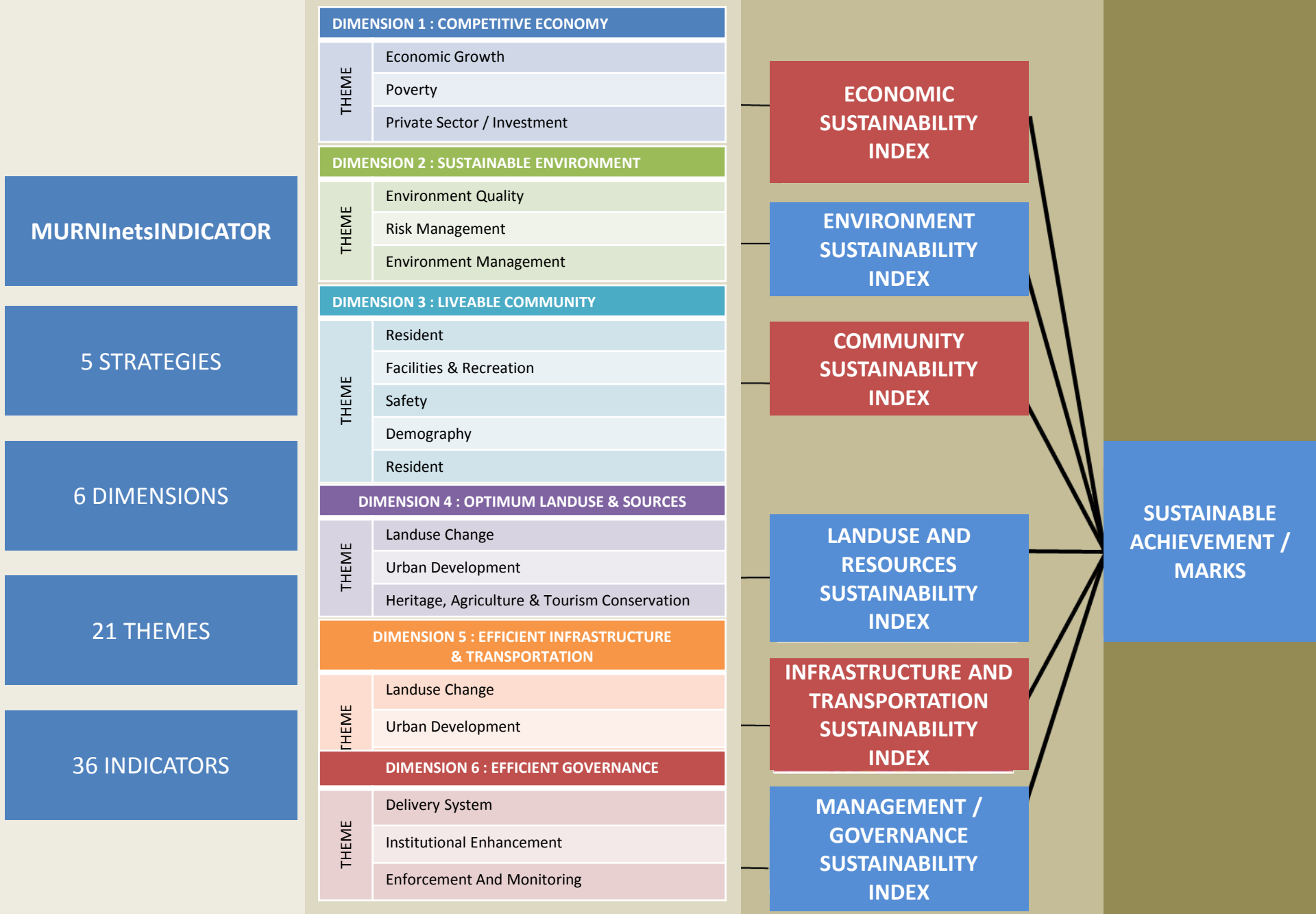
# @ MURNInets - DIMENSION, THEME AND INDICATOR

6 dimensions ; 21 themes & 36 indicators

1	2	3	4	5	6
DIMENSION Competitive Economy	DIMENSION Sustainable Environment	DIMENSION Liveable Community	DIMENSION Optimum Landuse & Sources	DIMENSION Efficient Infrastructure & Transportation	DIMENSION Effective Governance
THEME	THEME	THEME	THEME	THEME	THEME
<ul style="list-style-type: none"> <li>Economic Growth (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Environment Quality (2 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Resident (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Landuse Change (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Utility Efficiency (2 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Delivery System (2 indicator)</li> </ul>
<ul style="list-style-type: none"> <li>Poverty (2 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Risk Management (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Amenities &amp; Recreation (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Urban Development (3 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Solid Waste Management (2 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Institutional Enhancement (2 indicator)</li> </ul>
<ul style="list-style-type: none"> <li>Private Sector / Investment (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Environment Management (2 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Quality of Life (5 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Heritage, Agriculture &amp; Tourism Conservation (2 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Transportation (1 indicator)</li> </ul>	<ul style="list-style-type: none"> <li>Enforcement And Monitoring (2 indicator)</li> </ul>
		<ul style="list-style-type: none"> <li>Safety (1 indicator)</li> </ul>		<ul style="list-style-type: none"> <li>Sewage Management (1 indicator)</li> </ul>	
		<ul style="list-style-type: none"> <li>Demography (1 indicator)</li> </ul>			



# @ MURNInets - SUSTAINABLE COMPOSITE INDEX

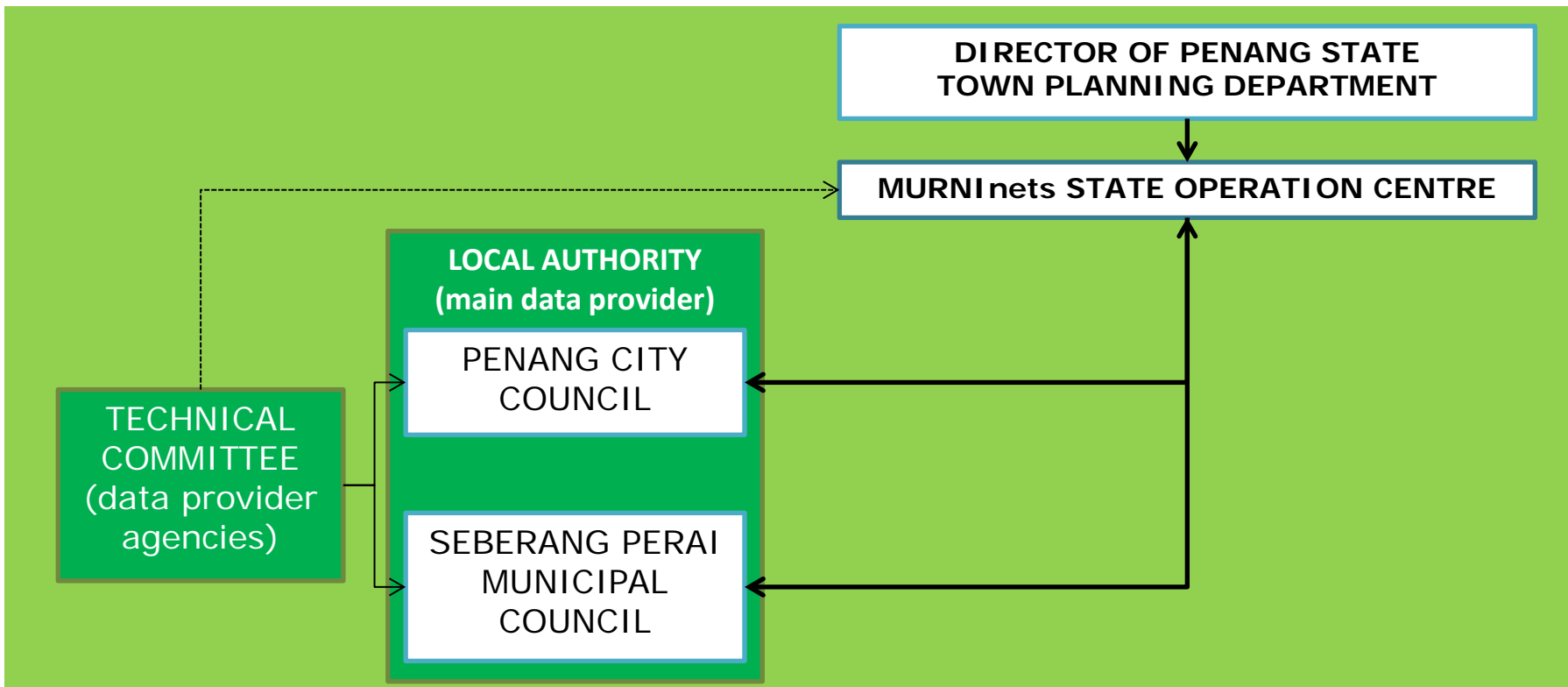


# @ MURNInets - MARKING MURNInets

## SUSTAINABLE MARKING

❖	SUSTAINABLE	80% and above
❖	MODERATE	50% - 79%
❖	LESS SUSTAINABLE	49% and below

# @ MURNInets - ORGANISATION CHART





*Phnom Penh Capital Hall*

# ***The 4<sup>th</sup> Asia Smart City Conference***

19-21 October 2015  
Yokohama, Japan

**“ City to City cooperation toward sustainable urban development ”**

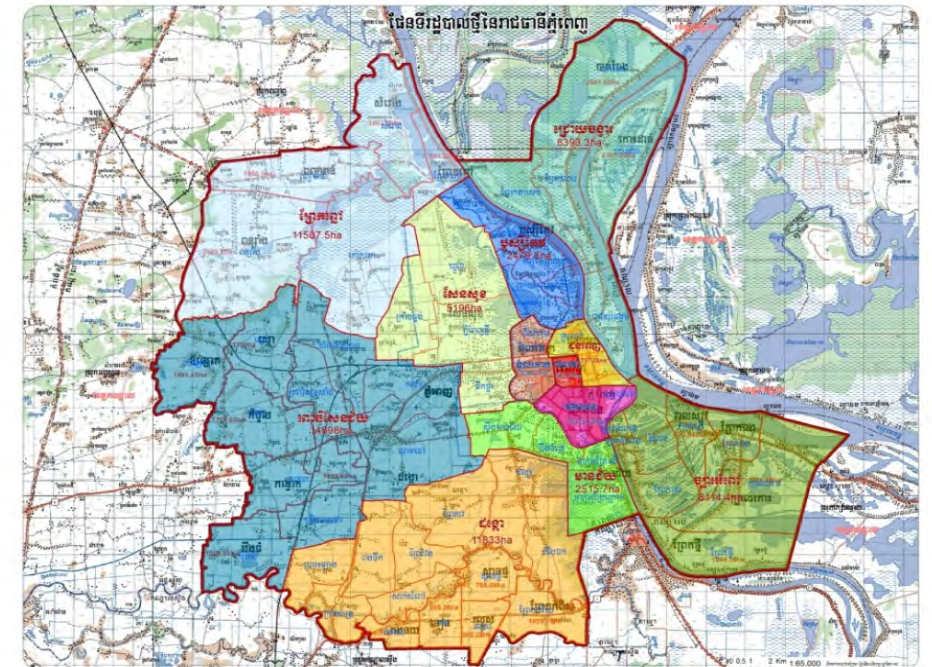
by HUOT HAY

Deputy Director of Administration,  
Phnom Penh Capital Hall, Cambodia

# Welcome to Phnom Penh !



Phnom Penh is the capital of the Kingdom of Cambodia, located on the confluence of four-faced river, comprising the Upper Mekong river, Lower Mekong river, Tonle Sap and Bassac river.



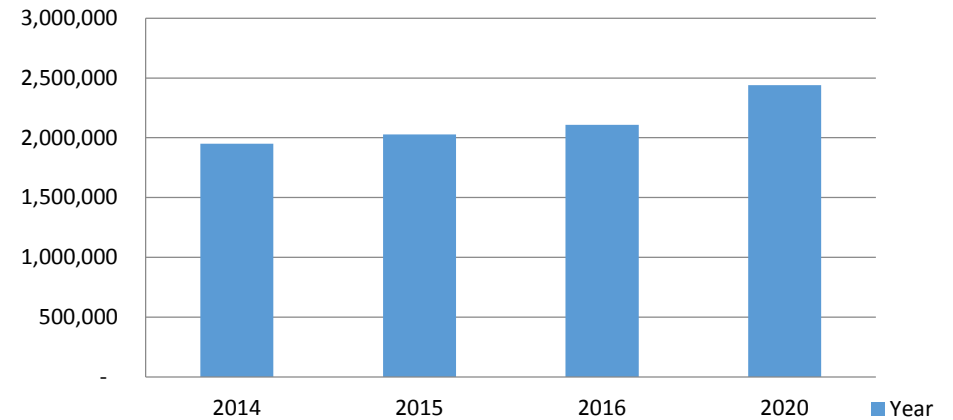
- Surface: 678.46 Km<sup>2</sup>
- Population : 1.45 million (Permanent)
- Density : 2.131/Km<sup>2</sup>
- Birth Rate: 3.97% / Year,
- Division Area : - 12 Khans (district)  
- 96 Sangkats (commune)

# What are the Problems?

## 1. Population Growth

- 2014: 1.950.000
- 2015: 2.027.000
- 2016: 2.107.000
- 2020: 2.441.000

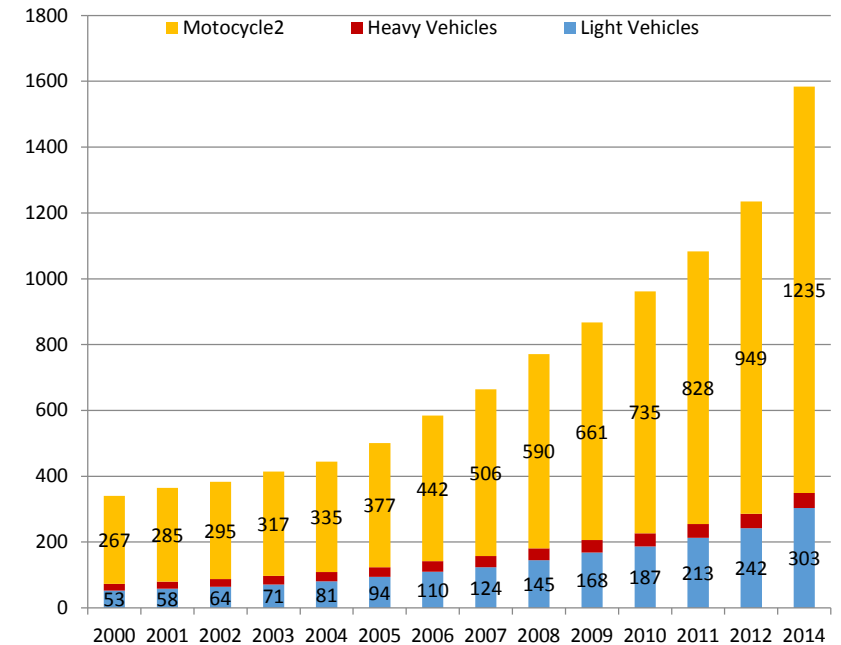
Population



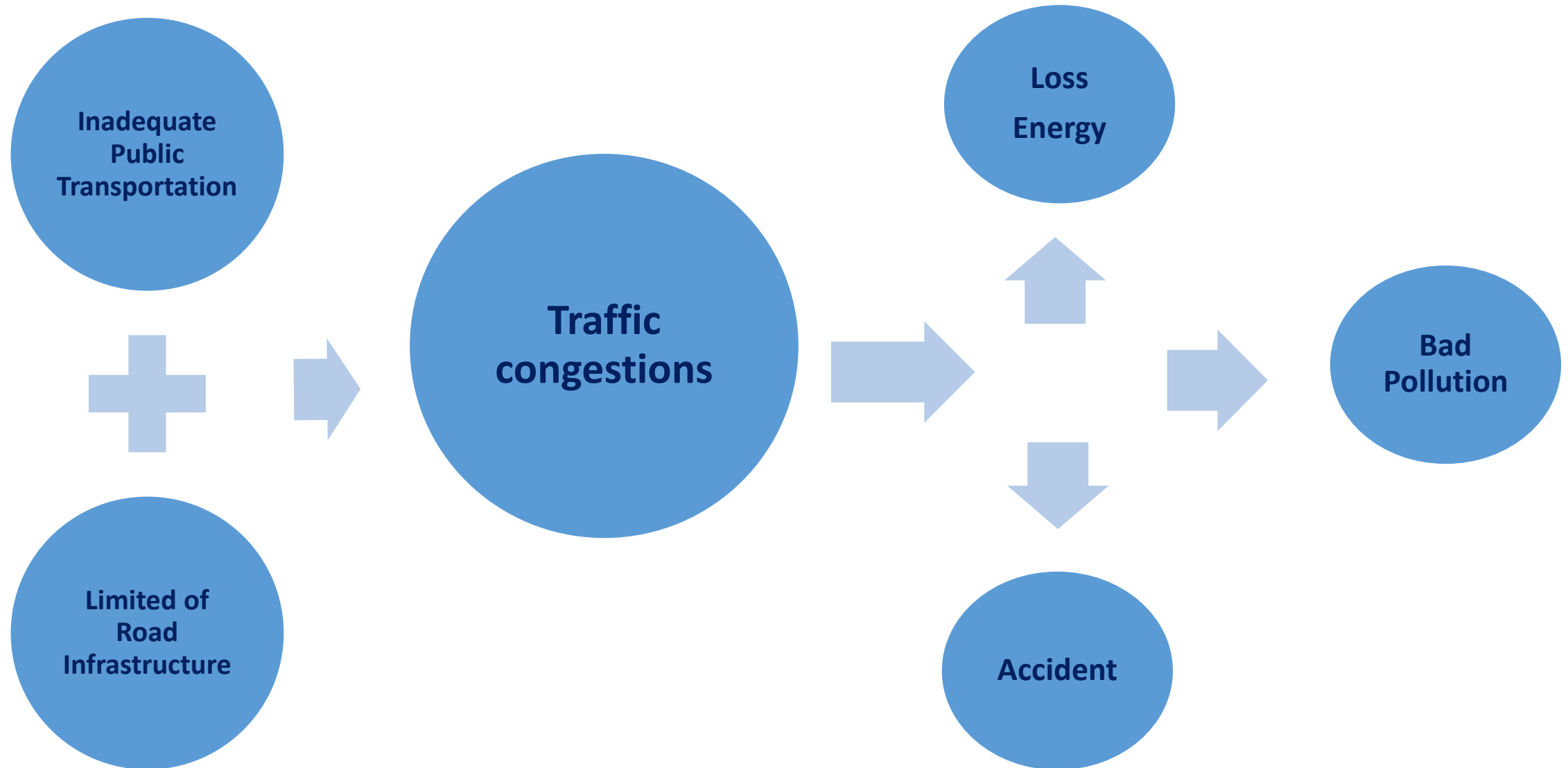
## 2. Private Vehicle Growth

- Major transport mode : Motorcycles & Cars
- In 2014, the registered vehicles consist of 1.571.574 units

- light vehicles : 303.092
- heavy vehicles : 33.189
- Motorcycles : 1.235.293



# 3. Traffic Congestion



# Solution

## 1. Infrastructure Development

- Major urban transportation development projects are prioritized and developed rapidly during the last 2 decades such as bridges, road expansion, flyover construction and sewage system etc.

## 2. Create Public Transportation , Taxi Meter

In order to mitigate the traffic congestion in Phnom Penh, The Royal Government of Cambodia allowed 4 taxi meter companies to operate in Phnom Penh, of around 400 taxi meters.

## 3. Create Public Transportation ,City Bus

- In addition, Phnom Penh Capital Hall has launched city bus.

## 4. Public Transportation Initiative (Sky Train)

- Automatic Guide Train (AGT) is the trunk public transport system in the long-term (2020 – 2035) and covers 4 main transport corridors in Phnom Penh.
- The first line is selected for feasibility study as the target public transport along the South-West corridor where urbanization is actively progressing

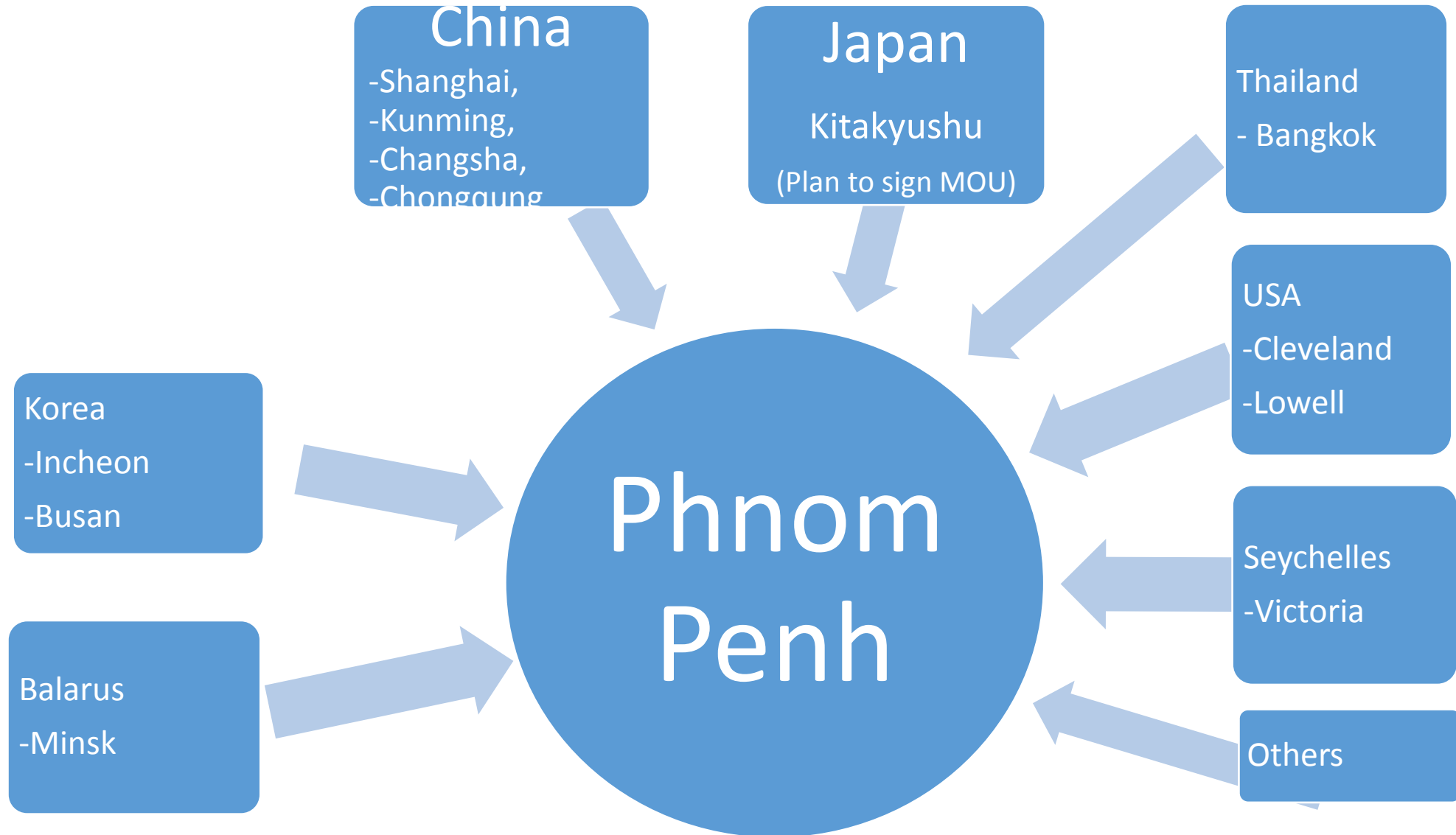
## 5. City Regulation for Heavy Vehicles (Heavy Vehicle Ban)

- Phnom Penh Capital Hall issued circulars to ban heavy vehicles such as for loading containers and heavy goods to access Phnom Penh during the day time

## 6. Sister City Cooperation



## 6.CITY TO CITY COOPERATION (Sister City)







**Thank you !**



**ADB's Future Cities**  
*From Aspiration to Action*

4<sup>th</sup> ASIA SMART CITY CONFERENCE

YOKOHAMA

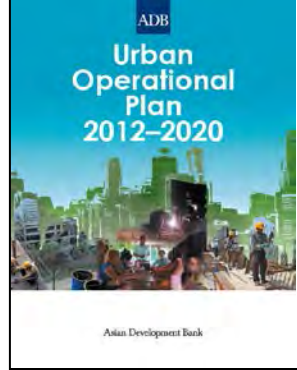
20 OCTOBER 2015

# Development Issues in Urbanizing Asia

- 3.2 billion or 65% of Asia's population will live in urban areas by 2050
- 200 million people in Asia's cities live on < US\$1 per day
- 65% of global air pollution mortality occurs in Asia
- 900 million urban dwellers in low and middle income countries will be affected by disasters and climate change



# ADB's Urban Operational Plan



STRATEGY 2020

LIVABLE CITIES

Operational Plan Response

Integrated Urban Investments

Inclusive Cities

Green Cities

Competitive Cities

Effective Governance Systems

Operational Support

Project Development  
and Structuring

Knowledge  
Management

Innovative Financing  
Mechanisms

# ADB's Urban Finance Options and Programs



## ADB Internally-Managed Funds

Fund	Date Established	Cumulative Commitments \$ million
<b>ADB Climate Change Fund (ADB net income)</b>	May-08	59.6
Clean Energy		34.6
REDD and Land Use		6.8
Adaptation		18.0
Climate finance readiness		0.3
<b>Clean Energy Financing Partnership Facility</b>		<b>298.1</b>
Clean Energy Fund (multi-donor)	Apr-07	84.3
Asian Clean Energy Fund (Japan)	Jan-08	57.1
Carbon Capture and Storage Fund (Australia)	Jul-09	75.2
Canadian Climate Fund for the Private Sector in Asia	Apr-13	81.5
<b>Urban Climate Change Resilience Trust Fund</b>	Nov-13	<b>140.7</b>
Asia Pacific Disaster Response Fund (ADB, from Asian Tsunami Fund)	2009	40.0
Japan Fund for the Joint Crediting Mechanism	2014	16.6
Integrated Disaster Risk Management Fund (Canada)	Feb-13	9.7
<b>Carbon Finance (multi-donor)</b>		
Asia-Pacific Carbon Fund (up to 2012)	Nov-08	151.8
Future Carbon Fund (post-2012)	Jul-08	115.0
<b>Total</b>		<b>831.5</b>

as of Dec 2014

7

Urban Environmental Infrastructure Fund



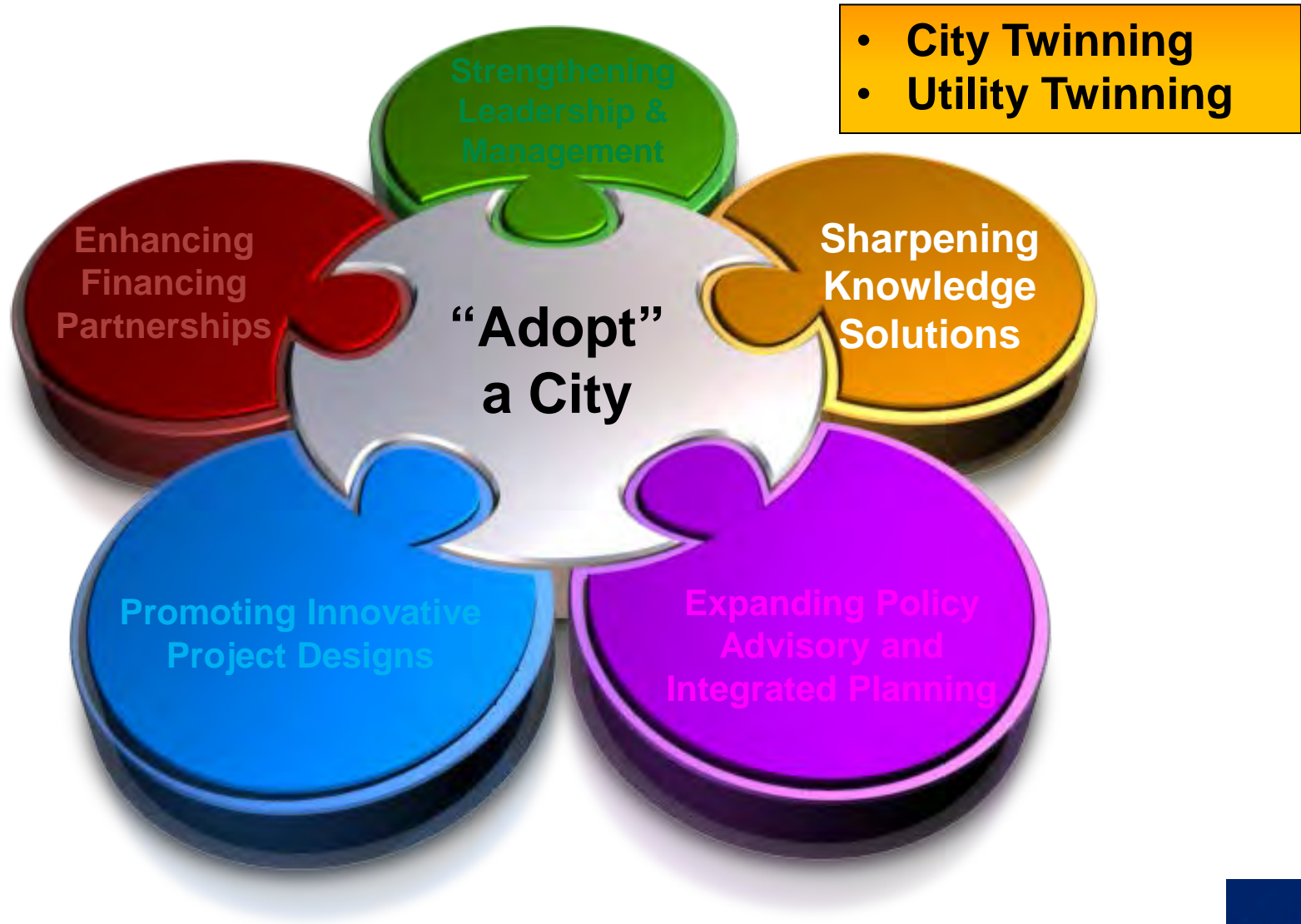
Urban Climate Change Resilience Trust Fund



# ADB's Future Cities Program – Approach



# ADB's Future Cities Program



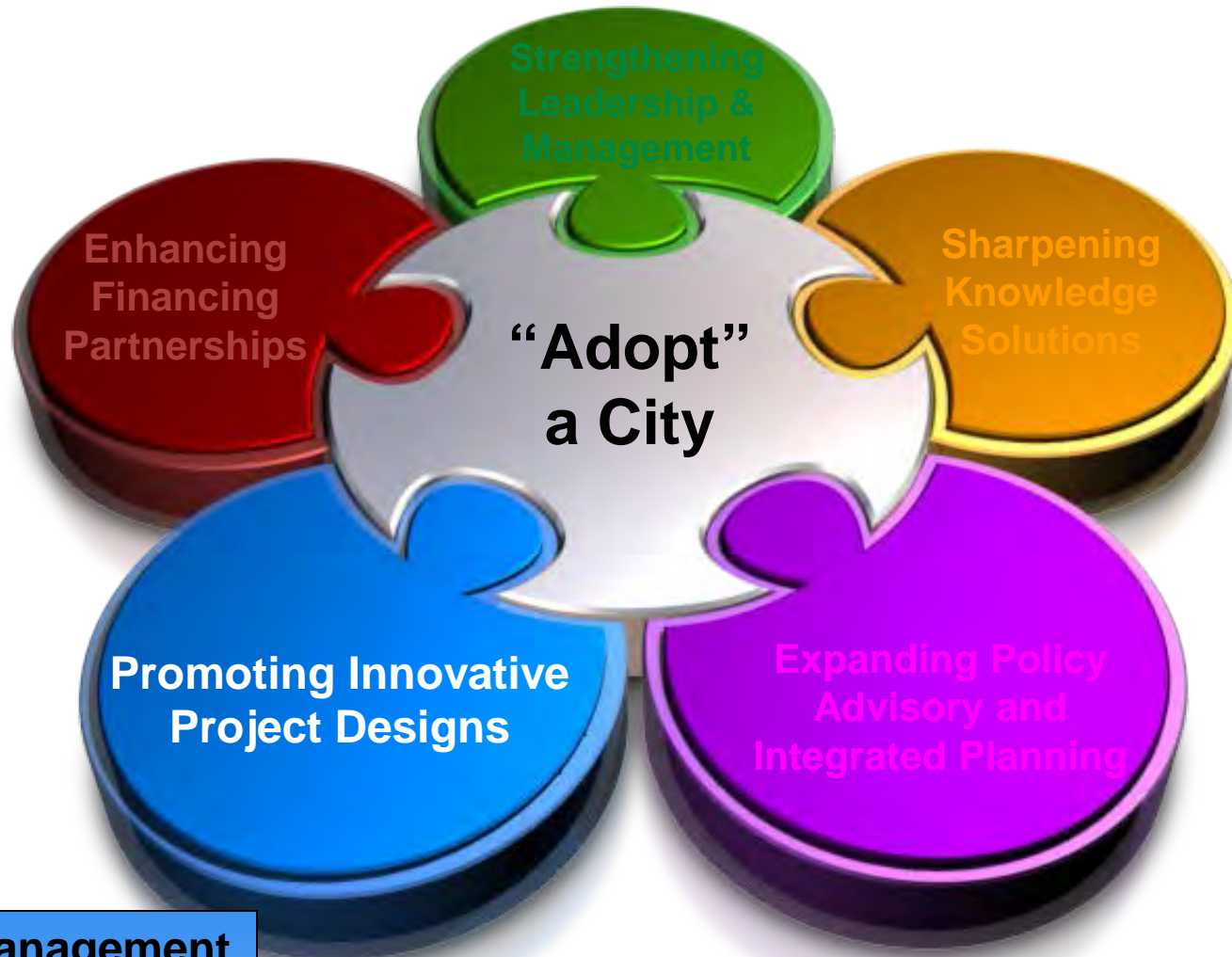
# ADB's Future Cities Program



**Low Carbon  
Interventions  
for Cities**



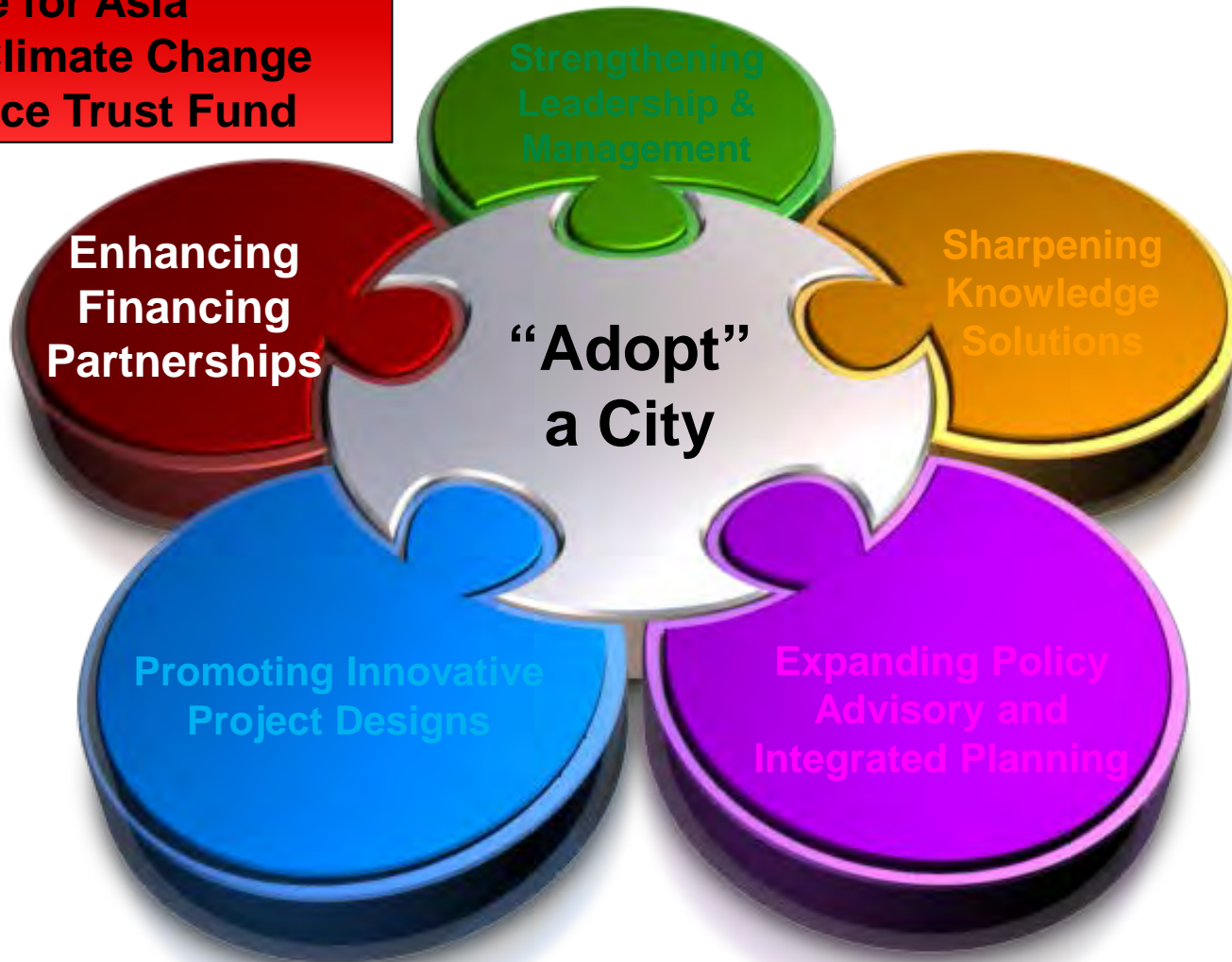
# ADB's Future Cities Program



- **Urban Management**
- **Integrated Waste Management**

# ADB's Future Cities Program

- Cities Development Initiative for Asia
- Urban Climate Change Resilience Trust Fund

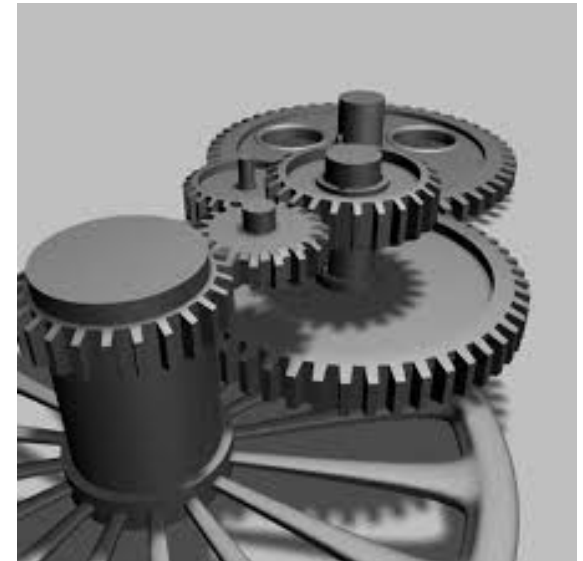


# ADB's Future Cities Program



# A Call for Action

- Understand the mindset shifts and culture needed
- Architect implementation along the levers that will drive change
- Build broad ownership, taking a structured approach, and measuring impact



A photograph of a city skyline featuring several modern skyscrapers. In the foreground, there is a large green park with a prominent tree on the left and a smaller tree on the right. The sky is overcast. The text 'City Twinning and Sustainable Urban Development' is overlaid in large yellow letters.

# City Twinning and Sustainable Urban Development

# Facilitating the water operators partnership

WOP – Phase 1 (17)

WOP – Indonesia (9)

WOP – Phase 2 (27)

WOP – Pacific (7)

2007 2008 2009 2010 2011 2012 2013 2014 2015 2016



# Cities Development Initiative Asia



- Activities
  - Capacity building
  - Infrastructure investment prioritization
  - Pre-feasibility studies
- Donors: ADB, Germany, Austria, Nordic Development Fund, Spain, Sweden, Swiss SECO, Shanghai Municipal Government, etc.
- Commitments: US\$93 million (2007-2017)
- Sharing experiences with 49 cities on climate resilient development and linking to finance
- Supporting horizontal knowledge sharing between cities by establishing Centers of Learning

# Urban Climate Change Resilience Trust Fund



- Improving urban resilience through
  - Integrated urban planning,
  - Investment grants for resilient infrastructure and
  - Knowledge generation and sharing
- Improving resilience in about 25 cities
- City-to-City learning central to knowledge strategy
- Cross-sectoral interventions in urban, water, energy, transport, health, education
- \$140 million (2014-2021) from DFID, USAID and Rockefeller Foundation



# Thank You

Urban Sector Group  
Asian Development Bank  
[vpadmanabhan@adb.org](mailto:vpadmanabhan@adb.org)

# City to city cooperation by the "FutureCity" Initiative

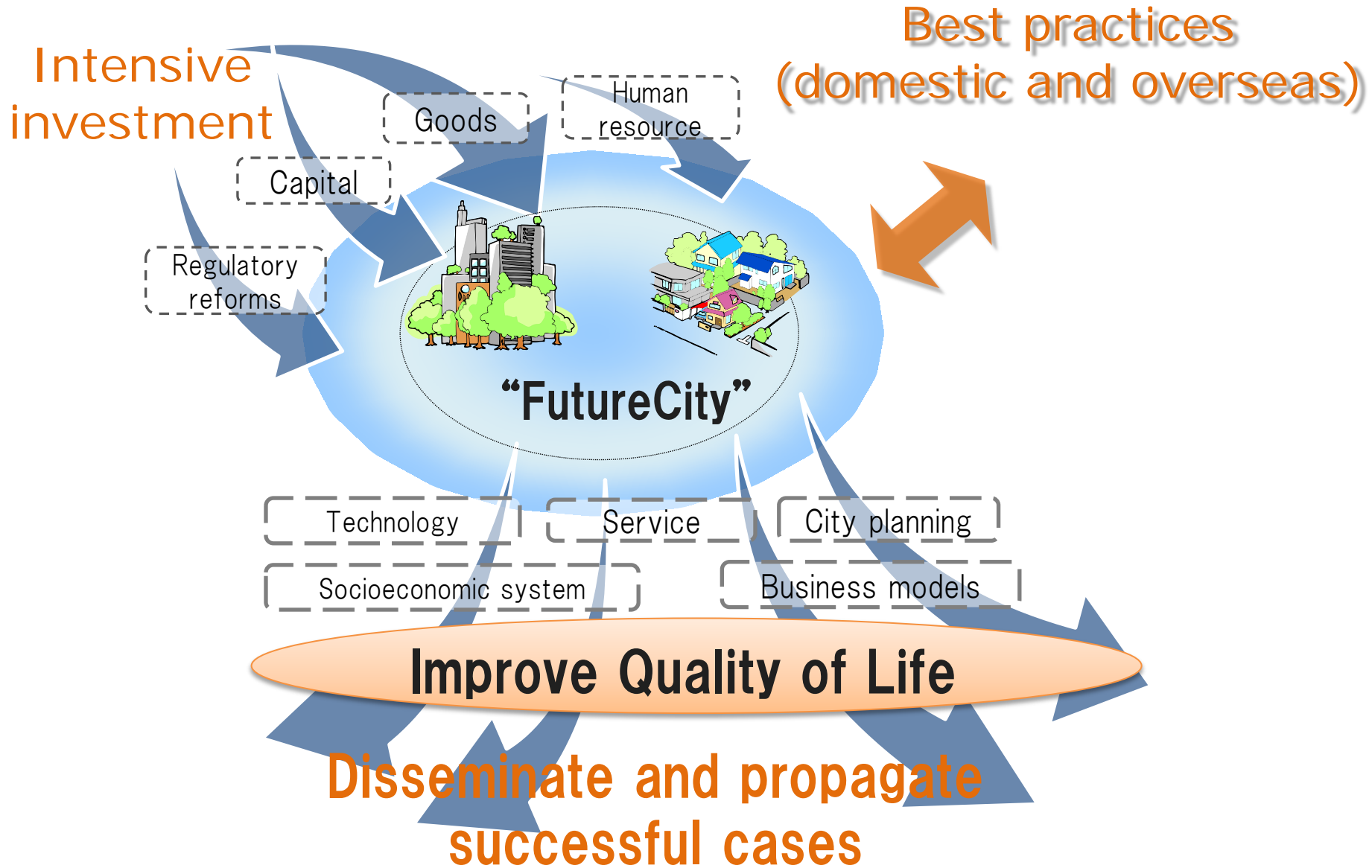
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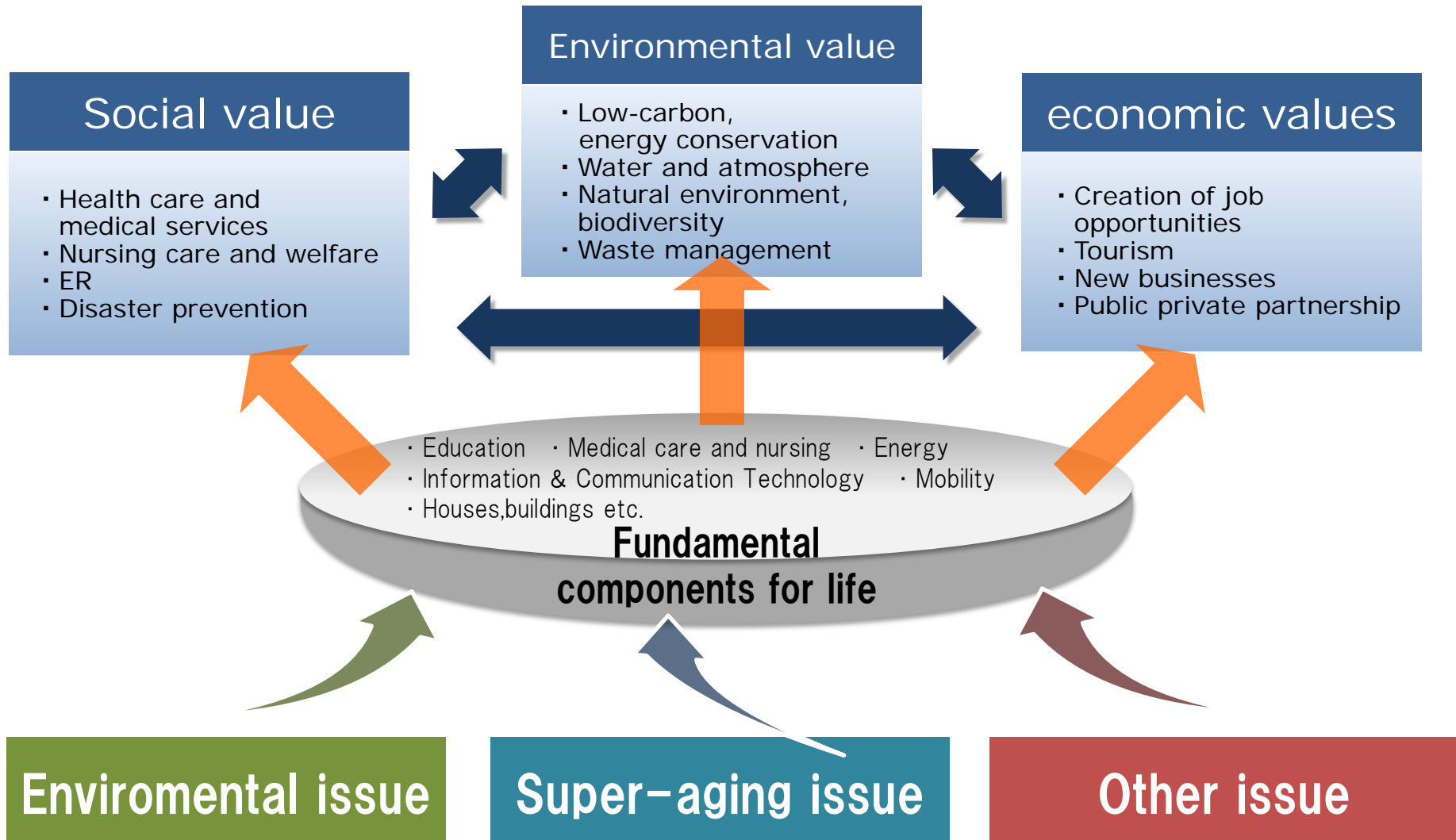


## **Masaaki Takabatake**

Counselor, Office for promotion of  
Overcoming Population Decline  
and Vitalizing Local Economy in  
Japan, Cabinet Office

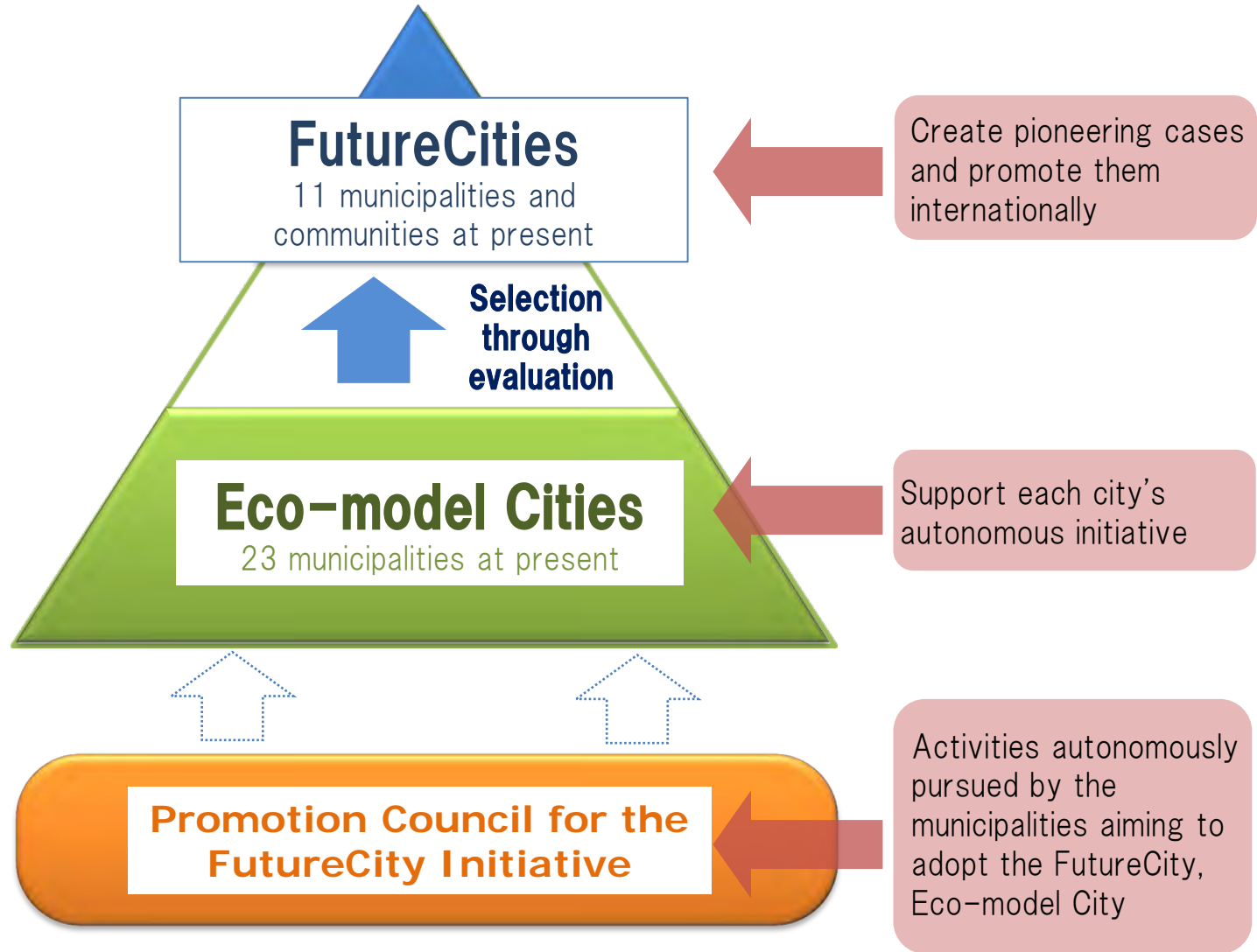




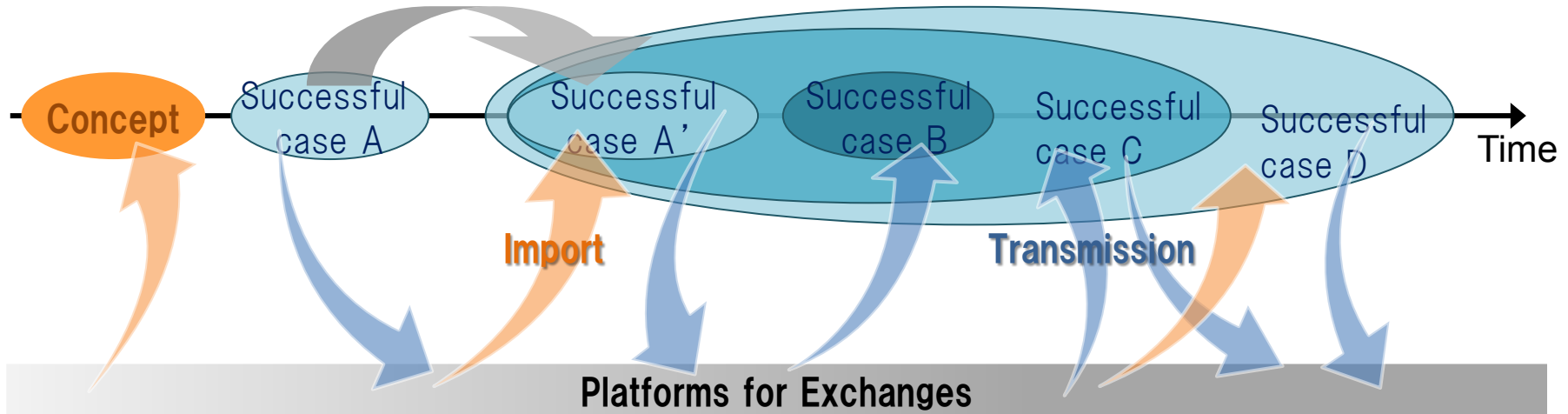


**Environmental value**  
**Social value**  
**Economic value**

**Low-carbon society**  
(Renewable energy, organization of forest land, deployment of local resources)



# Develop a platform for international intelligence



## Collaboration with domestic and global networks

International Forum on "FutureCity" Initiative in Higashimatsushima (12/06/2014)



6 countries, participated in about 250 people

International Forum on "FutureCity" Initiative in Malaysia (02/08/2015)



10 countries, participated in about 300 people

The 4<sup>th</sup> Asia Smart City Conference

# Government Strategy for Infrastructure Export



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October 20, 2015

Cabinet Secretariat

Counsellor

Naoto Hisajima

# Importance of Infrastructure Export

- World GDP may double by 2030
- Huge infrastructure demand
  - **\$71 Trillion** : global infrastructure investment needs through 2030 (OECD)
  - **\$2 Trillion** : annual infrastructure investment necessary for developing countries (WB)
  - **\$8 Trillion** : infrastructure investment necessary for Asia from 2010 to 2020 (ADB)



Japanese Advanced Technology can contribute to this massive infrastructure demand



# Government's Effort for enhancing Infrastructure Export

- “Council on Overseas Economic Cooperation and Infrastructure Export Strategies” established in 2013 under instruction from PM
- Comprised of Cabinet Members chaired by Chief Cabinet Secretary



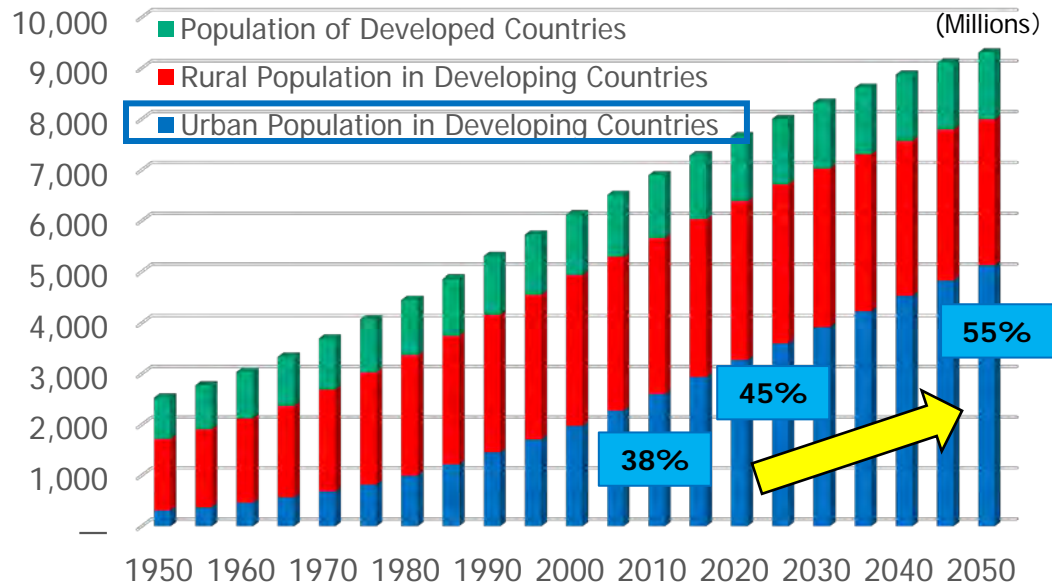
**【Goal】** Raise overseas infrastructure project orders received to approximately ¥ 30 trillion by 2020 (2010: approximately ¥ 10 trillion)

(※Investment Profit included)

# Worldwide Urbanization

- Urbanization is significant especially in Developing Countries
- Cities with 500 Thousand inhabitants is expected to increased from **962 in 2010** to **1418 in 2025** (UN)
- World market for **Urban Infrastructure** is rapidly increasing

Global Population



World Market for Water Supply/Sewerage System and Waste Treatment Sector

	Present	Future
Water Supply/ Sewerage	33 Trillion Yen (2007)	74 Trillion Yen (2025)
Waste Treatment Plant (※Total of 7 Countries in Asia)	2 Trillion Yen (2009)	3.5 Trillion Yen (2020)

(Source) Chart generated by Cabinet Secretariat using data from METI and MOE

※Thailand, Malaysia, Vietnam, Indonesia, Philippines, India, China

# Government Policies for Supporting Urban Infrastructure Export

## <Promotion of "Japan Brand" >

- Identify Infrastructure Development activities of Advanced Cities as a Showcase and promote by comprehensive approach

## <Provide Platform to Exchange Information >

- Implement seminars and workshops for local government, and promote City-to-City Cooperation
- Set up Contact Point for local government in relevant Ministries

## <Utilizing ODA Scheme >

- Financial support for F/S, implementation of development projects by local governments

Photo © Seoul Metropolitan Government



# Up-scaling local climate action – planning, implementation and monitoring

*Takashi Otsuka, Director , ICLEI Japan Office  
ICLEI – Local Governments for Sustainability*

*Asia Smart Cities Confernce 2015, Yokohama, Japan, 20 October 2015*

# Pioneers of urban sustainability

**ICLEI** was founded in 1990, by cities and for cities.

Today, **ICLEI** is a world-leading association of over 1,000 cities, towns, metropolises in 86 countries, committed to building a sustainable future.



in  
**86**  
countries

**700+**  
million  
people

**20%**  
of the global  
urban  
population

**66**  
new  
Members  
in 2014

• ICLEI Members as of May 2015

# Global presence



ICLEI is supported by 280 staff in 17 offices.

# Focus on local government

**Political**



**Processes  
and systems**



**Technical**



# Global initiatives for accelerating urban sustainability transformation

● Compact of Mayors



COMPACT  
*of* MAYORS

● Transformative Action Program

TAP

Transformative  
Actions  
Program





# COMPACT *of* MAYORS

C40  
CITIES

I.C.L.E.I.  
Local  
Governments  
for Sustainability

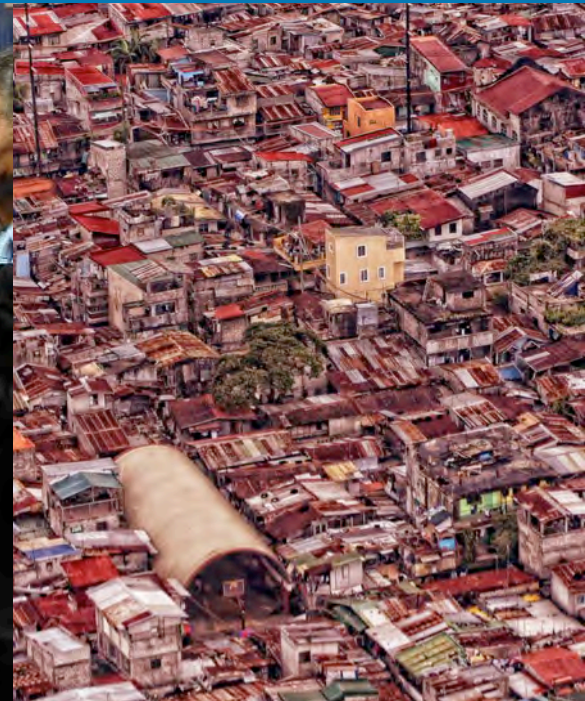


UCLG  
United Cities  
and Local Governments

MICHAEL R.  
BLOOMBERG

UN Secretary-General's Special Envoy  
for Cities and Climate Change

UN HABITAT  
FOR A BETTER URBAN FUTURE





## WHAT IS THE COMPACT OF MAYORS?

The Compact of Mayors is a global coalition of mayors and city officials committing to reduce local greenhouse gas emissions, enhance resilience to climate change and track their progress publicly. It is an agreement by city networks—and then by their members—to fight climate change in a consistent and complimentary manner to national efforts.

- The Compact collects the significant climate action data that cities are already reporting in a consistent, transparent manner and makes that data available in a single place.
- The Compact builds on existing cooperative efforts, partnering with other initiatives to better measure and communicate the impact of city action.
- The Compact represents the greatest opportunity to bring attention to, and quantify, city action, both in the lead-up to Paris and beyond.

# COMMITTED AND COMPLIANT BADGES

To join the Compact, a city leader must engage in the following four phases over a three-year period. Each phase has a two-step process: Mitigation and Adaptation.



Phase 1



Phase 2



Phase 3



Phase 4



Compliant



## Establish An Action Plan

Within three years, a city's strategic action plan must show how it will deliver on its commitment to reduce greenhouse gas emissions and adapt to climate change.

Upon registering its commitment to the Compact of Mayors, a city will receive an official "Committed" badge.



Upon completing all requirements, a city will receive a "Compliant" badge. A new "Compliant" badge will be issued each year that compliance is maintained through annual reporting.



These badges may be publicly displayed online and in print materials.

# ● carbonn Climate Registry

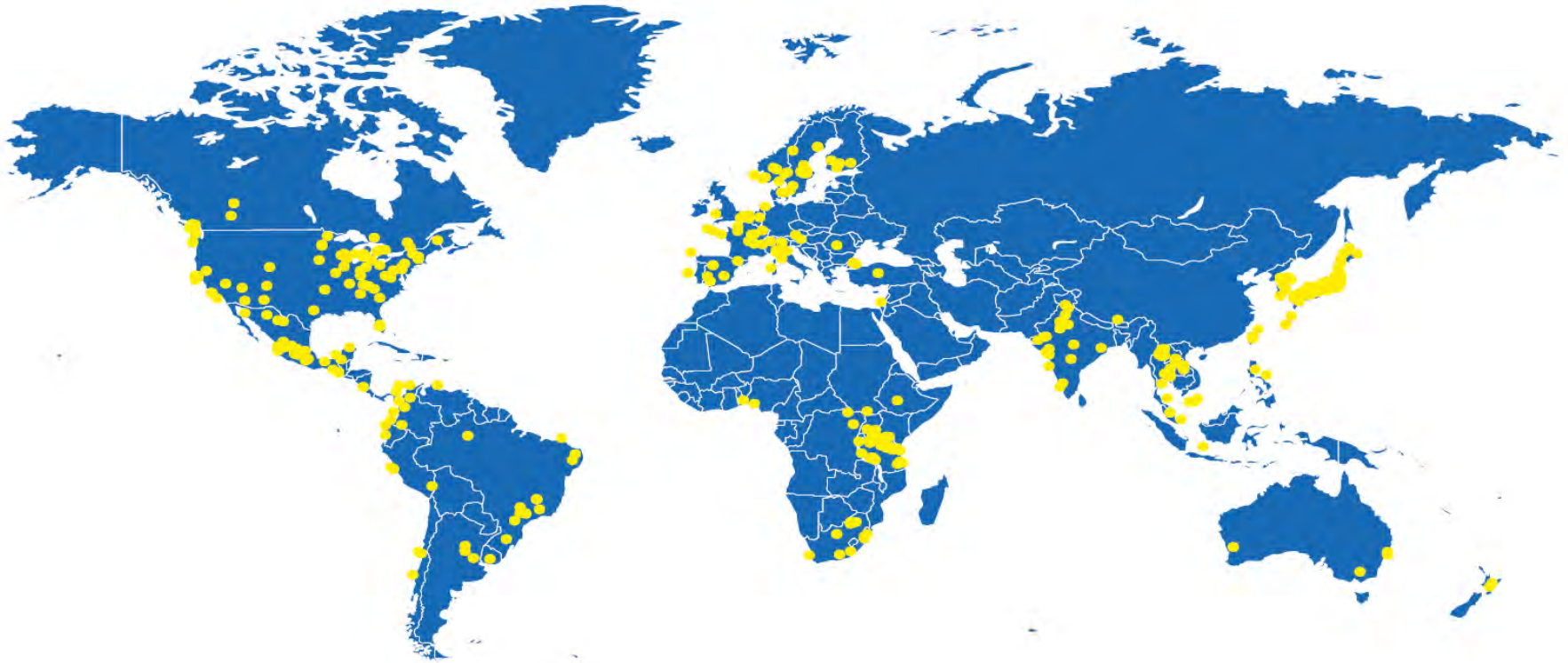
- Launched in November 2010
- Global reporting platform for local and subnational climate action (mitigation and adaptation)
- Supports 14 initiatives, including  
**Compact of Mayors** and **Compact of States and Regions:**
- 1st data partner of UNFCCC's **NAZCA:**

3 areas of reporting:

Commitments

Performances

Actions



524

Number of reporting cities and regions



50

Countries



480

Population in millions (15% of world's urban population)



1099

Energy and climate commitments



5201

Reported mitigation and adaptation actions (4013 mitigation & 1188 adaptation actions)



1.0 billion

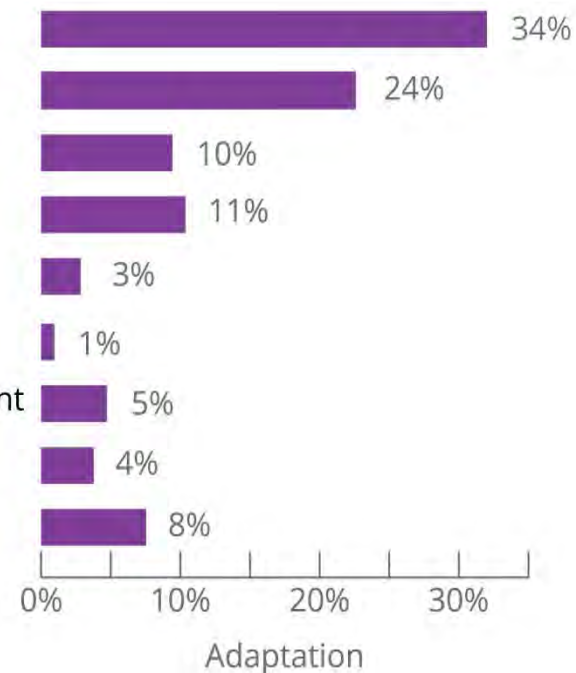
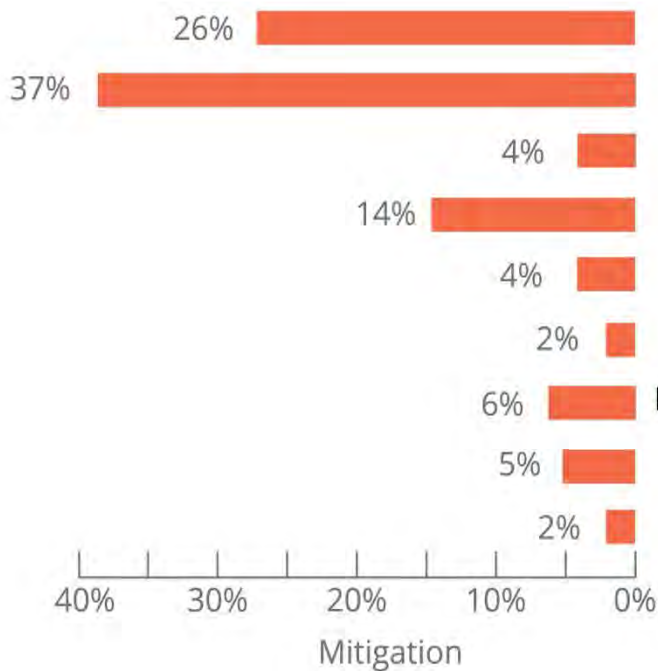
Committed GHG emissions reductions by 2020

# carbonn Climate Registry

Actions reported by local and subnational governments – status of March 2015:

## 4013 Mitigation Actions

## 1188 Adaptation Actions



# TAP

Transformative  
Actions  
Program

## Transformative Actions Program

**I.C.L.E.I**  
Local  
Governments  
for Sustainability

**I.C.L.E.I**  
Local  
Governments  
for Sustainability

**af**  
AGENCE FRANÇAISE  
DE DÉVELOPPEMENT

**C40**  
CITIES  
CLIMATE LEADERSHIP GROUP  
c40cities.org



**R20**  
REGIONS OF  
CLIMATE ACTION

**Global  
Infrastructure  
Basel**

- 10 year program to support climate investment in urban areas
- Raise ambition and accelerate transformative actions towards low-carbon and resilient society
- Raise visibility, mobilize key actors and increasing access to finance

### Program

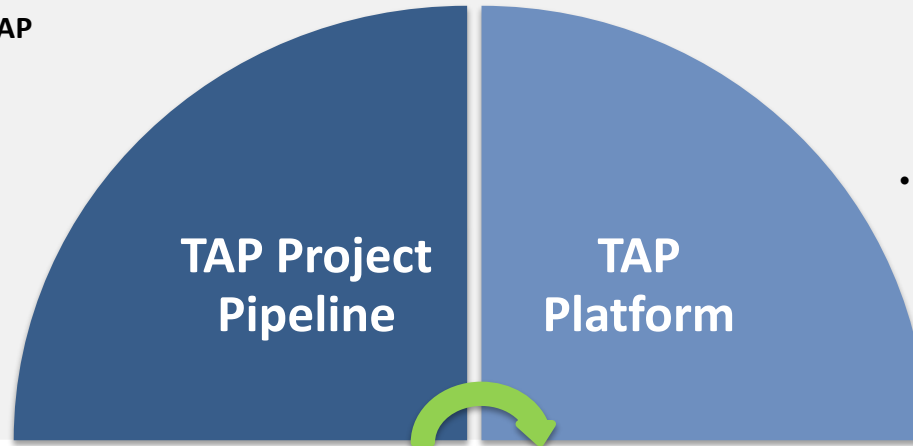
- Selection of TAP projects / action plans (100 each year)
- Visibility, information, communication through online platform
- Promotion at COP and other opportunities (TAP Pavilion @ COP21)

### Transformative potential (selection criteria)

- Ambitious (first-time, scale-up) ● Cross-cutting (people, place, planet)
- Inclusive (city administration, civil society, multi-level governance, business)

## The 4 Action Pillars of the TAP

- Selection of 100 TAP frontrunner cities and regions every year
- Support with application and project proposal development



- Online platform that visualizes action potential in a structured, unified format
- Information and communication facilitation for local/regional governments and funding bodies

- Mobilization of cities and regions
- Sustained awareness-raising
- With focus on: multi-level governance, effective vertical integration, new financing mechanisms



- Kick-off at COP21, at every future COP thereafter
- Space for showcasing of TAP projects to a multi-actor public

**TAP the potential of local and subnational climate action!**



## TAP Criteria and Selection Process

The Transformative Action Program (TAP) calls for project applications from subnational authorities that are ambitious, cross-cutting, and inclusive - our definition of transformative.

### Type of Projects

"Fast-track Transformers"	"Post-2020 Transformers"
<ul style="list-style-type: none"> <li>• Ready-to implement, fully designed projects/action plans with an identified need for funding (investment and/or grants)</li> <li>• Projects/actions plans with a clear budget, clear action plan and management concept</li> <li>• To be implemented pre-2020</li> </ul>	<ul style="list-style-type: none"> <li>• Well-designed project concepts</li> <li>• Identified need for funding, capacity building, technical advice, strategy development, finance expertise, etc.</li> <li>• To be implemented post -2020</li> </ul>



# Criteria for TAP Projects

## The Transformative Potential of Projects

TAP applicants should have the potential to transform society, and particularly respond to ACI – Ambitious, Cross-cutting, and Inclusive, - the 3 key components of transformative.

Ambitious	Cross-cutting	Inclusive
<p><u>First-time projects</u> that will serve a meaningful portion of the population</p> <p>OR</p> <p><u>Existing Projects</u> that will be scaled up and that will serve an increasingly large amount of the population/jurisdiction area/etc.</p>	<p><u>People</u> Demonstrate how citizens, in particular those identified as being from disadvantaged communities, will benefit in the short- and mid-term e.g. the urban poor, the unemployed, the elderly, youth, women, ethnic minorities, etc.</p> <p><u>Place</u> Improving different aspects of the locality by optimizing the use of local resources [air, water, waste, land, biodiversity/ecosystems, energy] across services and sectors</p> <p><u>Planet</u> Contribution to national and global sustainability goals</p>	<p><u>The city administration</u> Within the city administration, cross-departmental coordination processes and mechanisms have to be in place to assure effective project implementation and financing</p> <p><u>Civil society</u> Citizens and their stakeholders have to be actively engaged and encouraged to participate in the design and implementation of the project</p> <p><u>Multi-level governance</u> Concrete efforts to foster collaboration and cooperation with governmental stakeholders at all governance levels: municipal, local, sub-national, national, regional</p> <p><u>Business</u> In order to ensure Green Growth, local businesses and the local private sector should be engaged</p>

TAP the potential of local and subnational climate action!

# Useful links

- UNFCCC Homepage: <http://unfccc.int/2860.php>  
COP21/CMP11 Host Country Site [www.cop21.gouv.fr/en](http://www.cop21.gouv.fr/en)  
NAZCA Portal: <http://Climateaction.unfccc.int>
- Local Government Climate Roadmap [www.iclei.org/climate-roadmap](http://www.iclei.org/climate-roadmap)  
Local Governments at ADP Process  
<http://www.iclei.org/climate-roadmap/advocacy/unfccc/adp-sessions.html>
- carbonn Climate Registry [www.carbonn.org](http://www.carbonn.org)  
Compact of Mayors [www.compactofmayors.org](http://www.compactofmayors.org)  
Transformative Action Program [www.tap-potential.org](http://www.tap-potential.org)
- ICLEI Blog <http://talkofthecities.iclei.org>



# **JICA's Challenge for Creating Sustainable Cities**

20 October 2015

**Toshiyuki IWAMA (Mr.)**

Infrastructure and Peacebuilding Department  
Japan International Cooperation Agency (JICA)

# What is Sustainable City?

- concept of sustainable city -





## Make cities and human settlements inclusive, safe, resilient and sustainable

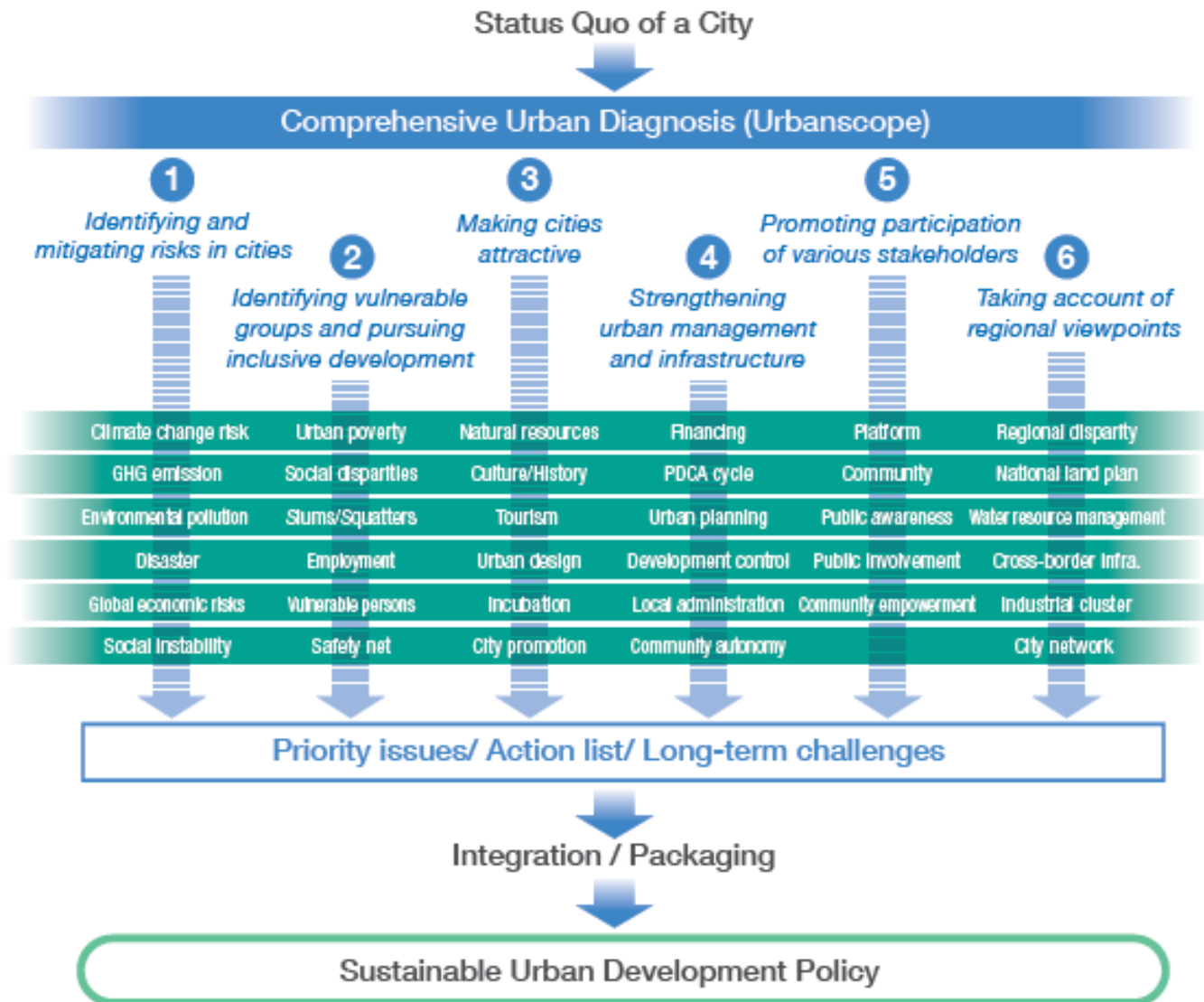


### Target

1. Safe affordable housing, upgrade slums
2. Access to public transport
3. Efficient land use
4. Conservation of cultural and natural heritage
5. Protect people against disaster
6. Ensure air quality and waste management
7. Access to green and public space

# Comprehensive Urban Diagnosis

## - Urbanscope -

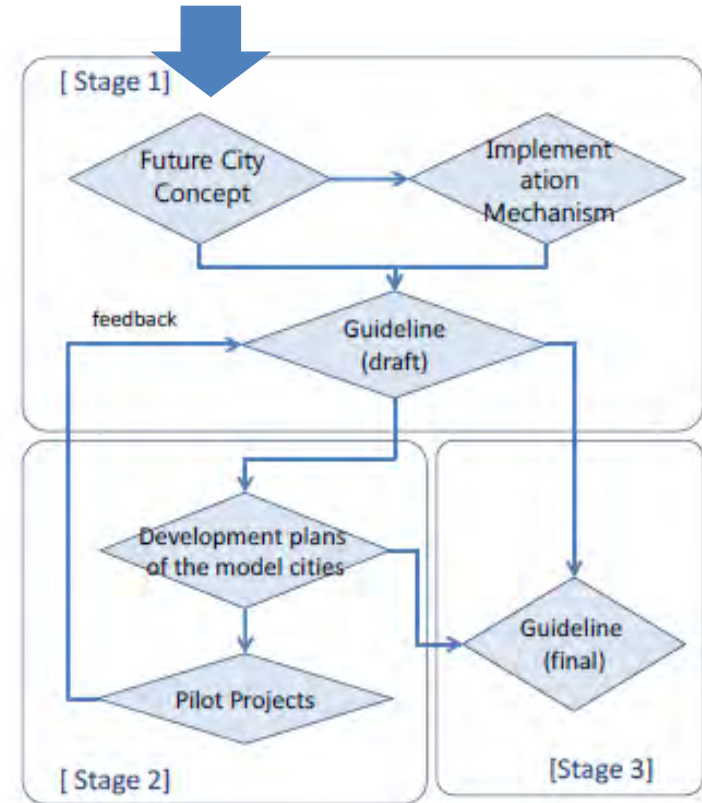




Source: DPT (2009) "Thailand National Spatial Development Plan 2057"

### Urbanscope

- 1 Environmental pollution, Disaster, Social instability
- 2 Urban poverty, Employment, Social disparities
- 3 Cultural history, Tourism, Urban design, Promotion
- 4 Financing, Urban planning, Development control
- 5 Platform, Public involvement, Community empowerment
- 6 National land plan, Cross-border infra, Industrial cluster



Project Stages and Expected Outputs

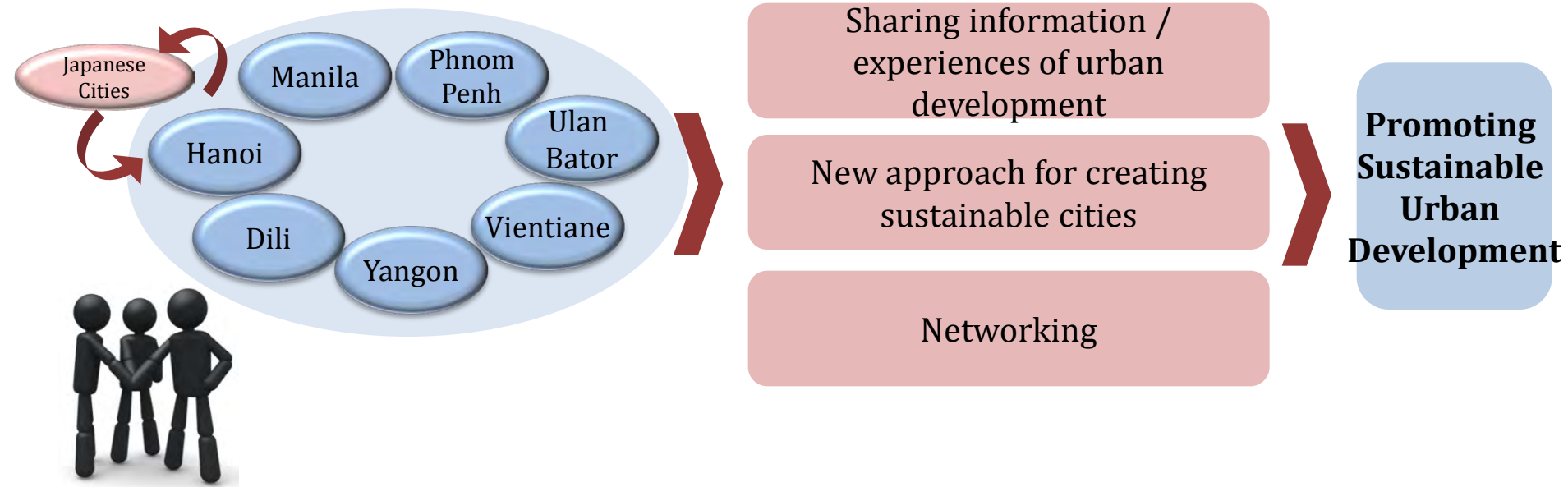


# New Approach on City to City Cooperation

[ Title ] Seminar on Inter-City Cooperation Platform for Creating Sustainable Cities

[Contents] The participants will discuss:

- the major issues for promoting the sustainable cities.
- the urban appeal and potential of the city.
- opinion regarding five basic characteristics of sustainable cities by JICA diagram.
- urban infrastructure and urban management.
- suggestion of global environment and sustainable cities



**The 4th Asia Smart City Conference**

**– City to city cooperation towards sustainable urban development**



**JFE**

**Case Studies:  
Public-Private Collaboration  
for Urban Development**

**October 20<sup>th</sup> 2015**

**Gen TAKAHASHI**

**Deputy General Manager**

**Global Business Development**

**JFE Engineering Corporation**

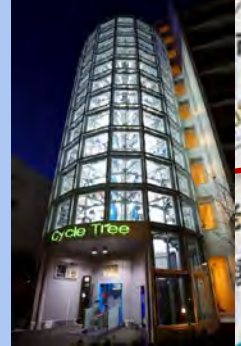
# Yokohama City & JFE Engineering



**Hokubu Sludge Treatment Plant**  
Sewage Digestion  
Gas Power Generation



**Cycle Tree**  
Fully Automated  
Bicycle Parking



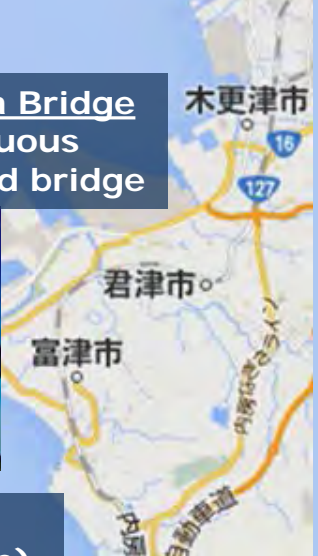
**Partnership Agreement**  
for the International  
Technical Cooperation



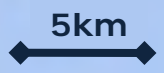
**Earthquake Resistant**  
Drinking Water Storage Tank  
Minato Mirai



**Tsurumi Tsubasa Bridge**  
3-span continuous  
steel cable-stayed bridge



**Kanazawa Plant**  
JFE WTE Plant (Stoker-Type)



# Case Study : Waste treatment facility in City

Asian City Open Dumping Site



Japan Waste to Energy (Incineration) Plant



How?

## Public Sector

Capacity Building,  
Regulation Setting,  
Finance Arranging, etc.



## Private Sector

Cutting-Edge Technology,  
Smooth and Safe  
Operation/Maintenance, etc.

# Case Study : Waste to Energy Plant in Yangon City Public – Private Collaboration for urban development



The Asian Network  
of Major Cities 21

JICA Program  
Phase1

JICA Program  
Phase2

Capacity Building for promoting benefit of WTE,  
3R initiatives and policy making

Tokyo Metropolitan  
Government



2012

2013

2014

2015



Analysis  
on current situation

Knowledge Building and  
Draft Proposal for  
**WTE with JCM Scheme**

Feasibility Study  
for **JCM Application**



MOEJ FS  
Phase1

MOEJ FS  
Phase2

JCM FS

**JCM  
Model Project**



**Thank you for your kind attention**

# The Global Lab on Strategic Metropolitan Planning and Management (**Metro Lab**) and links to the Tokyo Development Learning Center

Victor M. Vergara and Daniel Levine, World Bank

Thematic group on City to city cooperation towards sustainable urban development

***4<sup>th</sup> Asia Smart City Conference, Yokohama October 2015***

# The Metro Lab Defined

A solutions oriented community of practice which addresses challenges of urban growth from an inter-jurisdictional perspective at the Metropolitan and regional level. It fosters learning, leadership and innovation by co-creating solutions and actions in the context of **long term strategic plans with short and medium term results.**

The community of practice brings together in a seamless horizontal platform cities from low, lower-middle, upper-middle, and high income countries to share openly the lessons and insight in the planning and management of urban growth and transformation.



# Metro Lab Core Issues and Themes

- Core issues:
  - Planning systems for metropolitan land use and service provision.
  - Metropolitan solid waste management
  - **Smart metropolis for high quality growth**
- Selected Global Metro Lab themes:
  - Urban Governance
  - Urban Poverty and Housing
  - Climate Change
  - Metropolitan Finance
  - Metropolitan wide Citizen Participation at the Metropolitan
  - Metropolitan Service Delivery – transport, water
  - PPP

# Metro Lab Stakeholders

- **Led by World Bank client cities and city regions**
- Reference global cities: New York, Seoul, Paris, Barcelona, and in 2015 Japanese Cities in context of TDLC
- World Bank Metro Lab task team leaders, global leads
- Metro Lab partner institutions. Ford Foundation, Cities Alliance, Universities, Associations, UN Habitat and METROPOLIS.

# The Metro Lab as a Process and Approach

- Global Labs hosted by Metro Lab Cities addressing specific thematic areas.
  - - Global Labs in Resource Metro Lab Cities **New York, Seoul, Paris**
  - - Global Labs in World Bank Client Cities **Mumbai, Dar es Salaam, Rio de Janeiro**
- Learning Events Serving Metro Lab Cities: Webinar on Metropolitan Finance, Linking to World Bank Urban Learning Portfolio.
- Collaboration for Development Metro Lab Home Page.
- External Metro Lab partnership events (Regional Plan Association, New York University, Lausanne Polytechnic, Metropolis Institute, Massachusetts Institute of Technology, United Nations, Wilson Center, TDLC)

# Metro Lab Upcoming Events

IGLUS final session in Dortman, Germany	September 17-18
UN working group on Metropolitan Development, Montreal	October 6-7
IGLUS first session of second cohort Guadalajara, Mexico	October 24-25
Rio de Janeiro Global, Rio de Janeiro, Brazil	November 16-19
UN HABITAT Conference on Metropolitan Governance, Guadalajara	November 23-24
Paris Follow up Metro Lab event on Climate Change	December 4th
MIT Metro Lab to create Smart Metropolis MOOC	January 11-15
Tokyo TDL launch with Global Lab, Tokyo Japan	February 2015
Wilson Center Graduate Student Urban Poverty Competition	February 2015
New York RPA annual Assembly and Metro Lab	April 27-29
Kigali Global Lab	May 23-27 TBC

# TDLC Phase III Program Components

## **(1) City Partnership Program**

- Official engagement with selected cities in Japan to facilitate multi-lateral knowledge exchanges of development challenges and solutions
- Production of high value knowledge assets inclusive of knowledge notes, toolkits, good practice guides, videos, etc. that are practical and actionable

## **(2) Knowledge Networking and Outreach Support**

- Support knowledge outreach, dissemination and networking activities and expertise mobility across networks, communities of practices (inclusive of Metro Labs) and thematically aligned groups or organizations (Internal and External)

## **(3) Operational Support**

- Support and facilitate delivery of knowledge, capacity building, and advisory services on a just-in-time basis, in conjunction with Bank operational projects
- Transform traditional modes of technical assistance and advisory services of the Bank in to more programmatic and sustained approaches through inclusion of virtual delivery elements

## **(4) Design Delivery of Structured Learning for Clients, Partners, and Staff**

- Serve as a platform for development and dissemination of e-learning courses, MOOCs and accreditations developed by the WBG and partners based on client demand and emergent needs

## **(5) Technology, Conferencing, and Outreach Services**

- Utilize TDLC's state-of-the-art facilities as a delivery platform both for Bank knowledge, learning and outreach programs and for those of development partners.

# https://collaboration.worldbank.org



**COLLABORATION FOR DEVELOPMENT** Home Browse ▾ My Groups My Content Log in Search

## Global Lab on Metropolitan Strategic Planning ▾

Overview Content People Calendar Actions ▾ About Share

Log in to follow, share, and participate in this socialgroup. Not a member? [Join Now!](#)

### REGISTRATION

This group is for members only. You must [log in](#) and join the group to follow, share, and participate with MetroLab Community Members. Not a member of C4D? [Join now!](#)

Questions about registration? [Click here](#) to access registration guidelines.

### METROLAB PROJECT PAGES

- New York (coming soon)
- Mumbai (coming soon)
- Seoul (coming soon)

## Think Outside Your Boundary

*This is your lab.*

MetroLab: Think Outside Your Boundary

Take the lead and contribute to your Global Lab. Be part of peer learning and reviews, virtual knowledge exchanges, and high-level face-to-face workshops and consultations.

The objective of this Community of Practice is to enable city regions to continue to jointly explore solutions for economic development, resiliency, social equity, transport, governance, and other shared concerns. We also would like to encourage you to invite people that you will benefit from this community to join our group.

Its direction, focus, and activities are in your hands. Your active participation is

### FEEDBACK

Have feedback about our site? Please [contact us](#) to let us know what you think!

### NEED HELP?

Having problems with Collaboration for Development? [Click here](#) for guidance about the platform.

### THEMATIC SUPPORT MATERIAL

- [Bangkok MetroLab Materials](#)
- [City Data & Institutional Framework](#)
- [Dar es Salaam MetroLab Materials](#)
- [Metropolitan Strategic Planning](#)
- [Mumbai MetroLab Materials](#)

# Introduction of IACSC



September 2015

# What is IACSC?

- IACSC

International Academic Consortium for Sustainable Cities

- Purpose:

To contribute to solving urban problems mainly in three areas:

- Environment
- Urban Planning
- Public Health

.

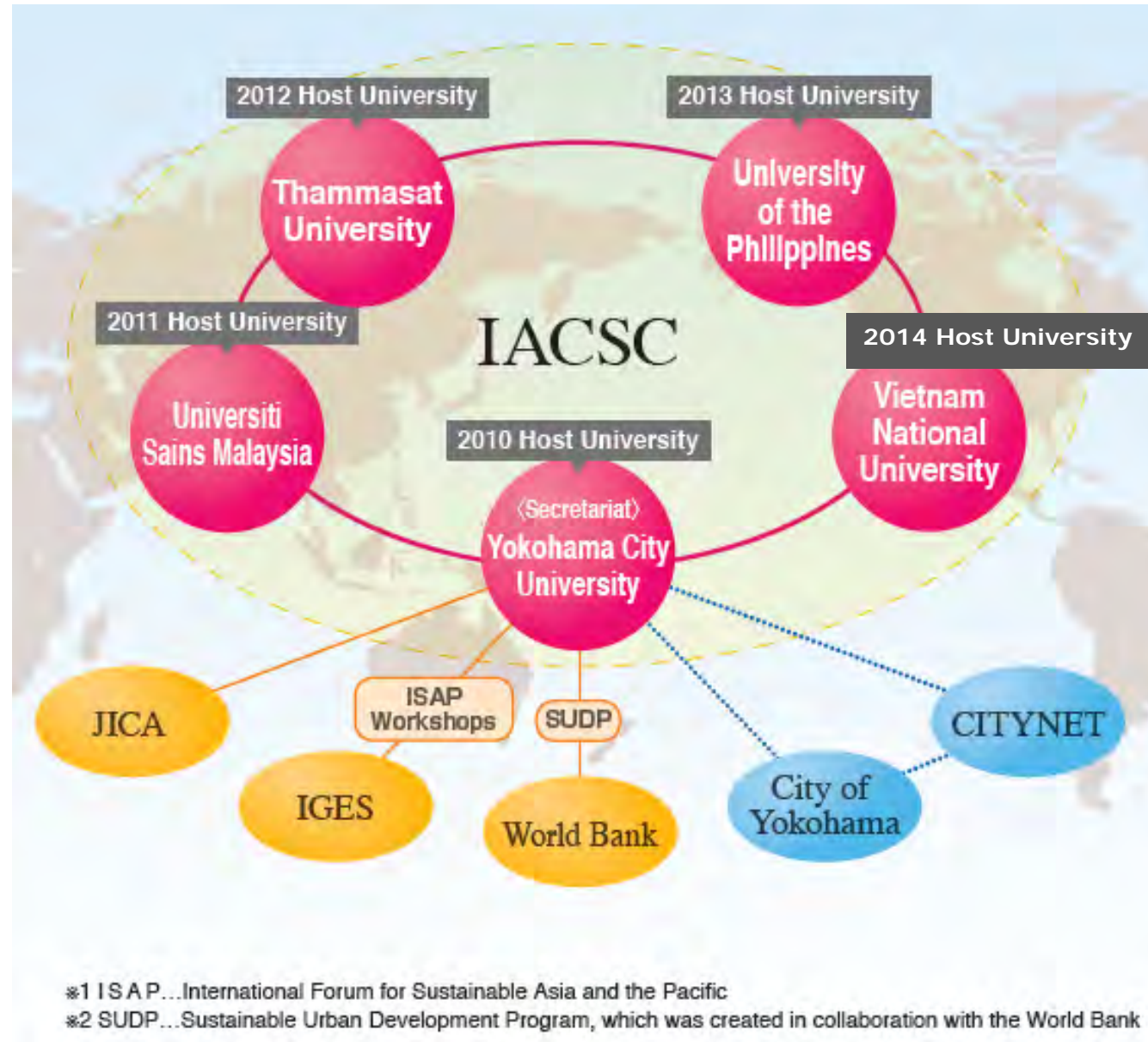


# What and Who is IACSC?

International  
Academic  
Consortium for  
Sustainable Cities  
(IACSC)

is

an academic  
network of Asian  
Universities



# Introduction of JICA Project #1

JICA Grassroots Project in Seberang Perai, Malaysia.  
This supports city-to-city cooperation of Yokohama City.



Seberang Perai Municipality, Malaysia.

Share know-how of Yokohama's urban design with Seberang Perai Municipality  
in the town development of Bukit Mertajam District.

Project period : 2015 Dec – 2018 Dec. (3 years)

Amount: 54 Million Yen in 3 years

# Introduction of JICA Project #2

JICA Grassroots Project in Iloilo City, Philippines  
This supports city-to-city cooperation of Yokohama City in Disaster  
Risk Reduction (DRR)



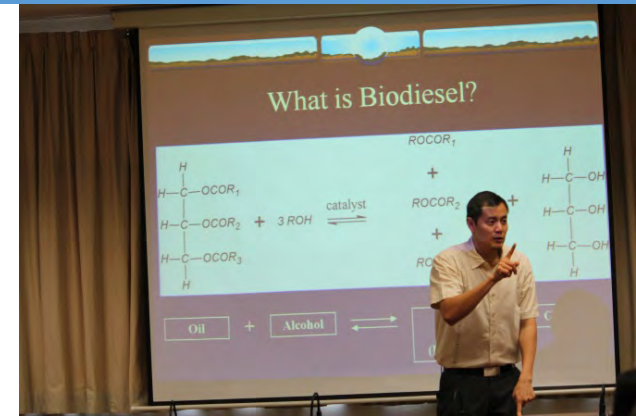
Training conducted in Yokohama  
for community disaster prevention  
led by YCU faculty

**Project aim is to achieve Community Based Adaptation and Resiliency Against Disasters for Iloilo City**

Project period : 2015 March – 2017 March  
Amount: 60 Million Yen in 2 years

# SUDP

## Sustainable Urban Development Program (SUDP)



# Sustainable Urban Development Program (SUDP) Features

1. Conducted in English
2. Problem-solving Approach
3. Group work and presentation
4. Field trip
5. Cases of Asian cities (variety of sectors)
6. Variety of resource speakers including municipality, NGO, private sector
7. Faculty exchange



# Sustainable Urban Development Program (SUDP) Subjects

## Common Themes

- Introduction to the World Bank's ECO2
- What is Sustainability?
- Global Warming
- Case Study of Municipality

Focus

2012

Yokohama

### ◆ Land Use & Transportation

- ◆ Waste Management
- ◆ Case of HoChi Minh
- ◆ Case of Penang
- ◆ Case of Yokohama

2013

Penang

### ◆ Heritage Conservation

### ◆ Waste Management

- ◆ Case of Japan
- ◆ Case of Penang

2013 & 2014

Yokohama

### ◆ Public Health

### ◆ Water

- ◆ Case of Dhaka, Bangladesh
- ◆ Case of Yokohama City



**Possibility of Eco Industrial Park  
in Yokohama Green Valley  
&  
Waste Management G30**

**Prof. Masazumi AO  
Yokohama-City University**

# History of Japanese waste management

1879

***“Regulation of cleaning to town and lavatory.”***

First waste management in Japan

Because of typhoid and cholera.

1900

***“Regulation of cleaning to dirt ”***

This management obligate **every municipality to dispose waste by themselves.**

developing industrialization and concentration of population

1970

***“Regulation of waste disposal ”***

Government promote **incineration waste disposal .**

1997

***“Regulation of recycling containers ”***

Reuse, decreasing plastic and prolonging using final disposal site.

**→Japanese starts classification of waste.**

developing into a social problem



# History of Policy

**2001** Because of the increase in population, the amount of waste had been increasing.

Before then, the city disposes waste by dumping on landfills and incinerators mainly.



However, the city couldn't dispose all amount of waste due to its amount .

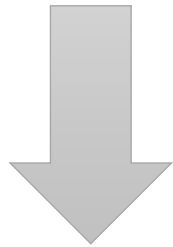
**They should have converted the disposal method to new one.**

In 2003

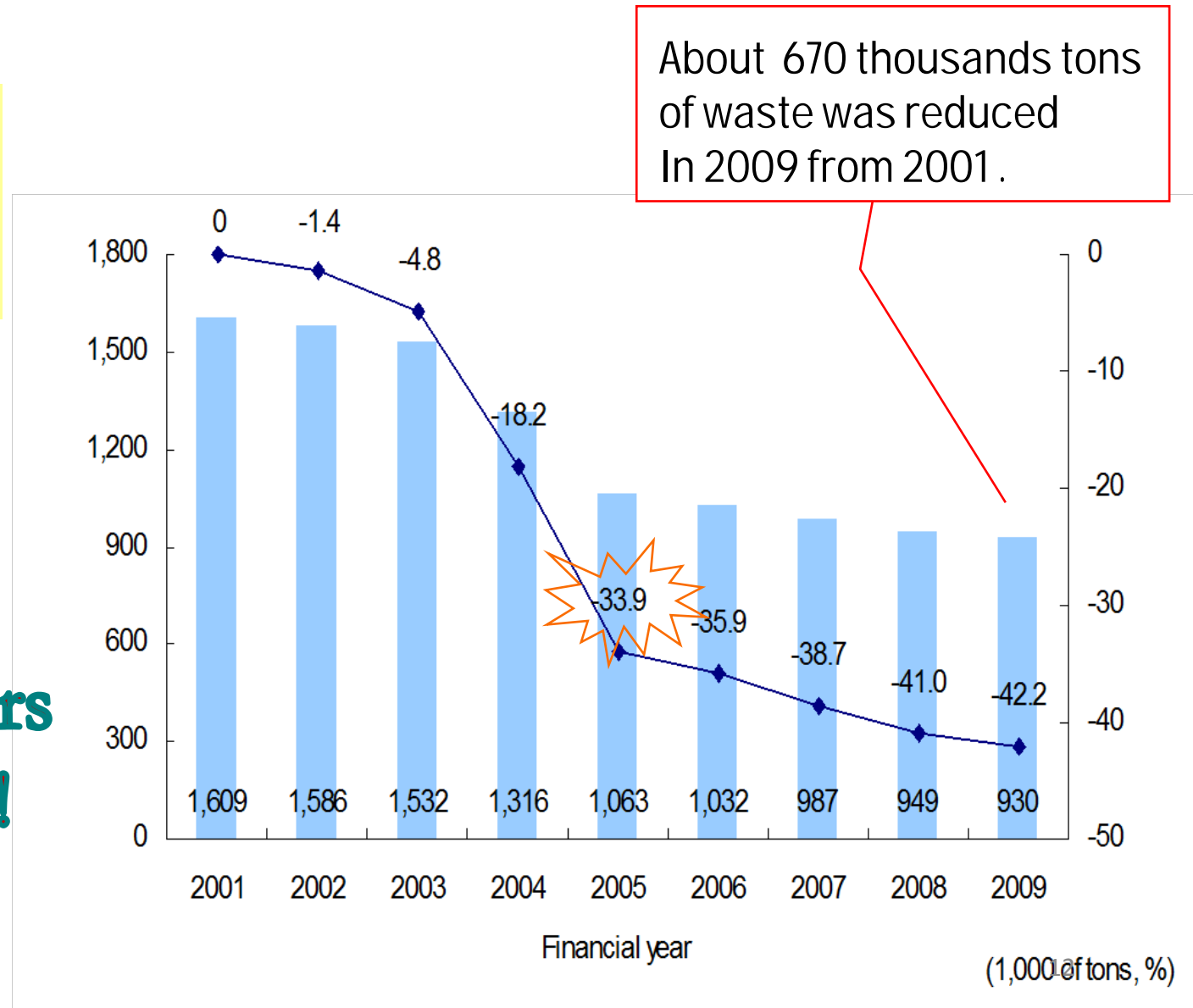
**They made a waste management plan called 'G30', along with basic law for recycling society.**

# Consequences of G30

30% reduction in 2005  
42% reduction in 2009



The goal was achieved 5 years earlier than it was planned !



# The approach to citizen

Administration checks strictly and guides to residents and business owners for introduction of new classification categories.



## Inform

Information Session  
11,000 times  
(2004,2005)

## Manage

the waste which isn't separated would not be collected.

## Guide

Morning Guidance  
3,300 times  
Education Campaign  
@station  
600 times  
(2004,2005)

## Fine

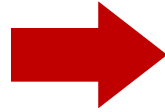
For unsorted waste and imposing a fine



change and expansion of existing plan

● **basic principles on the waste management policy**

Proper treatment  
of wastes



Promotion of waste reduction and recycling!

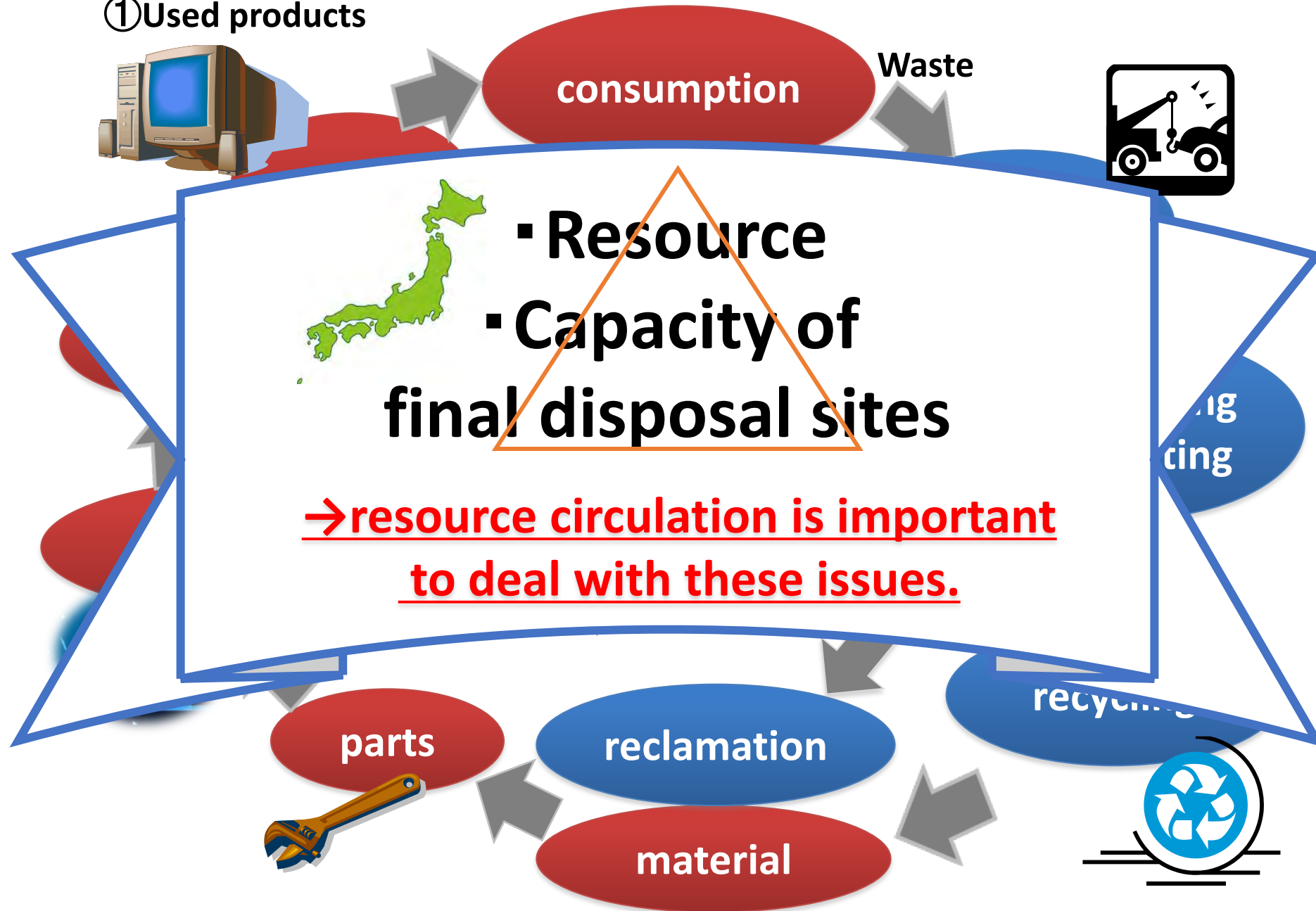
Factors for the remarkable achievement of waste reduction and recycling in a short period of time in the City of YOKOHAMA include

- (1) Restriction of general waste from business activities
- (2) Full implementation of “Containers and Packaging Law”
- (3) Promotion of recycling by City Staff and Private Groups

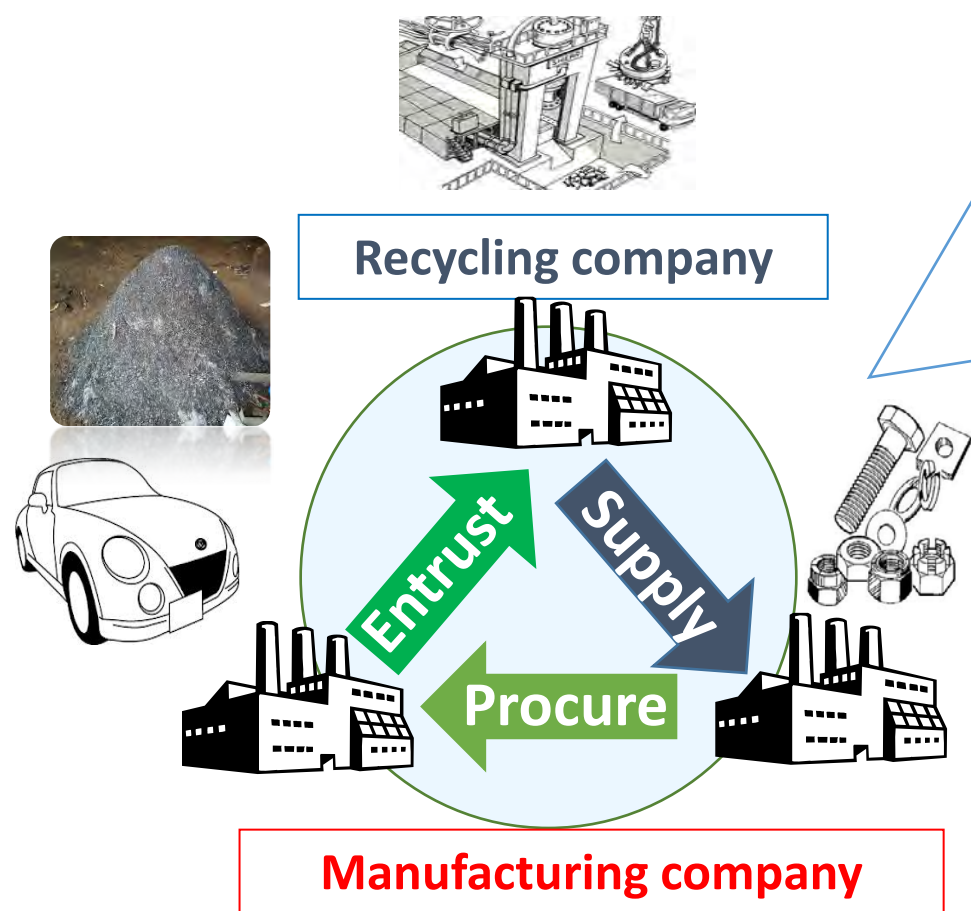
● That is to say that the City of Yokohama has **enforced the basic waste management policy**, rather than implementing innovative measures

# Resource circulation

① Used products



# Ideal Resource circulation in Industrial Park



## Condition 1

Manufacturing company and recycling company accumulate in industrial park

## Condition 2

Companies have a cycle of entrusting, supplying and procuring by network

***By-product=waste→resource  
=realize zero emission***

# Investigation area



## Yokohama city



Kanazawa  
Industrial  
Park  
(KIP)

**YOKOHAMA  
GREEN VALLEY AREA**



# Yokohama Green Valley ( YGV )

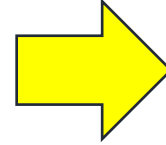
=Model Area which is chosen by Yokohama city to **realize sustainable low carbon society** (2010~)

-This project started in "Kanazawa-ward"-



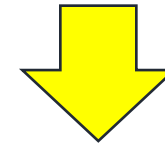


# Vision of YGV



**Kanazawa-Ward**


**Yokohama**



**Developing countries in Asia**

**Vision**  
*Realize*

*sustainable low  
carbon society*

**Goal** 

- ① reduce green-house gases
- ② stimulate the economy

**Target** 

2025 reduce **30%** of green-house gases (from 2004 levels)  
use 10 times more renewable energy

2050 reduce **80%** of green-house gases (from 2004 levels)

# 3 projects of YGV

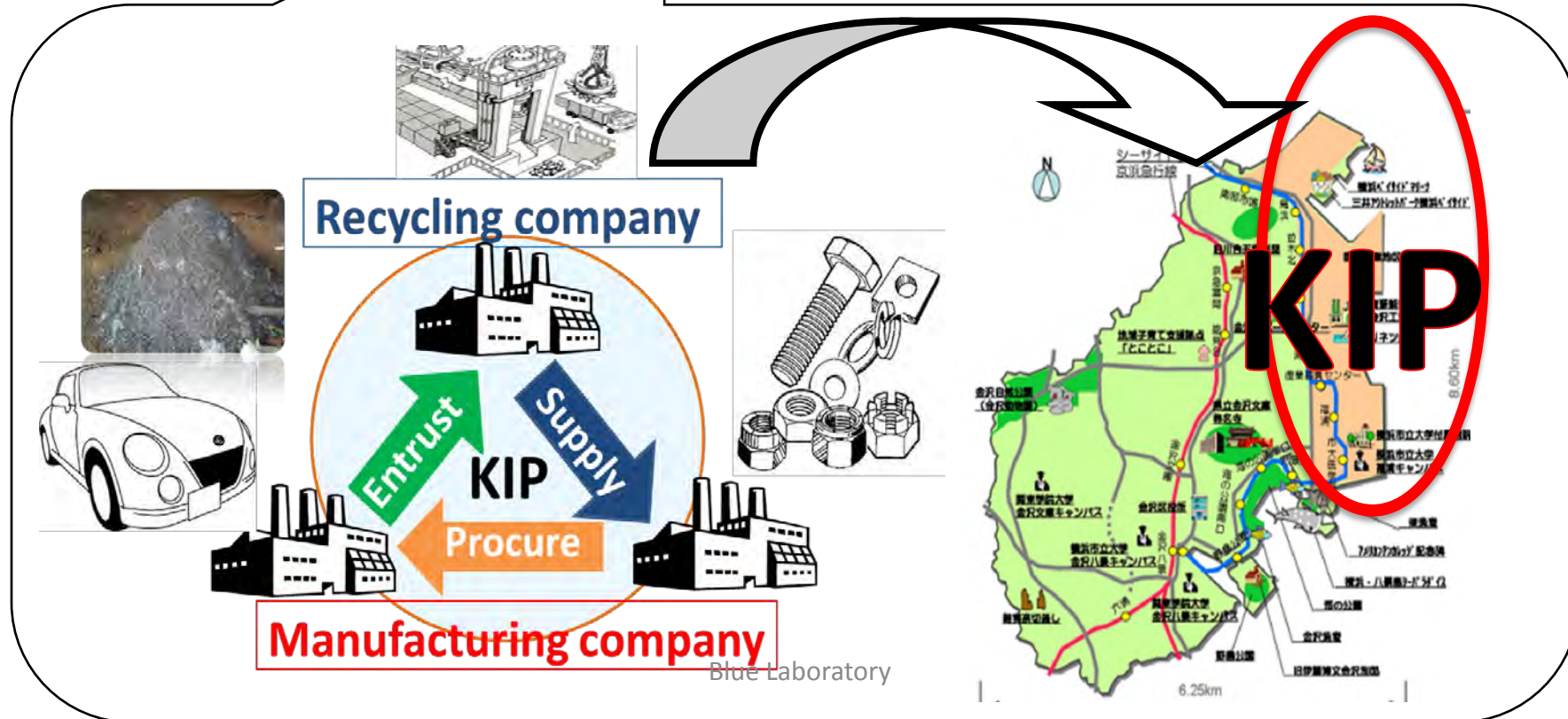
Construction of energy management systems



Developing environmental industry



Strengthening basis of environmental education





# Investigation of KIP





Manufacturing  
companies

## Condition 1

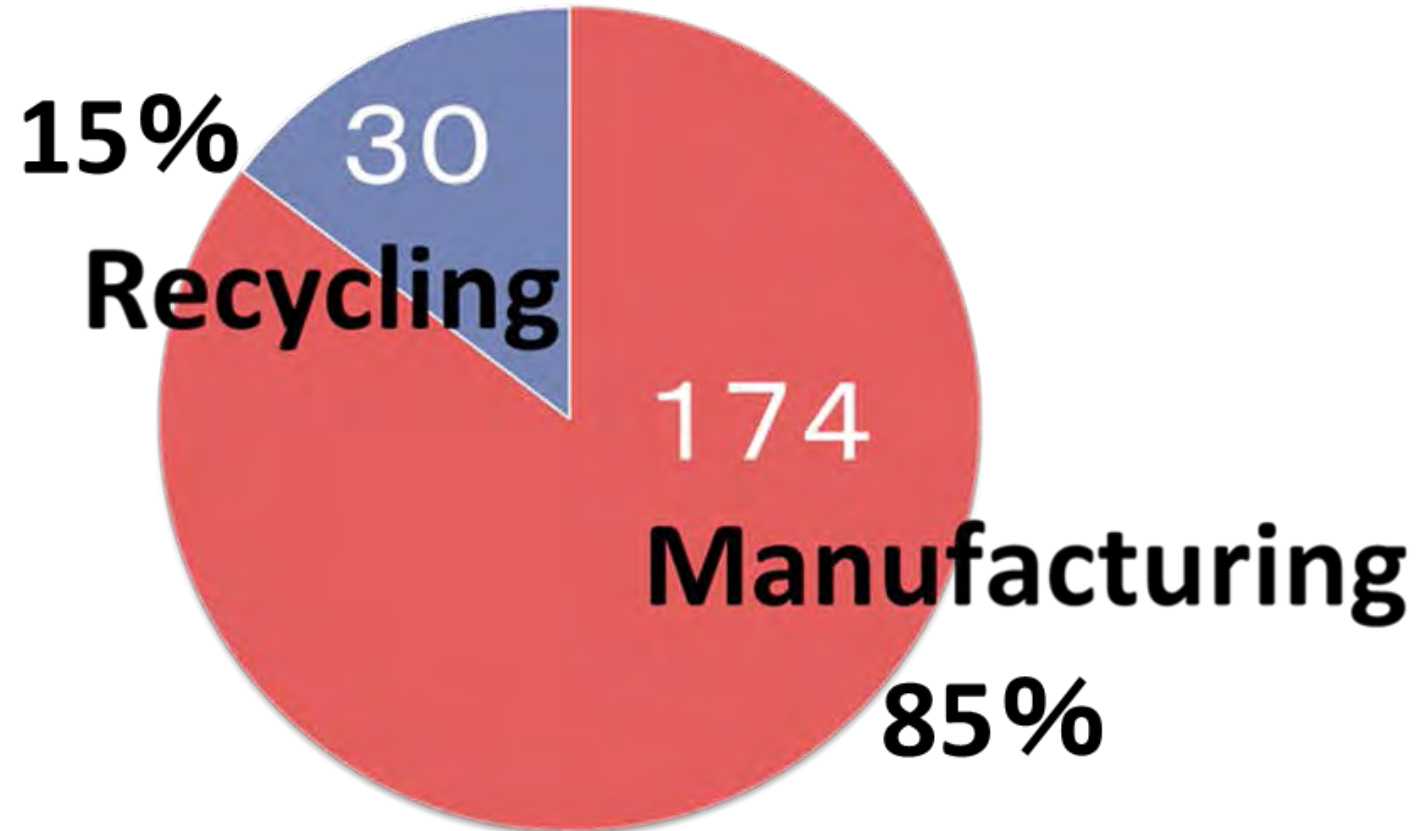
Manufacturing and recycling companies are  
accumulating

recycling  
companies

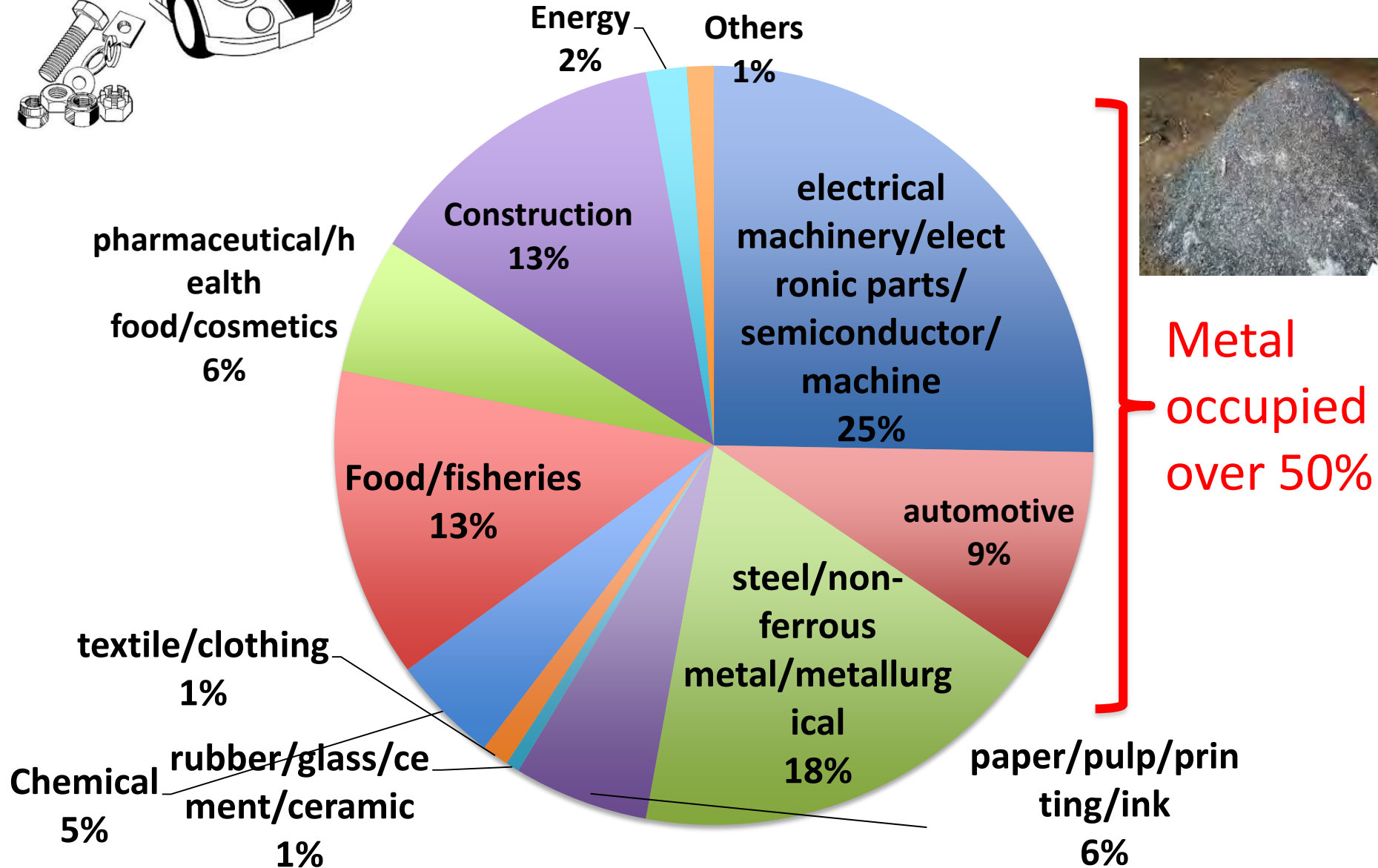
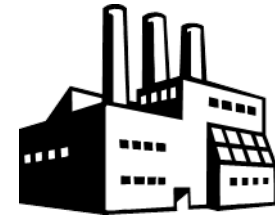
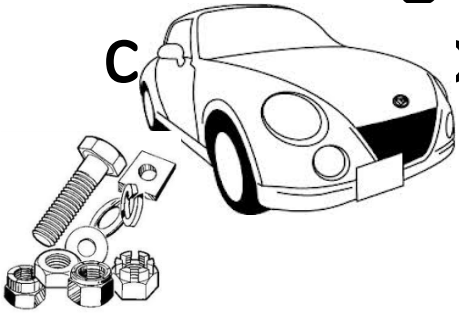


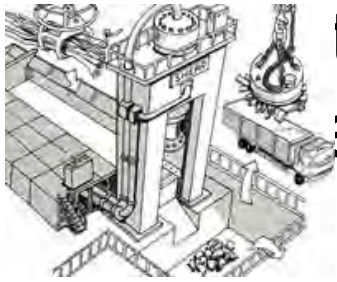
Blue Laboratory

# Number of manufacturing and recycling companies

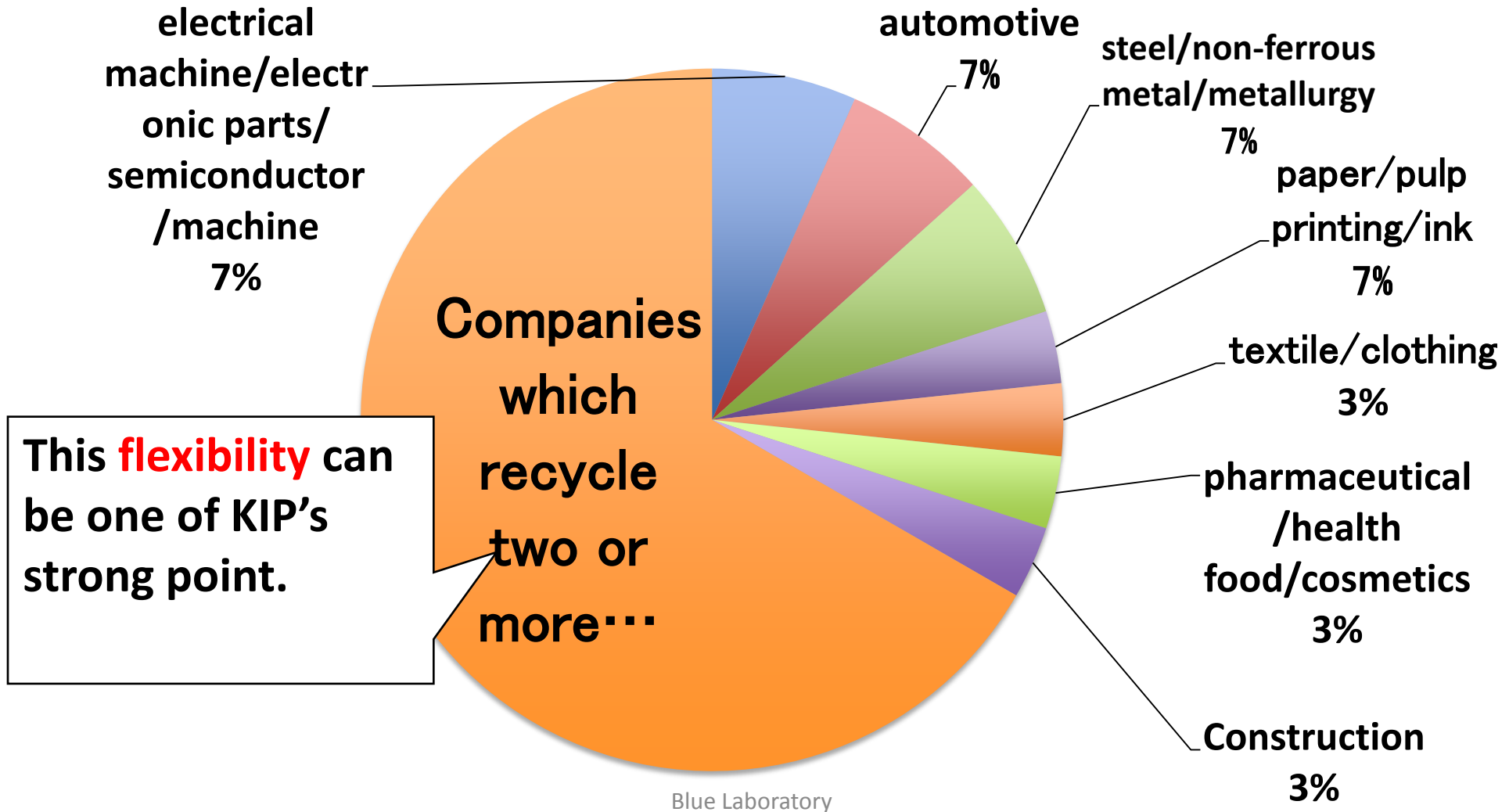
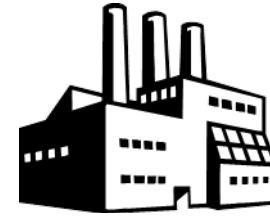


# Percentage of manufacturing companies by industry in KIP

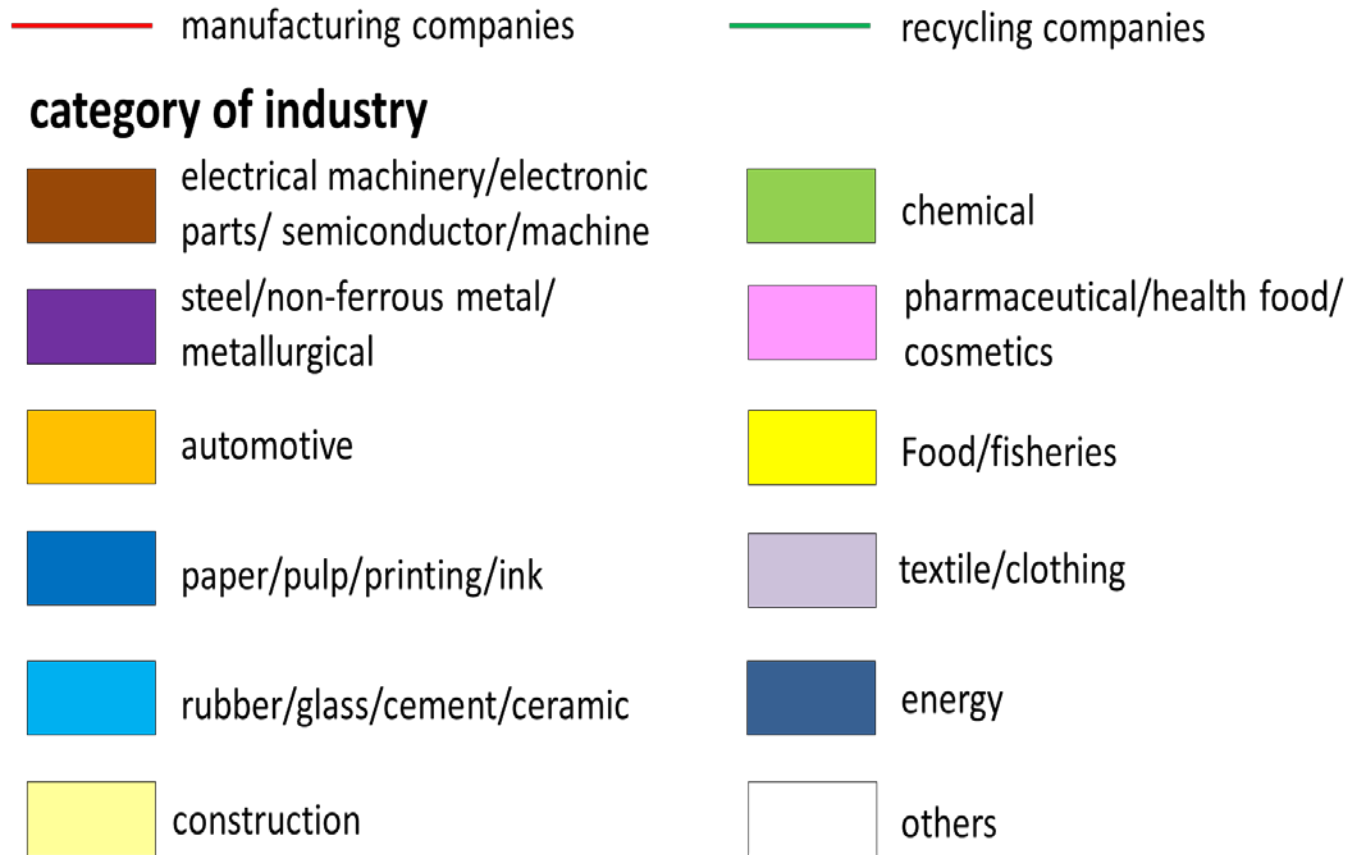




# Percentage of recycling companies categorized by industry



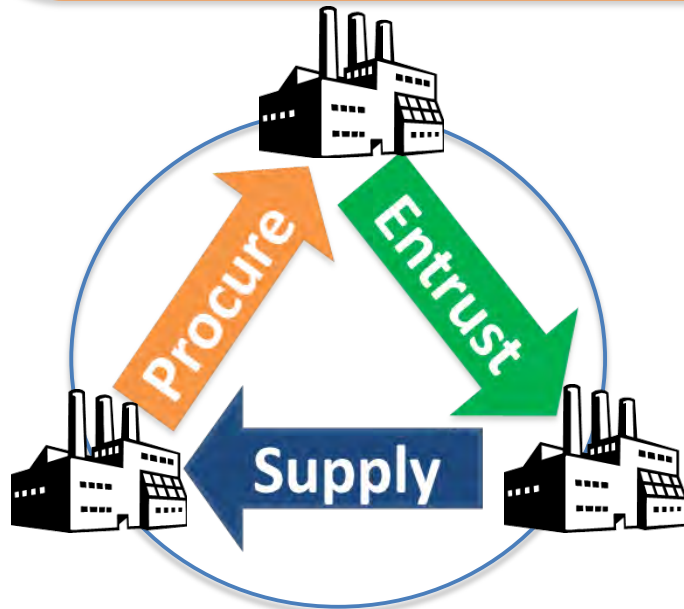
# Mapping of KIP



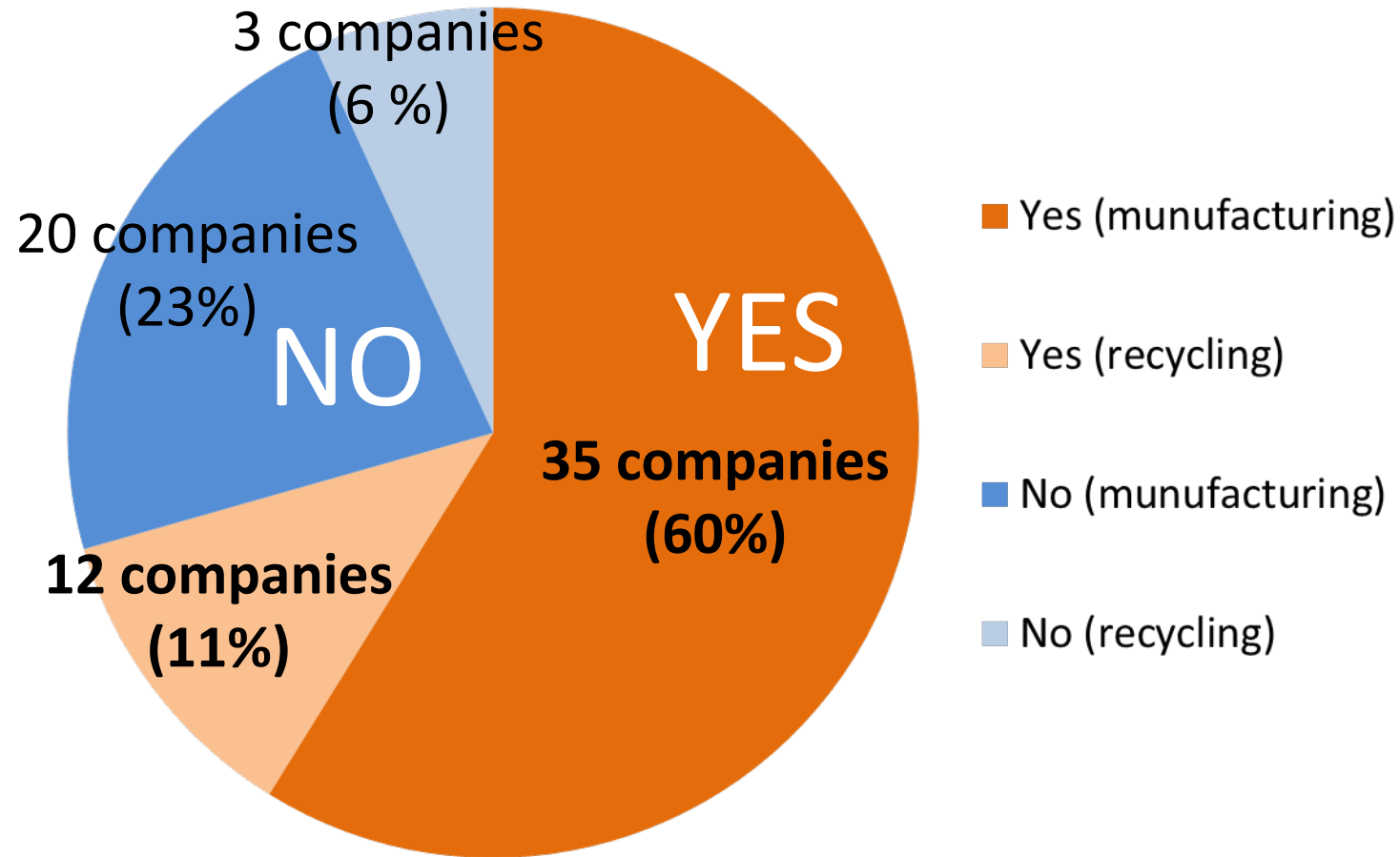
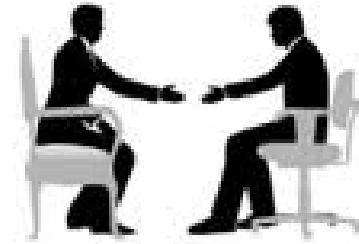


# Condition 2

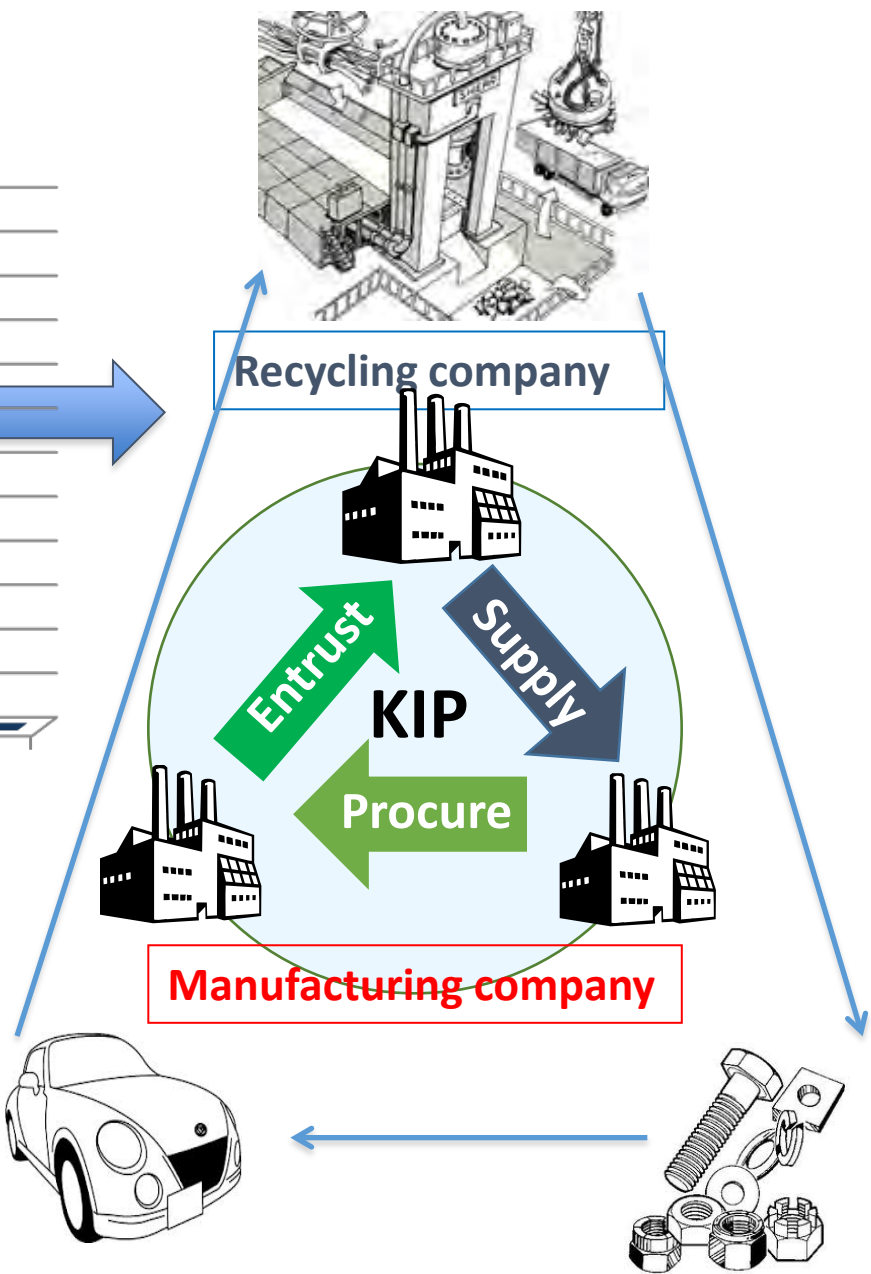
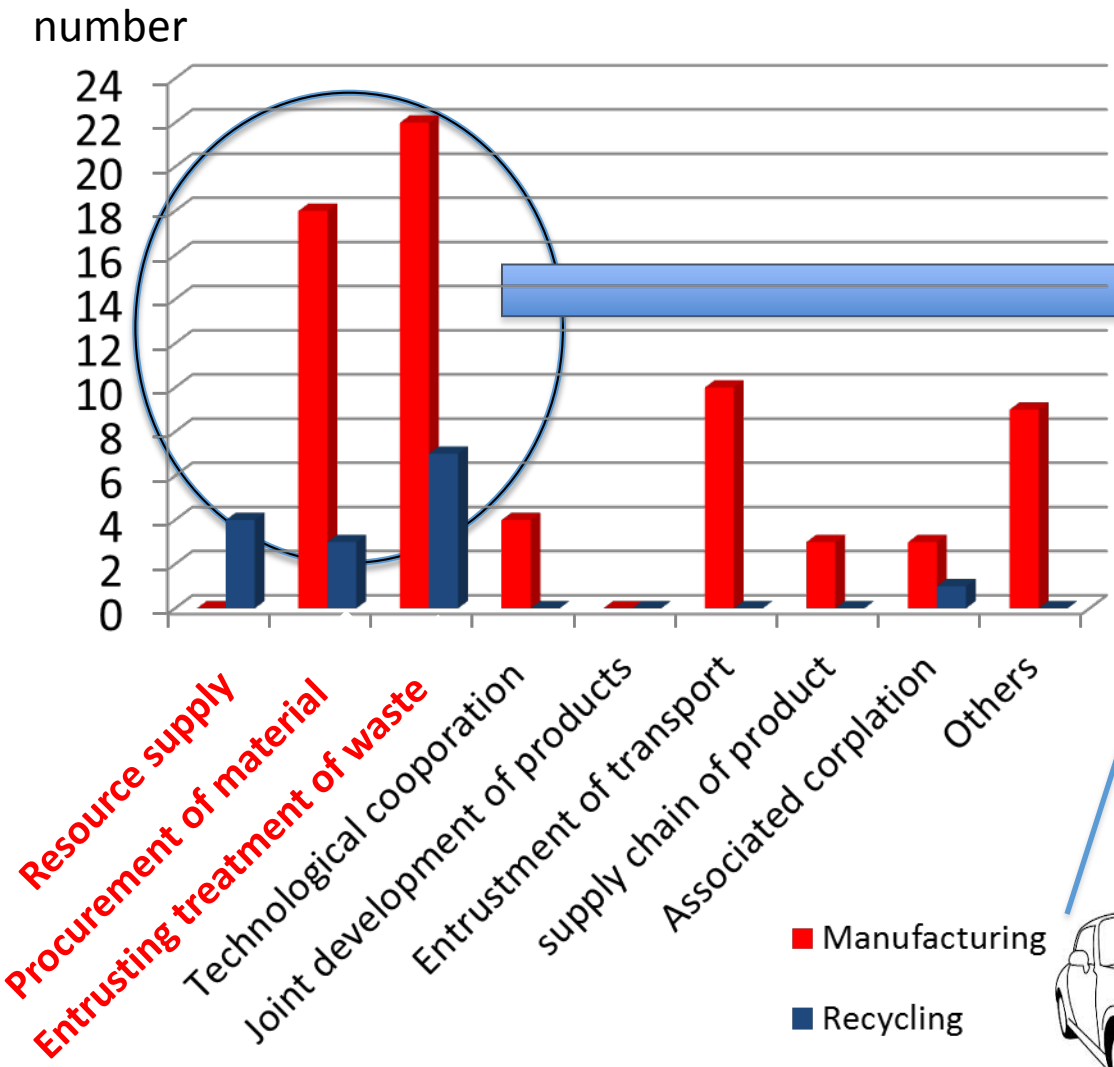
Companies have a cycle of entrusting, supplying and procuring by KIP network





# Do the companies have company cooperation in KIP?

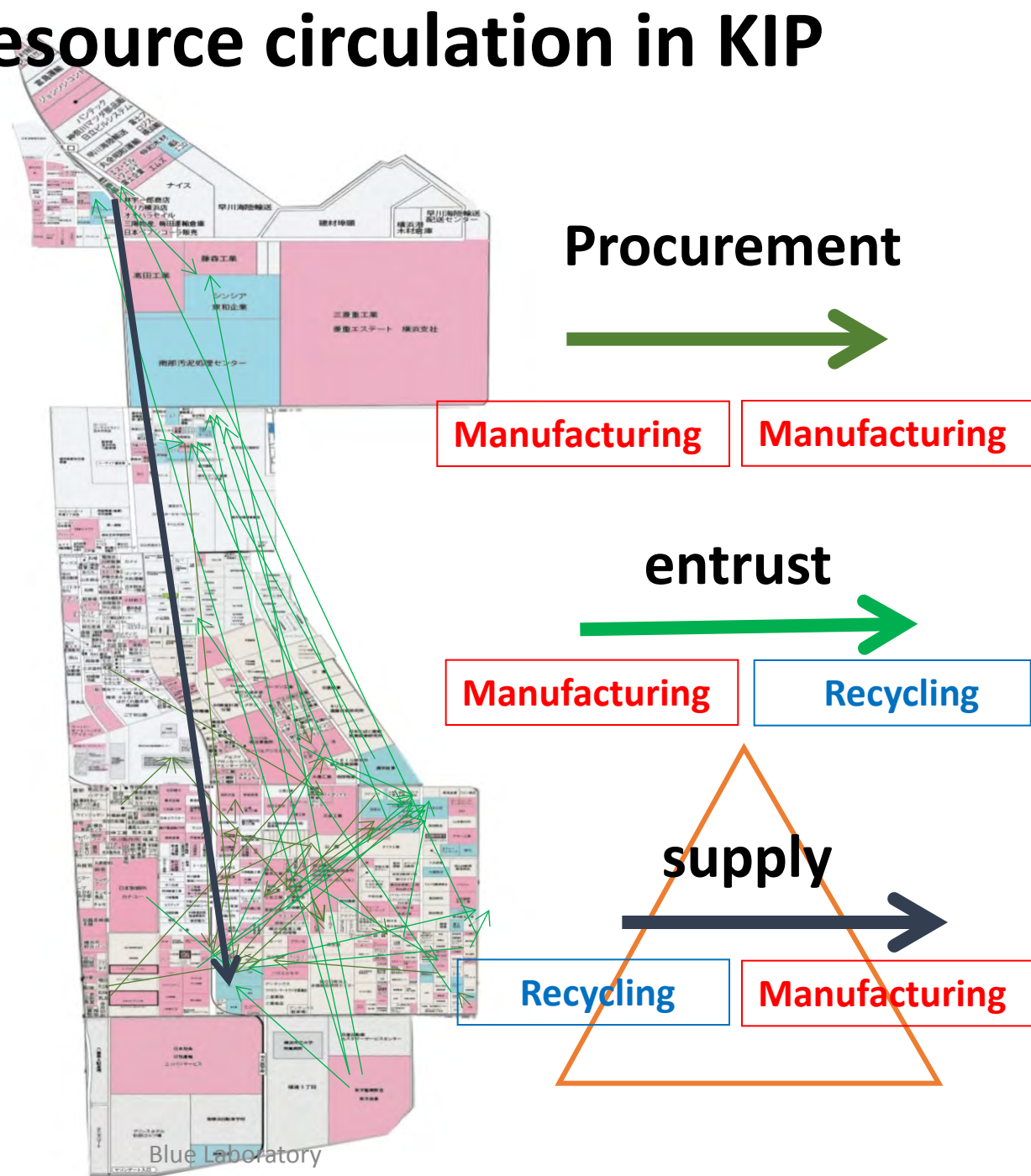


# How company cooperation in KIP does companies have ?



# Map showing resource circulation in KIP

-  manufacturing companies
-  recycling companies



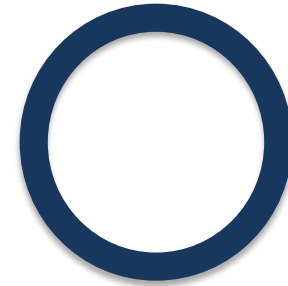
# Conclusion

# Conclusion

## Condition 1

“Manufacturing and recycling companies are accumulating”

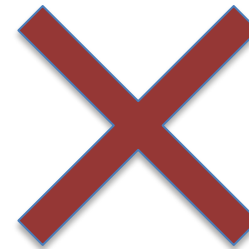
- Electric, automobile and steel companies
- Companies which can recycle various by-products
- KIP has a possibility of resource circulation



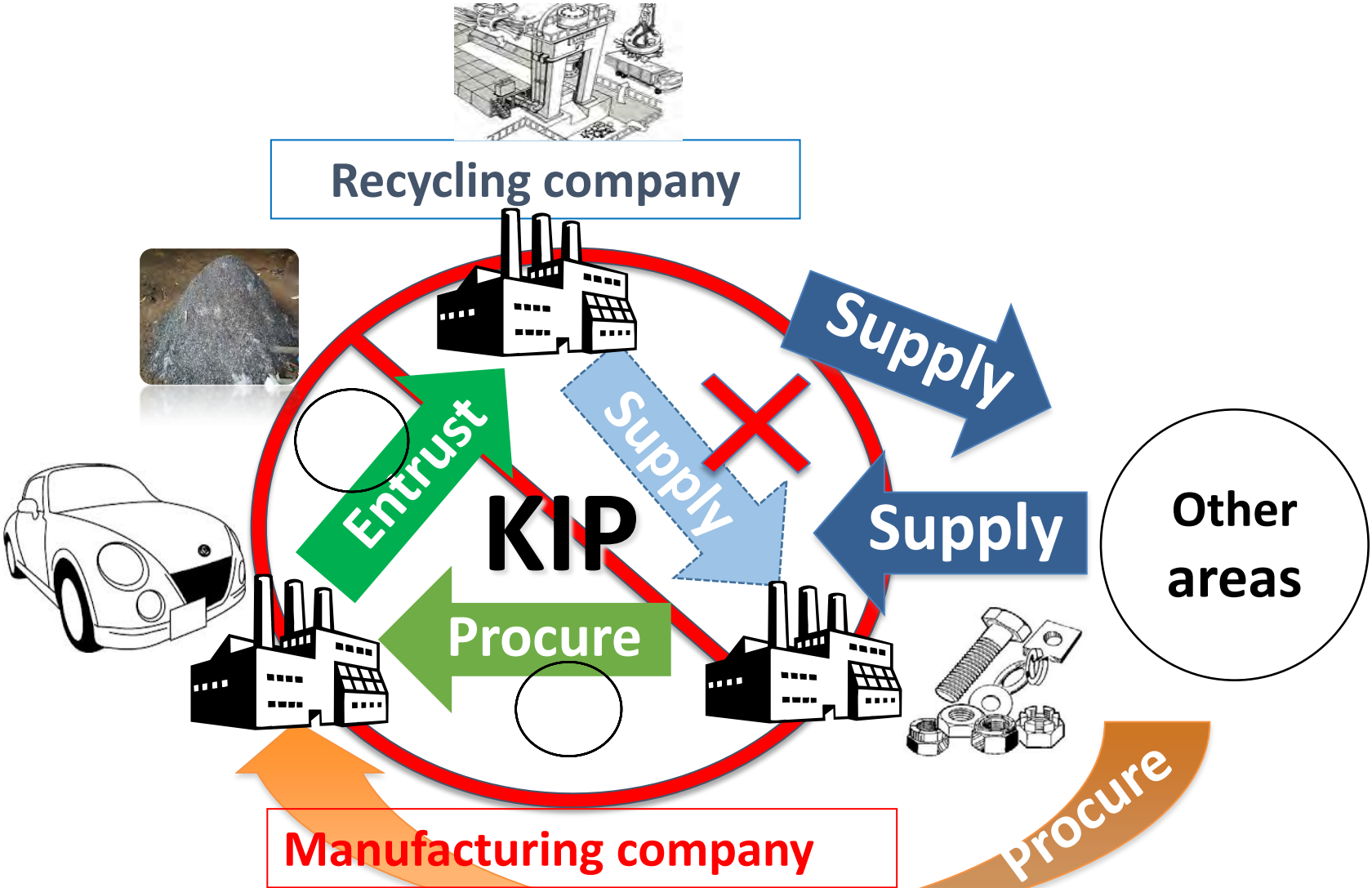
## Condition 2

“Companies have a cycle of entrusting, supplying and procuring by KIP network”

- supplying recycled materials is not working well



# Resource circulation in KIP



***=The cycle is not working well***

Thank you for your attention

