

●No.3 “Showcase of financial arrangement for smart city development”

Moderator: Dr. Bindu Nath Lohani (Special Advisor for Y-PORT Center / Distinguished Adjunct Faculty and Board of Trustee, Office of The President, Asian Institute of Technology)

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| 2 | Ministry of Finance of Japan | Director, Multilateral Development Banks Division, International Bureau | Mr. Akihiro Tsuchiya |
| 3 | Japan Bank for International Cooperation | Director, Division 2, Social Infrastructure Finance Department, Infrastructure and Environment Finance Group | Mr. Masashi Kishioka |
| 4 | Asian Development Bank | Principal Public-Private Partnership Specialist, Office of Public-Private Partnership | Mr. Amr J. Qari |
| 5 | Ministry of Foreign Affairs of Japan | Director for Development Assistance Policy Coordination Division, International Cooperation Bureau | Mr. Takao Imafuku |
| 6 | Ministry of Land, Infrastructure, Transport and Tourism, Japan | Director, International Affairs Office, City Bureau | Mr. Toru Ishikawa |
| 7 | Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development | Manager, Project Department | Mr. Tsutomu Sudo |

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| 9 | The Bank of Tokyo-Mitsubishi UFJ, Ltd. | Manager, Structured Finance Division, Project Finance Office, Asian Origination Team | Mr. Tomohide Oyama |
| 10 | Sumitomo Mitsui Banking Corporation | General Manager, Public & Financial Institutions Banking Dept. Wholesale banking Unit | Mr. Toyoomi Shimamura |
| 11 | Municipal Corporation of Greater Mumbai | Deputy Municipal Commissioner | Mr. Vasant Premanand Prabhu |
| 12 | Talisay City | Mayor | Atty. Eduardo Rivera Gullas |
| 13 | GreenPlace Assets | Chief Sustainability Officer, Executive Management | Mr. Stuart Robert Kay |
| 14 | Dhaka North | Municipal Solid Waste Management, Waste Management Department, Dhaka North City Corporation | Mr. Mohammad Abdur Razzak |
| 15 | Dhaka South | Councilor, Dhaka South City Corporation | Mr. Omar bin abdal Aziz |
| 16 | Panjim | Minister, Urban Development and Haj, Government of Karnataka | Mr. Rehman Roshan Baig |
| 17 | Hubli | Managing Director & CEO, Imagine Panaji Smart City Development Limited | Mr. Swayandipta Pal Chaudhuri |
| 18 | Quito | Advisor to the Mayor of Quito, Municipio de Quito | Mr. Sebastian Ordoñez Holguin |

The 5th Asia Smart City Conference

Government Strategy for Infrastructure Export



November 18, 2016

Cabinet Secretariat

Counselor

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 Framework to enhance Infrastructure Export and Investment

- “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)

Five Pillars of Infrastructure Export Strategies

(1) Promote public-private partnership in order to strengthen the global competitiveness of enterprises.

- Effective use of policy support tools
- Support for area-wide / broad-based activities
- Consistent support for activities from upstream to downstream
- Promotion of various and powerful top sales and strategic PR
- Strengthening of public-private partnership, etc.

(2) Exploitation / development of enterprises, local governments, and human resources who will lead overseas deployment of infrastructure.

(3) Obtaining international standards using advanced technologies, knowledge, etc.

(4) Support for entry into the new frontier infrastructure field

(5) Promotion of securing stable and low-cost supply of energy mineral resources from overseas

Various Support Tools for Smart City Development

Support for M/P and F/S projects

Utilization of technical cooperation and grant aid

Utilization of yen loans

Support for strengthening of public finance

- ◆ Support formulation of a comprehensive master plan necessary for regional development, institutional framework, etc.
- ◆ Support F/S for large-scale infrastructure projects, etc.

- ◆ Accelerate the procedure of yen loan
- ◆ Introduce yen loan to be repaid in foreign currency
- ◆ Yen loan for sub-sovereigns
- ◆ Introduce US\$-denominated yen loan, etc.

- ◆ Expand the target of overseas investment and financing
- ◆ Strengthen JBIC function
- ◆ Expand the international trade insurance system
- ◆ Establishment of JOIN and JICT, etc.

Initiatives to enhance Infrastructure Export and Investment

“Partnership for Quality Infrastructure”

Promote quality infrastructure investment in Asia in collaboration with other countries and international organizations through "Partnership for Quality Infrastructure" (PQI) .

(Announced by Prime Minister Abe in May 2015, follow-up measures of PQI announced in Nov. 2015)

“Expanded Partnership for Quality Infrastructure”

Increase the supply of financial resources towards infrastructure projects including natural resources across the world, aiming to achieve approximately \$200 billion for the next five years.

(Announced by Prime Minister Abe in May 2016 which was directed toward the G7 Ise-shima Summit meeting)

⇒See Reference for Detail

1. Increased Supply of Financial Resources towards Infrastructure Projects across the World

- Provision of financing of approximately USD 200 billion as the target for the next five years to infrastructure projects across the world together with other measures.
 - i. Expansion of the targeted area from Asia to the whole world (e.g. Russia, Africa)
 - ii. Expansion of the scope to a wide range of infrastructure that includes natural resources, energy, etc. (e.g. oil, gas, hospitals)
 - iii. Japan-wide efforts by relevant organizations (NEXI, JOIN (transport and urban development), JICT (telecommunications, broadcasting, and postal services), and JOGMEC (oil, gas, metallic minerals) in addition to JICA and JBIC)

2. Further Improvement of Measures for Promotion of Quality Infrastructure Investment

(1) Further Acceleration of Japan's Assistance

- Further Acceleration of Japanese ODA Loans
- Streamlining of the period between the initiation of feasibility studies (F/S) and the commencement of construction work to 1.5 years at fastest
- Increased visibility of the approximate term necessary for respective procedures

(2) Encouragement of Investment and Financing by Private Companies

- Japan International Cooperation Agency (JICA): Flexible operation and review of JICA's Private-Sector Investment Finance / Consideration of the possibility of Euro-denominated Private-Sector Investment Finance
- Nippon Export and Investment Insurance (NEXI): Expansion of the functions of NEXI (e.g. Increase of the maximum coverage on country risk to 100% for overseas investment insurance and export credit insurance)
- Japan Overseas Infrastructure Investment Corporation for Transport and Urban Development (JOIN) and the Fund Corporation for the Overseas Development of Japan's ICT and Postal Services (JICT): Relaxation of the investment standards and operation
- Japan Bank for International Cooperation (JBIC): Flexible application of the rule of priority redemption to private banks in JBIC's co-financing projects

(3) Others

- Assistance for geothermal power development in developing countries
- Assistance to F/S for large-scale infrastructure projects
- Improvement of the system and operation of Japan's Grant Aid
- Further enhancement of assistance for human resources development

Introduction of Japan Bank for International Cooperation

5th Asia Smart City Conference

18 Nov 2016

Japan Bank for International Cooperation (JBIC)



Wholly owned by
Japanese
government



Capital*
JPY 1.39 trillion



Outstanding*
Loans & Investment: JPY 13.84
trillion
Guarantees : JPY 2.46 trillion



16 Overseas
Offices

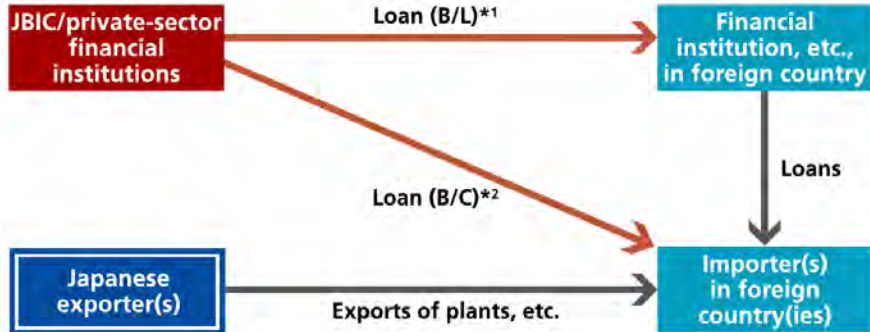
*As on March' 31st 2016

Missions of JBIC

- Promoting the overseas development and securement of **resources** which are important for Japan
- Maintaining and improving the **international competitiveness of Japanese industries**
- Promoting the overseas business having the purpose of **preserving the global environment**, such as preventing global warming
- Preventing disruptions to international financial order or taking appropriate measures with respect to damages caused by such disruption



Export Loan

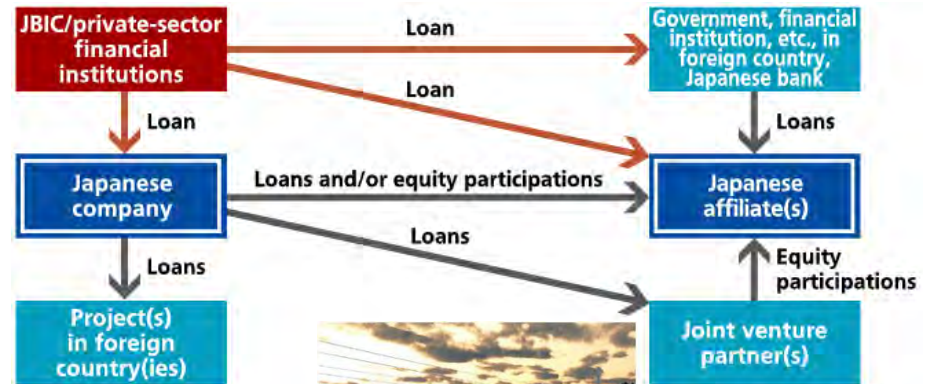


*1. Loan to foreign financial institutions (Bank-to-Bank Loan or "B/L").
*2. Loan to foreign importers (Buyer's Credit or "B/C").



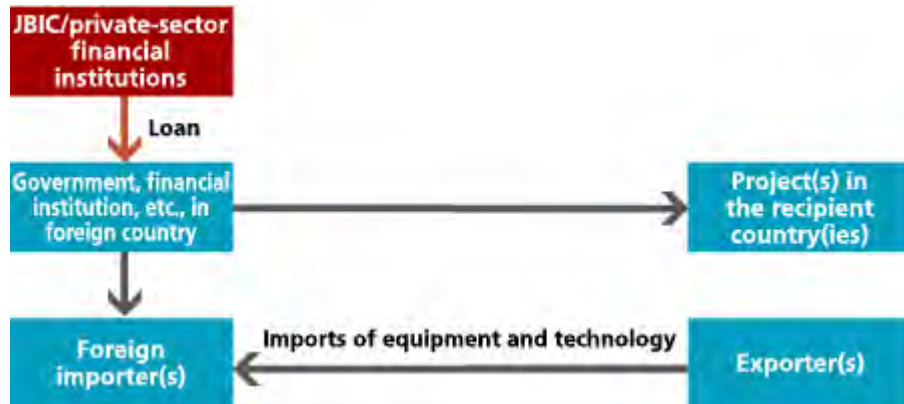
Source: Toshiba

Overseas Investment Loan



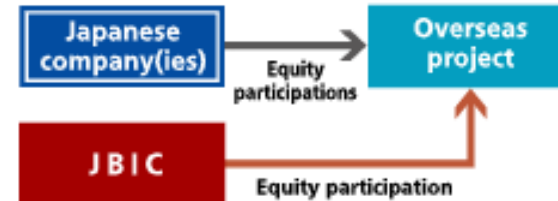
Source: Hitachi

Untied Loans

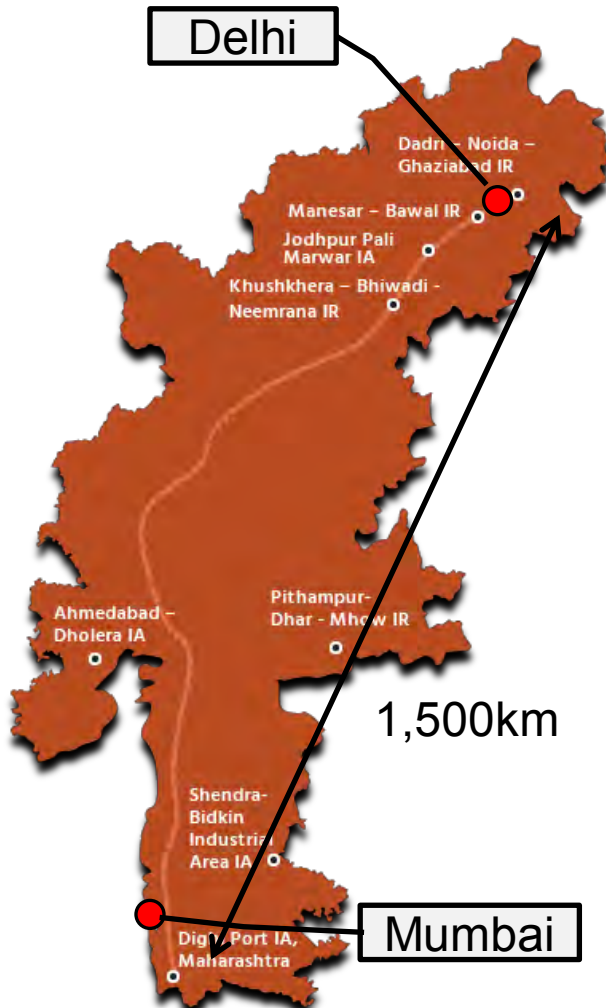


Equity Investment

example



Involvement from early stage of project planning



DMIC

Japan-India corridor development project between Delhi and Mumbai along the approx. 1,500km freight railway

DMIC Development Corporation

| | | |
|-------------|------------------------------------|------------------------|
| JBIC 26% | INDIA Gov. Institution (25%) | Gov. of India (49%) |
|-------------|------------------------------------|------------------------|

DMICDC Main Business Lines

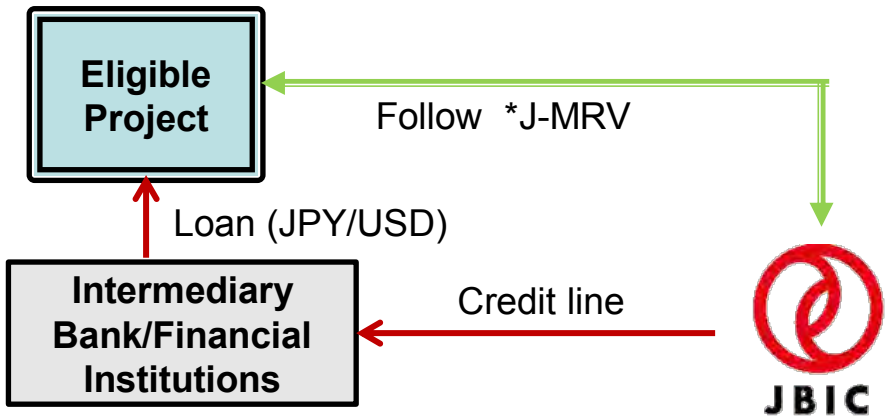
- Preparation of Master Plan/Development Plan.
- Execution of Feasibility Study.
- Assistance to obtain approval from central/state government.
- Assistance to obtain approval based on environmental regulations.
- Assistance to projects related staff.

GREEN (Global action for Reconciling Economic growth and Environmental preservation)
- Supporting Renewable Energy and Energy Efficiency Projects through bank loan



Example of projects

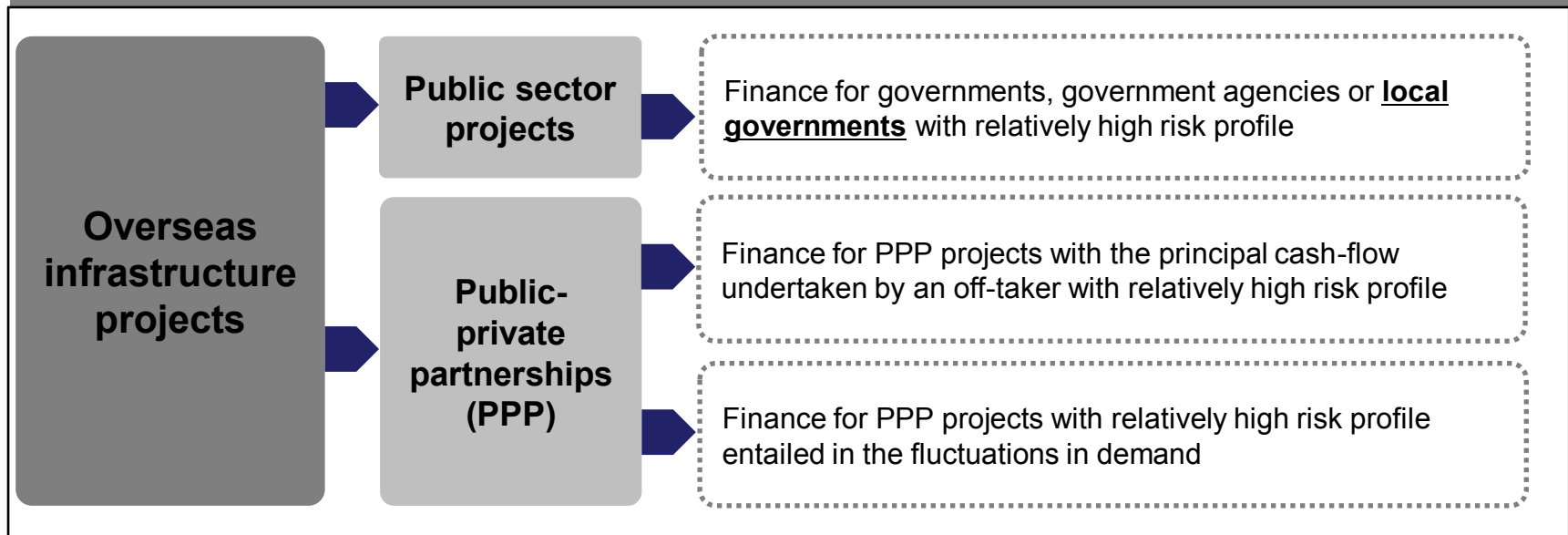
- Wind power generation
- Solar power generation
- Biomass power generation
- Thermal power plant (high efficiency)



*J-MRV Guidelines: Guidelines for Measurement, Reporting and Verification of greenhouse gas (GHG) Emission Reductions

- ❑ Special Operations will cover various infrastructure projects with relatively high risk profile when JBIC, through holding close dialogue with host-country governments, considers it capable of undertaking such risks in a controlled manner with reference to its expertise and to its past experiences.
- ❑ For the successful implementation of Special Operations, JBIC takes into account the credit standards of other financial institutions/commercial banks regarding the project, requires appropriate risk sharing among the parties involved and tries to mobilize private funds adequately.

Examples of Projects under Special Operations (see NB)



(NB) The classification into either Ordinary Operations or Special Operations is determined at the point when JBIC approves each individual project in light of relevant regulations.

5th Asia Smart Cities Conference

Thematic Meeting #3

Showcase of Financial Arrangement For Smart City Development

Presented by: Amr J. Qari

November 18, 2016



Private Sector Considerations Driving Decision to Bid in Emerging PPP markets

Primary Considerations

Certainty that government will go through with the procurement of the project

Assumed chances of success

Project Pipeline

Risk Allocation/Bankability

Enforceability of contracts

Transparent procurement

Other Considerations

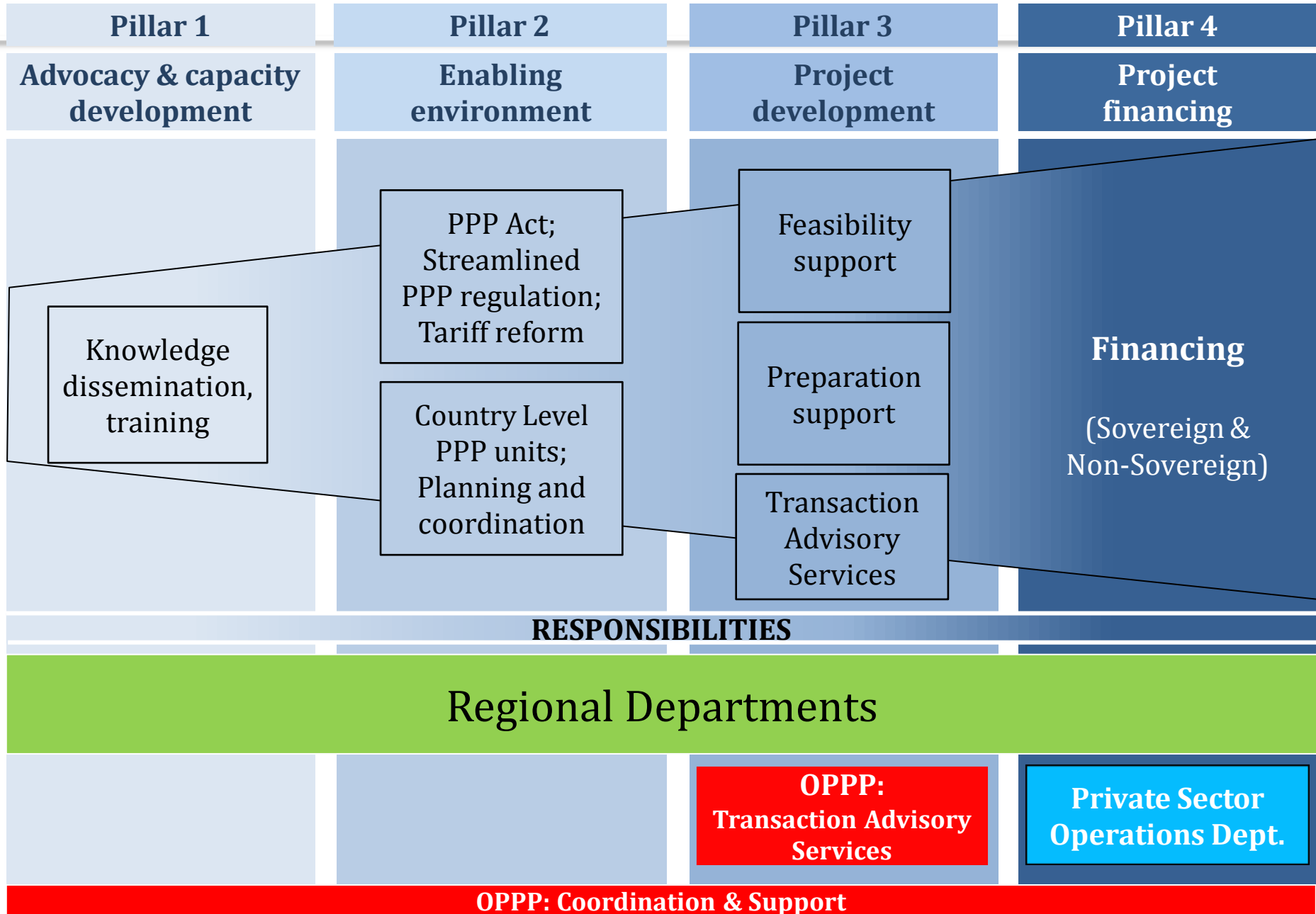
Barriers to foreign investors

Certainty of procurement processes in terms of meeting procurement milestones

Macroeconomic/
political/
governance risk

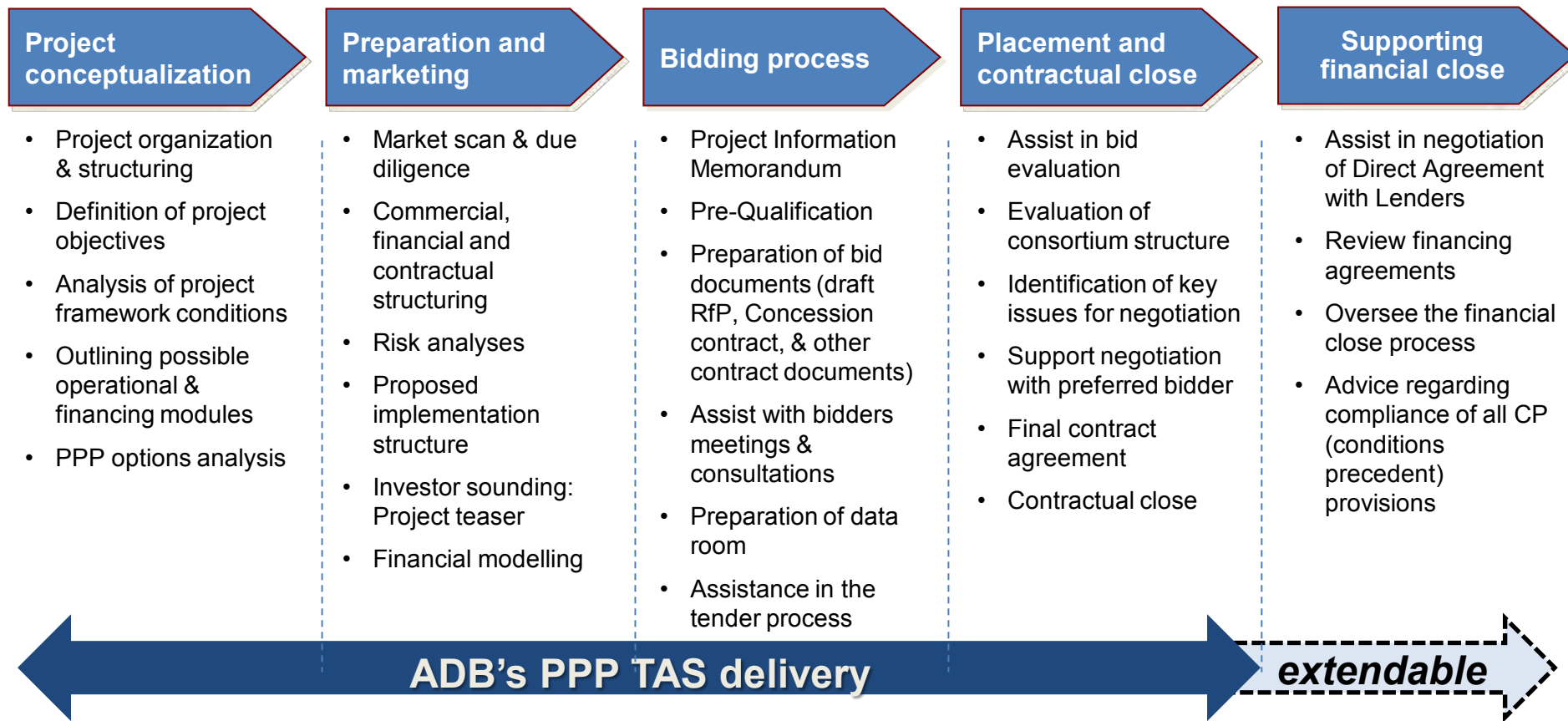
Level of bid costs

ADB's holistic approach to supporting PPP development



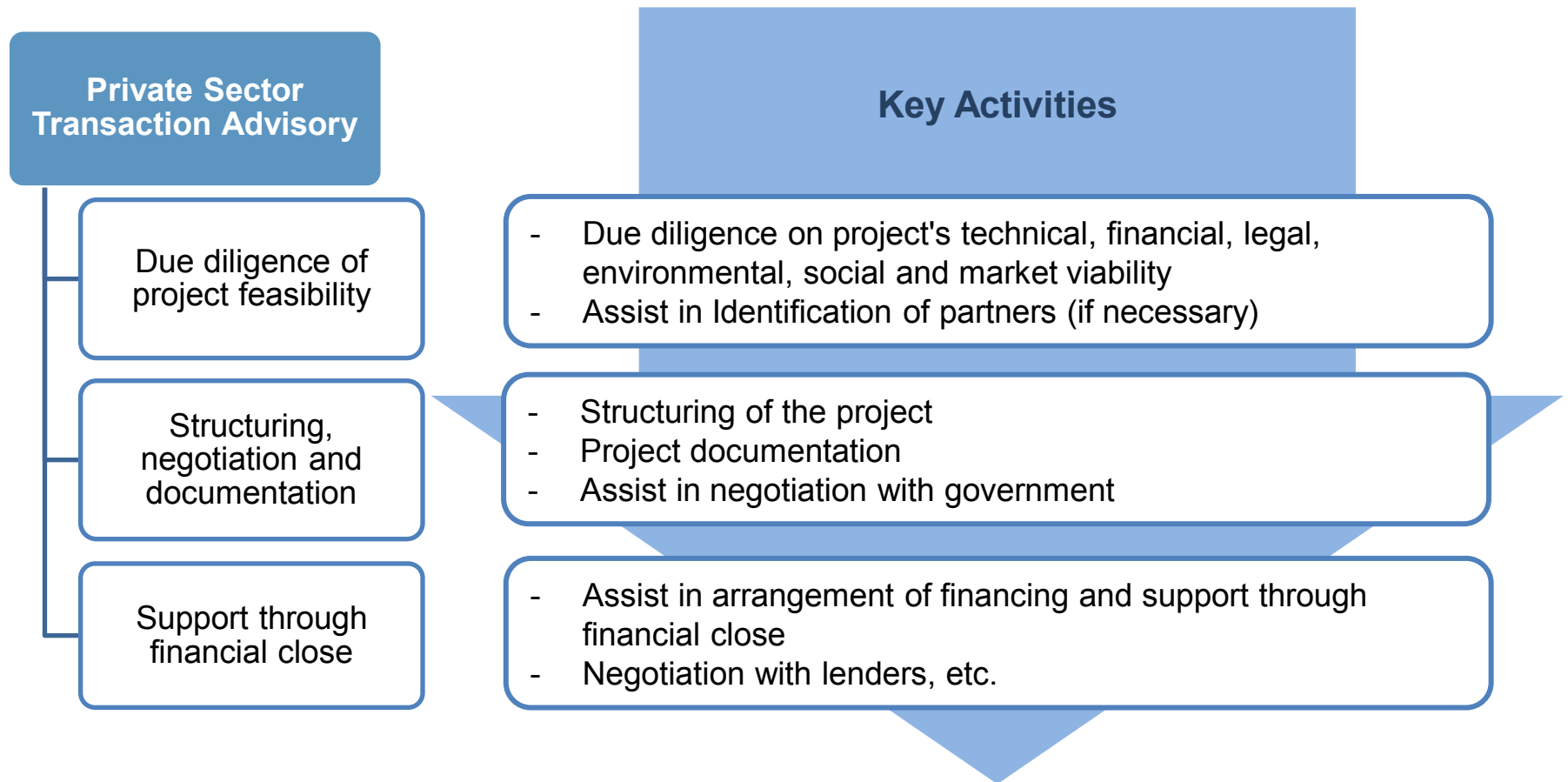
ADB's Public Sector Transaction Advisory Services

- Target clients are public sector entities in ADB's Developing Member Countries
- ADB assists clients during the **whole project cycle**, from concept to developing a bankable structure and until a private investor is selected



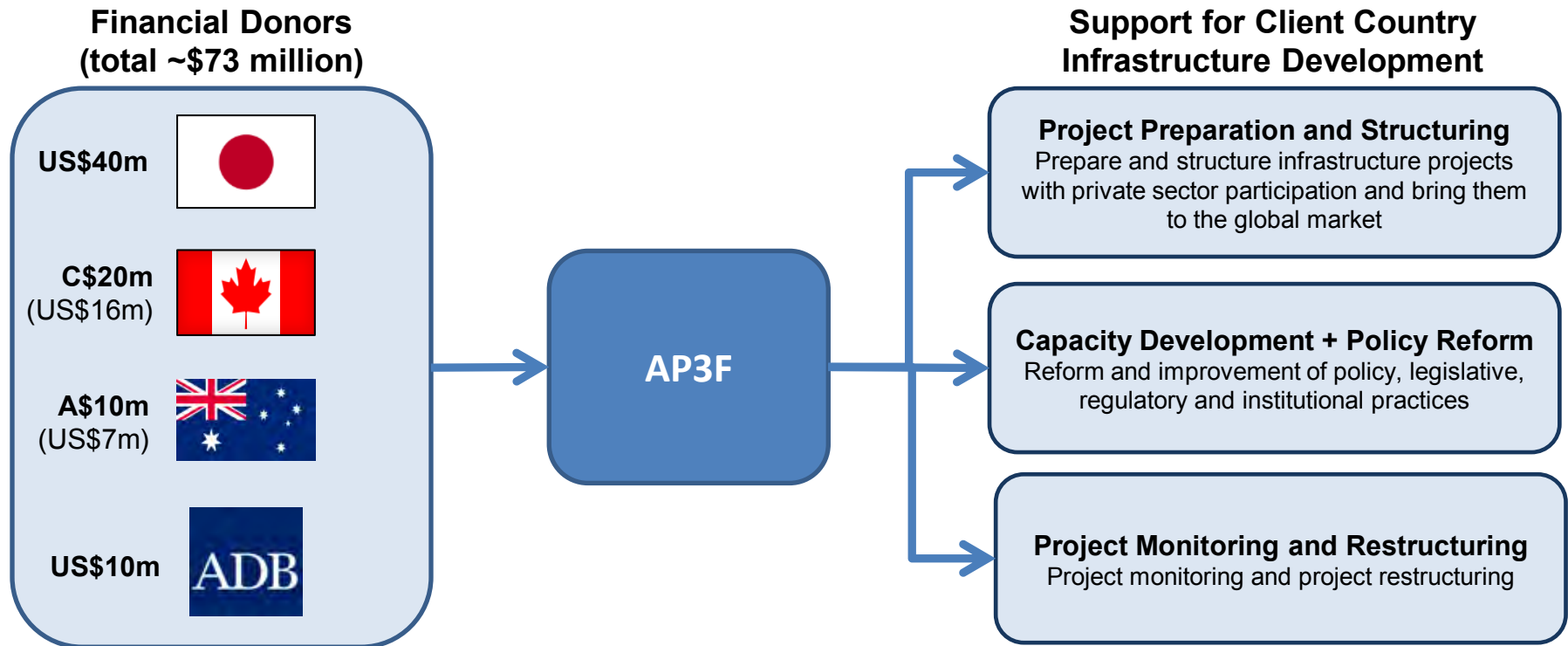
ADB's Private Sector Transaction Advisory Services

Goal is to assist clients in achieving a bankable transaction and raising financing



Asia Pacific Project Preparation Facility (AP3F)

AP3F's objective is to assist Developing Member Country governments and their public sector agencies in preparing and structuring infrastructure projects with private sector participation



AP3F's Eligibility Criteria and Priorities

All ADB developing member countries' public sector agencies may apply including central and local governments, as well as government agencies (including sub-sovereign and government-owned entities)

Target sectors include, but are not limited to:

- Energy (such as power generation, transmission and distribution)
- Transport (such as ports, airports, railways and roads)
- Urban development (such as water and waste management)
- Social infrastructure (such as healthcare and education)

Applications are prioritized in accordance with the following criteria:

- Demonstrates climate resilience through quality infrastructure
- Positively impact poverty reduction
- Enhances regional connectivity and economic integration
- Involves new investments
- Is in line with priorities by ADB's developing member countries (and their Country Partnership Strategy)
- Provides opportunity for best practice in governance, procurement and/or contracting
- Is first in kind in a given sector or country
- Projects structured as concessions should also demonstrate:
 - Value for Money and potential for replication; and
 - Commercial viability and probability of reaching financial close.

Japan's ODA measures for financing Smart-city development in ASIA

Takao Imafuku

Director,

Development Assistance Policy Coordination Division,

International Cooperation Bureau,

Ministry of Foreign Affairs of Japan

Nov. 18th, 2016

Japan's initiatives to promote Smart City Development

Japan promotes Quality Infrastructure Investment

“Partnership for Quality Infrastructure” (2015.5)

Japan will provide approx. USD 110 billion for “Quality Infrastructure Investment” in Asia from 2016 to 2020.



“Expanded Partnership for Quality Infrastructure” (2016.5)

Japan will provide approx. USD 200 billion to infrastructure projects across the world from 2017 to 2021.

[Quality Infrastructure Investment]

“G7 Ise-shima Principles for Promoting Quality Infrastructure Investment” indicate elements of quality infrastructure investment such as:

- Economic efficiency in view of life-cycle cost
- Safety and Resilience
- Job creation and capacity building
- Addressing social and environmental impacts
- Alignment with economic and development strategies



Smart City Development is an important part of Quality Infrastructure Investment.

Japan's ODA schemes

1. ODA based on requests from central government of recipient countries
 - Loan Assistance (ODA Loans, Private-Sector Investment Finance)
 - Grant Aid
 - Technical Cooperation (Dispatch of experts, Acceptance of trainee)

2. ODA which foreign local governments can directly apply for
 - Grant Assistance for Grass-Roots Human Security Projects (GGP)
(Apply to Japanese Embassy or Consulate-General)

3. ODA utilizing know-how of Japanese local governments
 - JICA Partnership Program (Japanese local governments apply to JICA)
 - Grant Aid for PPP type Projects
 - GGP

Case: Water Supply Improvement in Yangon, Myanmar

Background

- Yangon City provided water for only 38 % of the population.
 - Yangon City failed in collecting water fee thoroughly.
 - Equipment failures frequently occurred.
 - Japan has realized more than 95 % of water coverage.
- With this technology, Japan has been supporting water supply in Yangon City through ODA.



Greater Yangon Water Supply Improvement Project (2014-)

*ODA Loans

Japan supports replacement and improvement of aging water supply facilities.



The Project for Reduction of Non-Revenue Water in Mayangone Township in Yangon City(2015-)

*Pilot Projects by GGP

*Grant Aid for PPP type Projects

- Japan supports operation and maintenance of the water supply facility in Yangon.
- Japan Consortium established between a Japanese private Company and Administrative agency of Bureau of Waterworks, Tokyo Metropolitan Government, carries out the project.



The Project for Improvement of Water Supply Management of Yangon City Development Committee (2015-2020)

* Technical Cooperation

Japan dispatched experts and conducts technical cooperation project for improvement in the quality of water supply.

Other Projects which Contributes to Smart City Development

■ ODA Loan :

Delhi Mass Rapid Transport System Project (642.6 billion JPY)



■ Grant Aid :

Project for Development of Traffic Management System
in Phnom Penh(1.727 billion JPY)



■ Technical cooperation:

Urban Transport System Development Project for Colombo
Metropolitan Regions and Suburbs.





JOIN - Japan Overseas Infrastructure Investment
Corporation for Transport & Urban Development -

November 2016

1. What is JOIN?

We are the *first* and *only* government-private sponsored fund in Japan that specializes in overseas infrastructure investment.

- We support your country on building safe and reliable infrastructure through PPP arrangements.
- We work in collaboration with Japanese companies, banks, institutions (JICA, JBIC, NEXI, etc.). & government.



2. What does JOIN do?

JOIN is a “*HANDS-ON*” fund: we not only provide funding but we also bring Japanese expertise and high-end technology solutions to infrastructure projects worldwide.

Equity Investment jointly by

JOIN

&

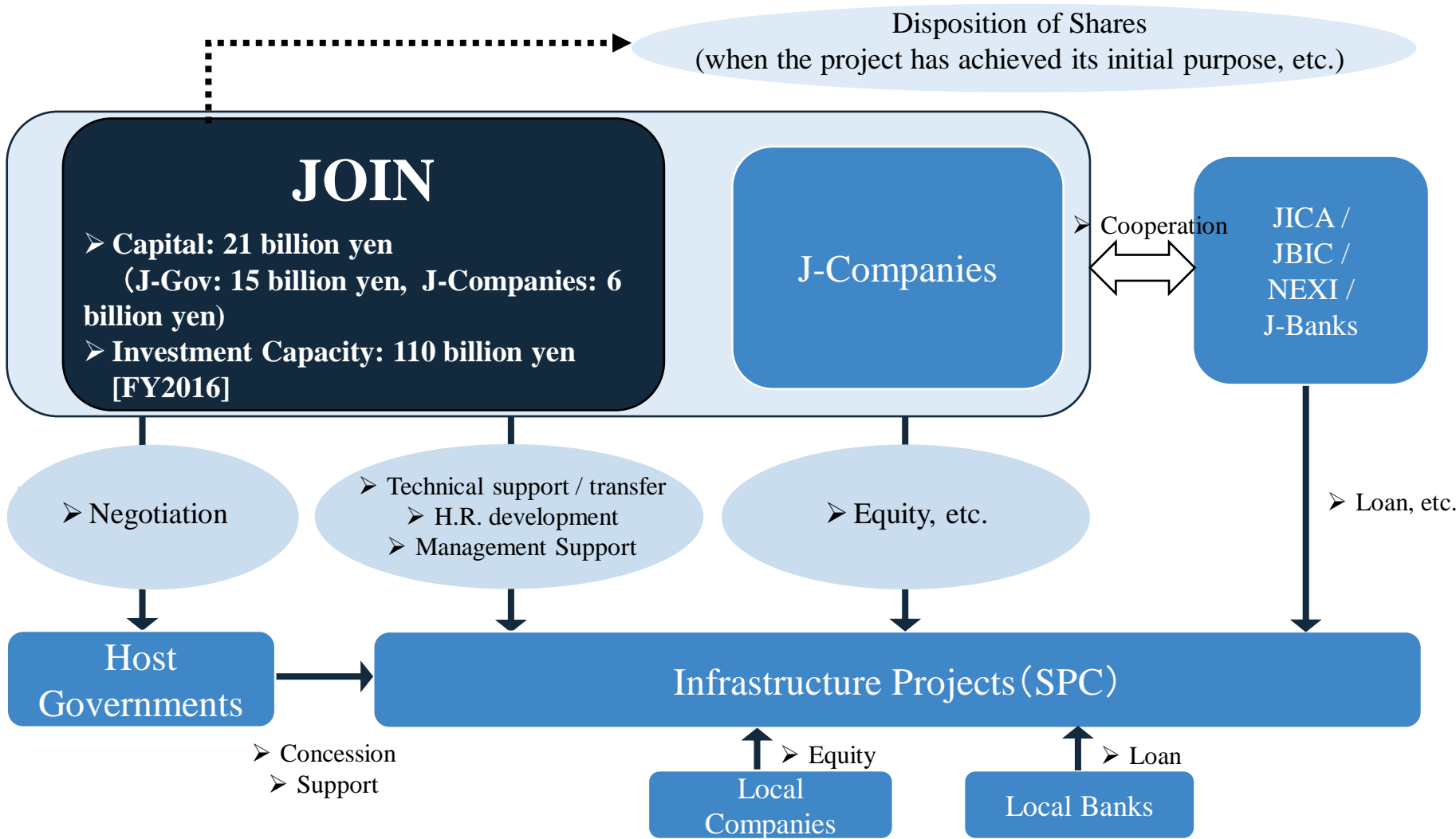
Private
Companies

*Spreading Safe and Reliable
Infrastructure Around the World*

Technology Transfer

Human Resource
Development

3. How does JOIN function?



Japan's contribution to infrastructure projects in overseas countries will lead to mutual economic growth

4. Our Focus

High-speed railways



Urban railways / transport system



Toll Roads



Ships / Offshore units



Port terminals



Airport terminals



Urban development



Logistics



5. Credentials

Vietnam

KYOEI STEEL  株式会社辰巳商會
TATSUMI SHOKAI CO.,LTD.

Thi Vai International Port's Terminal Project

JPY1.2bn equity
JPY0.85 bn guarantee

Acted as Sponsor and Guarantor

Oct 2015 

USA

 **TEXAS CENTRAL PARTNERS**
MEMBER'S ONLY TRAIN

Texas High-Speed Railway Project

JPY4.9bn equity

Acted as Sponsor

Nov 2015 

Brazil

 **MITSUI & CO.**  **JR-WEST**

Urban Passenger Railway Project

JPY5.6 bn equity

Acted as Sponsor

Dec 2015 


Myanmar

 **Mitsubishi Corporation**
 **MITSUBISHI ESTATE**

Landmark Project in Central Yangon

JPY4.5bn equity

Acted as Sponsor

Jul 2016 

Indonesia

 **Mitsubishi Corporation**  **Nishitetsu**
HANSHIN ELECTRIC RAILWAY  **KEIKYU**
HANSHIN ELECTRIC RAILWAY CO., LTD.

Mixed-use Urban Development Project in the Suburb of Jakarta

JPY3.4bn equity

Acted as Sponsor

Oct 2016 

Philippines

 **BCDA**
Bases Conversion and Development Authority 

Clark Green City Development Project

Acted as Master Planner

Jul 2016 

6. Company Outline

Company
Name

Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN)

Location

2-2-3 Marunouchi, Chiyoda-ku, Tokyo (Marunouchi-Nakadori Building, 9F)

Established

October 20, 2014

President
and CEO

Takuma Hatano

Contact

TEL: +81-3-5293-6700 (main line) / FAX: +81-3-3218-5561

E-mail

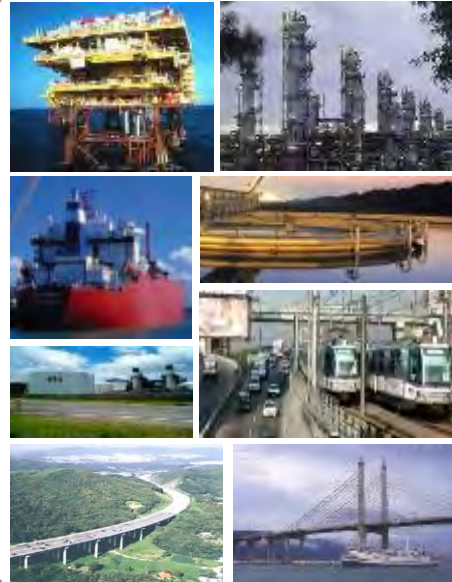
info@join-future.co.jp

Website

<http://www.join-future.co.jp/english/>

The 5th Asia Smart City Conference Thematic Meeting No.3

Tomohide Oyama
Manager of Asian Origination Team
The Bank of Tokyo-Mitsubishi UFJ, Ltd. (“BTMU”)
November 2016



Financing Sources for Infrastructure Development (summary)

| | | Features | |
|-------------------------------|--|---|---|
| Public project | Regional Gov't Budget <ul style="list-style-type: none"> ➢ Tax revenue ➢ Municipal bond | <ul style="list-style-type: none"> • Sufficient tax revenue or budget allocation from central gov't required • Multiple years budget for expenditure during construction period required • Funding in capital market, i.e. municipal bond, is one option | |
| | ODA | <ul style="list-style-type: none"> • Appropriate debts management required to be eligible for ODA • Can enjoy low interest rate & long tenor • Requires long time to prepare | |
| Private Project / PPP Project | Recourse Finance | ECA Finance | <ul style="list-style-type: none"> • Tenor possibly up to around 15 years • Usually syndicated with commercial banks • Banks will look at both corporate credit and project structure • Government guarantee may be required |
| | | Corporate Finance | <ul style="list-style-type: none"> • Tenor is usually up to 5-7 years (relatively short for infrastructure projects) • Banks will solely look at corporate credit quality |
| | Non/Limited Recourse Finance | Project Finance | <ul style="list-style-type: none"> • Tenor can go up to 30 years (depending on the project structure) • Banks will solely look at project structure and cash flows • Requires significant time and cost for preparation • Government supports could be required (case by case) |
| | Project bond | | <ul style="list-style-type: none"> • Usually for brownfield projects • Investors will mainly look at external rating for investment decision • External rating agency will assess project structure and cash flow |

Project Finance vs Corporate Finance

Project Finance solely relies on cash flow of the Project

| Comparison with Corporate Finance | | |
|-----------------------------------|--|--|
| | Project Finance | Corporate Finance |
| Credit | <ul style="list-style-type: none"> ■ Projected cash flow of specific project | <ul style="list-style-type: none"> ■ Financial status of corporation ■ Past performance , etc. |
| Loan Amount | <ul style="list-style-type: none"> ■ Large financing could be available | <ul style="list-style-type: none"> ■ Depends on borrower's financial conditions, business plans etc. |
| Tenor | <ul style="list-style-type: none"> ■ Typically long-term <ul style="list-style-type: none"> • Door-to-Door 10-20 yrs (or more) • Typically, determined by term sales contracts | <ul style="list-style-type: none"> ■ Typically 364-day, 3yr, or 5-yr revolving credit facilities / term loans |
| Borrower | <ul style="list-style-type: none"> ■ SPC (Special Purpose Company) | <ul style="list-style-type: none"> ■ Corporate |
| Sponsor and Project risk | <ul style="list-style-type: none"> ■ Sponsors are independent from project risk <ul style="list-style-type: none"> • Non / limited recourse to sponsors | <ul style="list-style-type: none"> ■ Corporate risks and project risks are interlinked |
| Covenants | <ul style="list-style-type: none"> ■ Restrictions on operating activities, additional indebtedness, liens, asset sales, etc. | <ul style="list-style-type: none"> ■ Limited restrictions on operating activities |
| Security | <ul style="list-style-type: none"> ■ Typically secured by all tangible and intangible assets with controlled cash accounts | <ul style="list-style-type: none"> ■ Typically unsecured |
| Preparation Period | <ul style="list-style-type: none"> ■ Few months ~ several year | <ul style="list-style-type: none"> ■ Few days ~ several months |
| Transaction Cost | <ul style="list-style-type: none"> ■ Extensive advisory fee <ul style="list-style-type: none"> • Environment, Technical, Legal, etc. | <ul style="list-style-type: none"> ■ Usually only legal fee |

Info. disclosure and external rating could help commercial bank for projects implemented under sub-sovereign risk

When PPP projects have cash flow from sub-sovereign entities...

- Such as regional gov't and regional gov't SOEs
 - (e.g.) IPP project with SOE as off-taker
 - (e.g.) Finance arranged under regional gov't guarantee



... international commercial banks need

- Information disclosure
 - Financial Statements
 - Consecutive publication required
 - Independence and consistency in relationship with central gov't
- External Rating by Moody's or S&P
 - Enable banks to assess credibility
 - May not be possible extend credit, but at least able to assess
 - Comparable with other cases

- Transparency enables banks to consider financing to sub-sovereign project
- External rating by international agency support banks' consideration

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Smart Community and SMBC

November 2016



三井住友銀行

SUMITOMO MISTUI BANKING CORPORATION

Growth Industry Cluster Department

Public & Financial Institutions Banking Dept.

Public Institutions Business Office - I

LEAD THE VALUE

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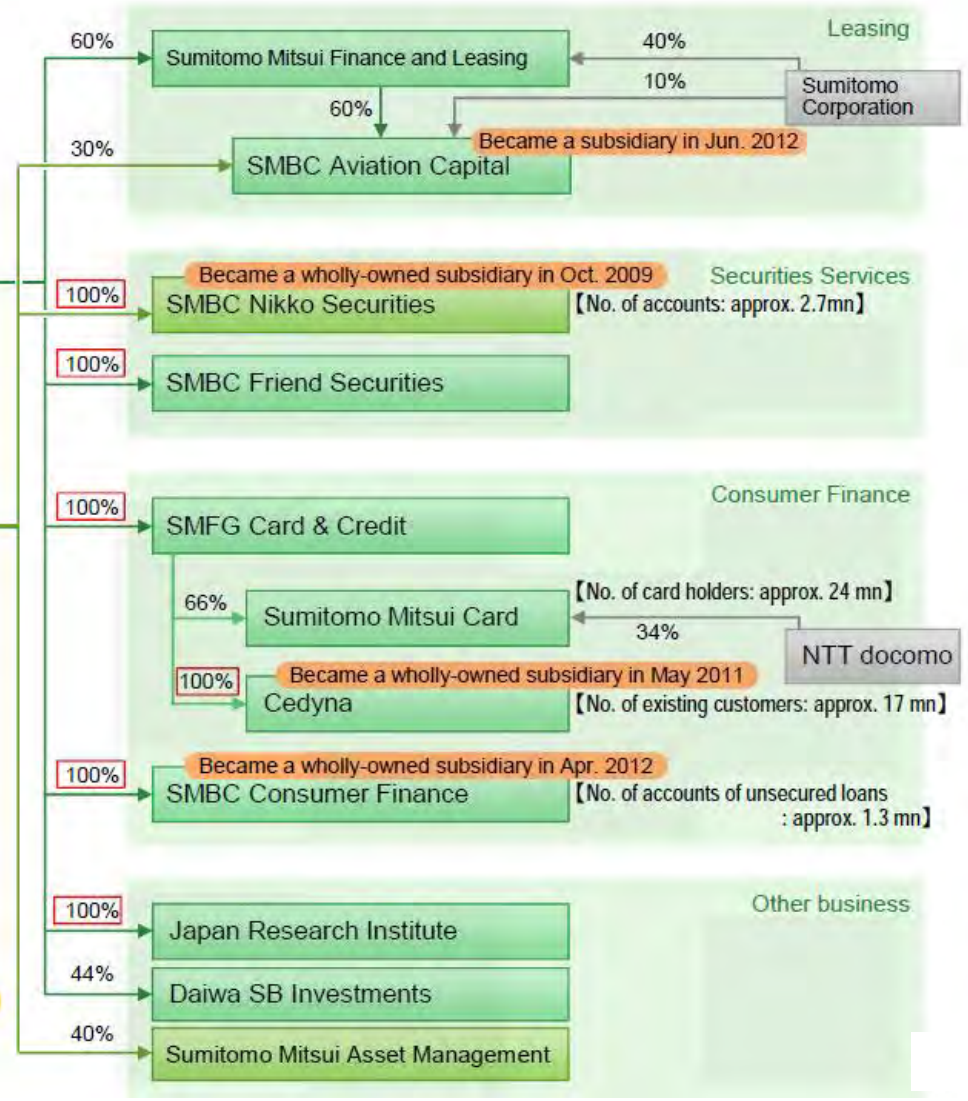
Sumitomo Mitsui Financial Group

| Sumitomo Mitsui Financial Group | |
|---|------------|
| Consolidated total assets | JPY 187 tn |
| Consolidated Common Equity Tier 1 capital ratio | 11.81% |

| Sumitomo Mitsui Banking Corporation | | | | | |
|-------------------------------------|----------------|-------|-------|----------|---------|
| Assets | JPY 154 tn | | | | |
| Deposits | JPY 99 tn | | | | |
| Loans | JPY 69 tn | | | | |
| No. of retail accounts | approx. 27 mn | | | | |
| No. of corporate loan clients | approx. 89,000 | | | | |
| Credit ratings* | Moody's | S&P | Fitch | R&I | JCR |
| | A1/P-1 | A/A-1 | A/F1 | AA-/a-1+ | AA/J-1+ |

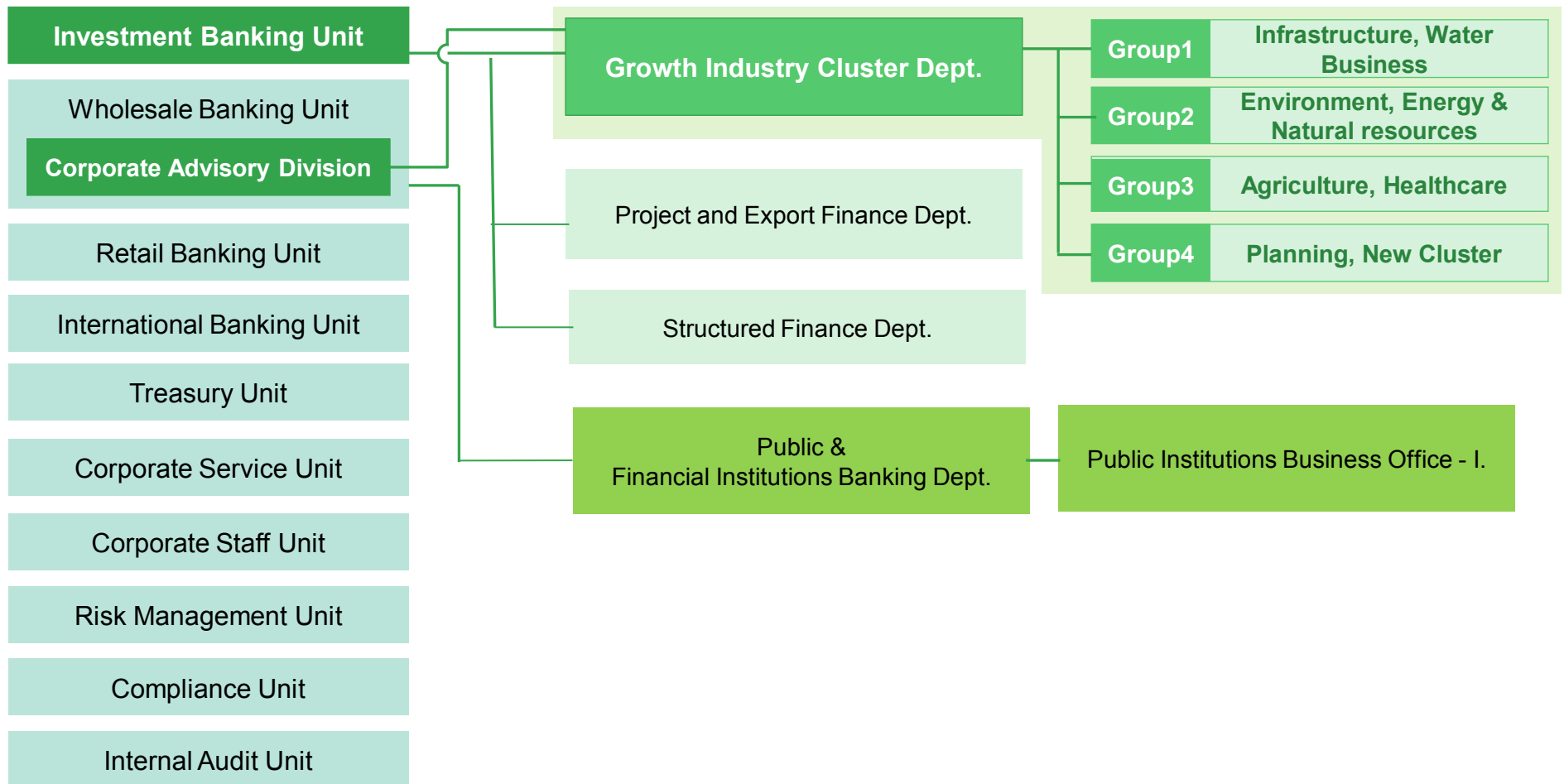
100% → Became a wholly-owned subsidiary in Oct. 2013
SMBC Trust Bank
 Acquired Citibank Japan's retail banking business in Nov. 2015

* As of Mar. 31, 2016



Team SMBC

“Growth Industry Cluster Dept.” and “Project and Export Finance Dept.” are specialized departments for various financing transactions, including “smart community projects”. “Public & Financial Institutions Banking Dept.” and “Public Institutions Business Office –I” provides various financial services in public sector



■ Introduction / Growth Industry Cluster Department (“GICD”)

Global Market and strategy of the Government of Japan

Global market

- Growing demand for infrastructures
- Eco-friendly
- Alternative energy

The Gov’t of Japan

- “New Growth Strategy”
 - ✓ Public-private partnerships
 - ✓ Cross-ministerial approach
 - ✓ Top sales

GICD’s Approaches

| | | | |
|--------------------|--|---------------------------|---|
| Water | Tap Water, Sewage, Desalination, Recycled Water, Waste Water | Alternative Energy | Renewable Energy (Wind, PV, CSP, Hydro) |
| Environment | Smart City, Transportation (Rail, Bus, EV) Batteries, Smart Grid | Natural Resources | Coal, Gas, Rare Metals |
| Health care | Medical, nursing care | Agriculture | Agriculture |

GICD provides:

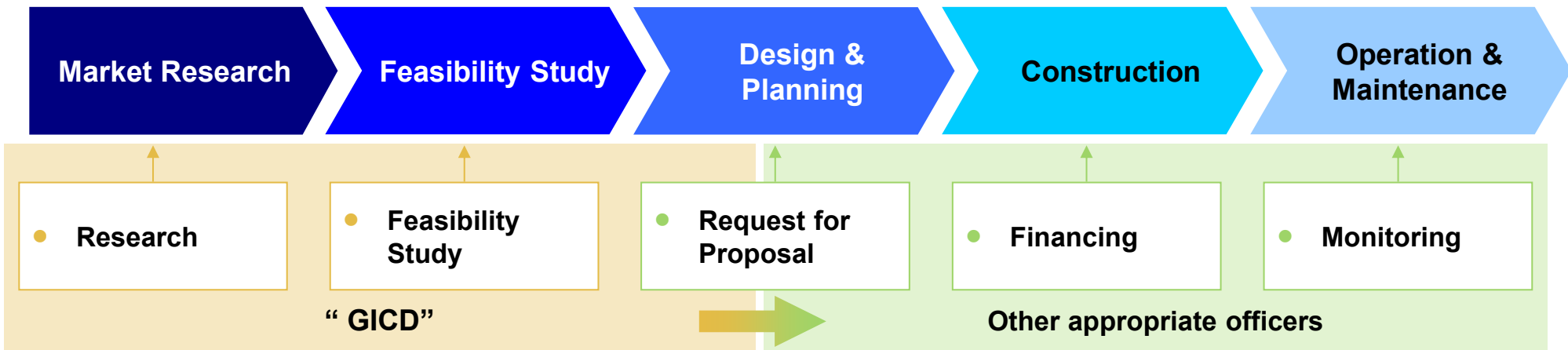
- | | |
|--|---|
| <ul style="list-style-type: none"> ● Intelligence <ul style="list-style-type: none"> ✓ Information ✓ Business Model | <ul style="list-style-type: none"> ● Solutions <ul style="list-style-type: none"> ✓ Financial Advisory Services ✓ Financings |
|--|---|

in cooperation with:

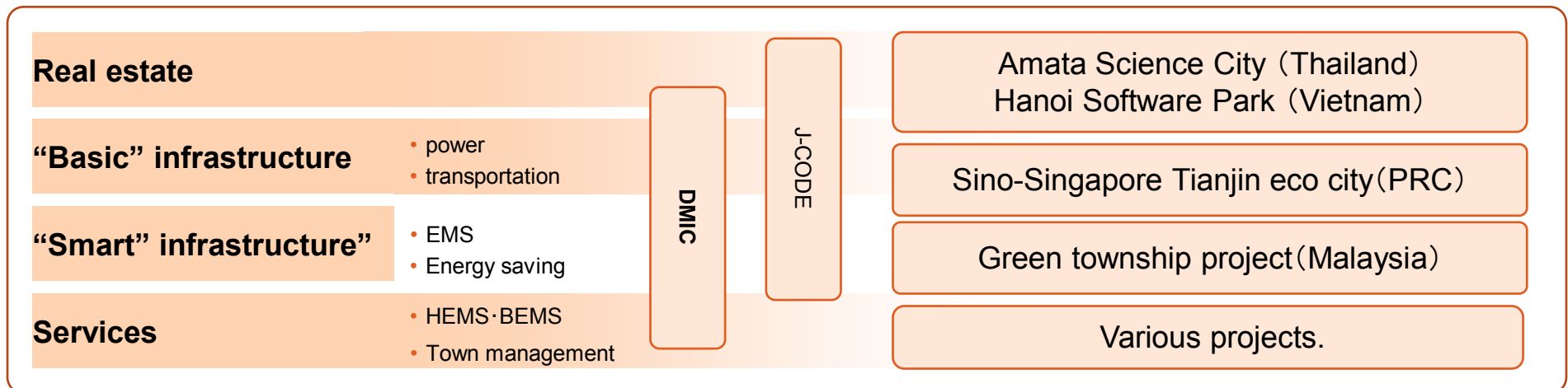
- ✓ Japanese and Local Governments / Institutions
- ✓ Multilateral Agencies

Our approaches to the Smart Community (1)

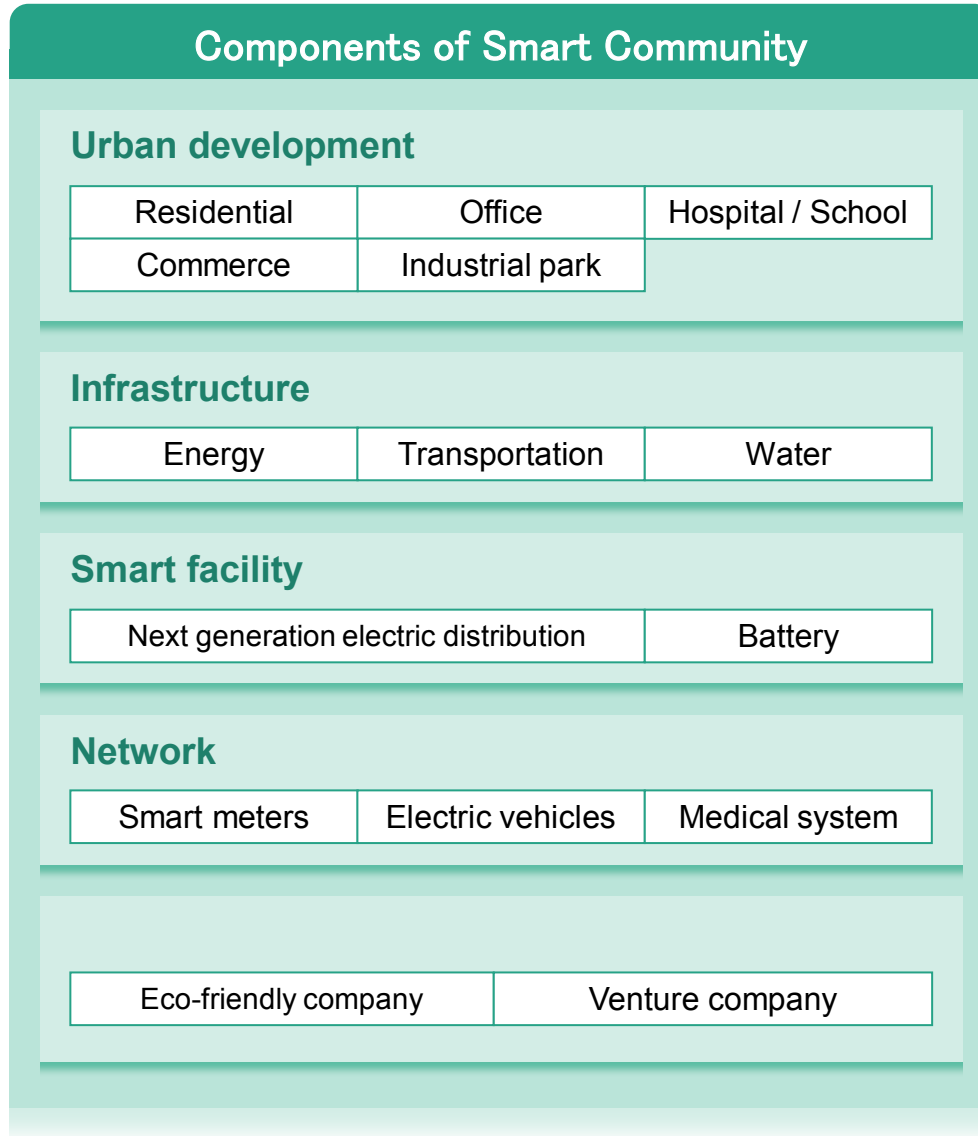
Schedule



Projects:



Our Approaches to the Smart Community (2)



Global Network



Americas

United States

- New York Branch
- Los Angeles Branch
- San Francisco Branch
- Houston Rep Office
- Manufacturers Bank

Canada

- Sumitomo Mitsui Banking Corporation of Canada

Mid and South America

- Cayman Branch
- Banco Sumitomo Mitsui Brasileiro S.A.
- Head Office(San Paulo)
- Cayman Branch
- Mexico City Rep Office
- Bogota Rep Office
- Lima Rep Office
- Santiago Rep Office

Europe/Middle East/Africa

Europe

- Sumitomo Mitsui Banking Corporation Europe Ltd
- Head Office(London)
- Paris Branch
- Milan Branch
- Amsterdam Branch
- Dublin Branch
- Prague Branch
- Madrid branch
- Dusseldorf Branch
- Brussels Branch
- Istanbul Rep Office
- Madrid Representative Office
- Sumitomo Mitsui Finance Dublin Ltd.

Middle East

- Bahrain Rep Office
- Tehran Rep Office
- Dubai Branch
- Abu Dhabi Rep Office
- Doha QFC Office

Africa

- JSC Sumitomo Mitsui Banking Rus Bank Cairo Rep Office
- Johannesburg Rep Office

Asia Pacific

Vietnam

- Hanoi Branch
- Ho Chi Minh City Branch
- Vietnam Eximambank

Myanmar

- Yangon Branch
- Thilawa Front Office

Cambodia

- Phnom Penh Rep Office
- ACLEDA Bank Plc

Philippines

- Manila Branch

India

- New Delhi Branch
- New Delhi Rep Office(※)

Australia

- Sydney Branch
- Perth Branch

Asia Pacific

China

- Sumitomo Mitsui Banking Corporation (China) Limited
- Head Office(Shanghai)
 - Tianjin Branch
 - Guangzhou Branch
 - Suzhou Branch
 - Hangzhou Branch
 - Beijing Branch
 - Shenyang Branch
 - Shenzhen Branch
 - Chongqing Branch
- Tianjin Binhai Sub Branch
- Suzhou Industrial Park Sub-Branch
- Shanghai Puxi Sub Branch
- Changshu Sub Branch
- Shanghai Pilot Free Trade Zone Sub-Branch
- Kunshan Sub-Branch
 - Dalian Branch
- The Bank of East Asia
- Hong Kong Branch

Taiwan

- Taipei Branch

Korea

- Seoul Branch

Mongolia

- Ulaanbaatar Rep office

Singapore

- Singapore Branch

Thailand

- Bangkok Branch
- Chonburi Office

Malaysia

- SMBC Malaysia Berhad
- Labuan Branch
- Kuala Lumpur Office

Indonesia

- PT Bank Sumitomo Mitsui Indonesia
- PT Bank Tabungan Pensiunan Nasional TBK

Appendix : Market Leader in Project Finance

SMBC is proud to be named “**Global Bank of the Year 2014**” by Thomson Reuters’ PFI Yearbook 2015 for an **unprecedented** third time. This award follows the Global Bank of the Year awards in 2008 & 2012.



| | | | |
|------------------------|--|---|--|
| PFI AWARDS 2014 | Global Bank of the Year 2014 | AP Deal of the Year Roy Hill Sarulla PAU | Europe Deal of the Year Budapest Airport Gemini Mersey Gateway |
| PFI AWARDS 2013 | AP Deals of the Year Nghì Son Refinery NSW Ports | Europe Deals of the Year A1/A6 Motorway Thameslink Rail | Americas Deals of the Year Sabine Pass LNG Chaglla Hydro |
| PFI AWARDS 2012 | Global Bank of the Year 2012 | AP Power Deal of the Year Gulf U–Thai | AP Infra Deal of the Year Sydney Desalination |
| PFI AWARDS 2011 | AP Power Deal of the Year Mong Duong 2 | AP Infra Deal of the Year Wiggins Island | Americas Renewables Deal of the Year Seigneurie de Beaupre Wind Farms 2&3 |
| pfi awards 2008 | Global Bank of the Year 2008 | Global Advisor of the Yr 2006 | Asia–Pac Advisor of the Yr 2006 |

INFRASTRUCTURE JOURNAL AWARD

| YEAR | AWARD |
|------|--|
| 2014 | Asia Pacific Bank of the Year |
| 2012 | MLA of the Year – Social Infrastructure |
| 2011 | Global MLA of the Year |
| 2011 | Arranger of the Year – Oil & Gas |
| 2009 | Global Arranger of the Year |
| 2009 | Global Deal of the Year – PPP (Victorian Desalination Plant) |

AWARD WINNING DEALS 2014

| DEAL | AWARD | ROLE |
|-----------------------|--------------------------------|---|
| Asahan | Refinancing Deal of the Year | Lead Manager |
| Donggi-Senoro | Upstream Deal of the Year | MLA |
| Nam Ngiep | Hydro Deal of the Year | MLA |
| PAMEL | Telecoms Deal of the Year | MLA |
| Roy Hill | Metals/Mining Deal of the Year | MLA. ECA Agent, Structuring Bank |
| Victoria Desalination | Water/Waste Deal of the Year | MLA |
| Sarulla | Power Deal of the Year | MLA / Modeling Bank / Hedging Strategy Bank / Swap Arranger |



**The 5th
Asia Smart City Conference
in Yokohama**



Vasant Prabhu
Deputy Municipal Commissioner,
Municipal Corporation of Greater Mumbai

Urbanisation

The World Scenario of urban population

- In 1800, the urban population was only 3%
- in 1900 it grew to 14%
- in 1950, approximately 30% population reside in urban areas
- In 2008, first time in history world population was evenly split, 3.3 billion people live in urban areas
- By 2050, expected that 70% of world population in urban areas

Advantages of cities

- Cities are driving force for economic development
- Economic growth stimulates urbanisation
- Cities attract talents and skill level that allow specialisation in knowledge, skills and management capability
- City facilitates creative thinking and innovation
- High concentration of people generates more opportunities, development of new ideas and technology
- Facilitate trade and commerce serve as production and service hub
- In short, cities are agents of social, cultural, economic and technological advancement
- Countries with high level of urbanisation tend to contribute to the strongest urban GDP growth

Negative Impact of Over-Urbanisation

- Continuous migration from rural parts
- High density population
- Shortage of infrastructure compared to population and thereby issues like traffic adequate water supply, drainage, cleanliness, etc.
- Inadequate funds to provide infrastructure
- under utilisation or improper utilisation of funds
- Inadequate housing for growing population, hence creation of slums
- Law and order issues

For Betterment of cities

- Inadequate finance to cater the growing need of the cities is the main issue
- As shortage of funds, there is no investment in infrastructure, therefore no development and as no development there is no income to the corporation and as there is no income there is no investment. This is a vicious circle and difficult to break
- It is ironical that cities are the growth engines of their country but for their own development there is shortage of funds. The land cost is sky rocketing in the city, developers and land lords are minting money, local authorities face the scarcity of funds. Though the land values are increasing due to their capital investment in the infrastructure
- Therefore corporation should take the advantage of the most valuable resource like land and exploit it in a professional manner. If more investment in infrastructure in undeveloped part of the city which will give boost to the development and it generate more property tax, development charges and water charges from that area
- If this investment in infrastructure correlates with the increase in income from which the financial investment can be repaid. Only viability gap is the responsibility of the government

Co-relation of investment to income

- Income and expenditure are correlated to each other
- As investment increases the income of MCGM increases
- In 1999, corporation is in debt of 600 crores but now MCGM has most sound financial position due to increase in investment in the infrastructure which in return generates more income
- Fungible FSI, an innovative idea
- Capital value based property tax
- Investment in infrastructure boost development which generated more property tax, gets a huge premium from increase in fungible FSI and increase in water and sewerage charges due to high consumption
- For eg. JVLR road is constructed for 221 crores immediately most of the slums along the road are developed in big properties. Thus from negligible property tax it gives crores of property tax in return
- In short, the planners, administrators, executives have to carefully select the underdeveloped areas where they can make a huge capital investment in infrastructure which will give a continuous return in future and also ensure that the city gets developed in proper manner with complete set of infrastructure



Thank you

THE FIFTH ASIA SMART CITY CONFERENCE
SHOWCASE OF FINANCIAL ARRANGEMENT FOR SMART CITY DEVELOPMENT

NOVEMBER 18, 2016



GREENPLACE
ASSETS

PROFIT WITH RESPONSIBILITY

WHO WE ARE

Investment management, asset management and advisory company active across real estate, selective infrastructure and urban sustainability projects.

Significant experience and track record across real estate investments, asset management, sustainability advisory and project delivery/ ongoing management.

Strong understanding and experience in investment and built environment sustainability across major Asian markets.

Deep understanding and focus of how sustainability can positively impact multiple levels of `value` for stakeholders.

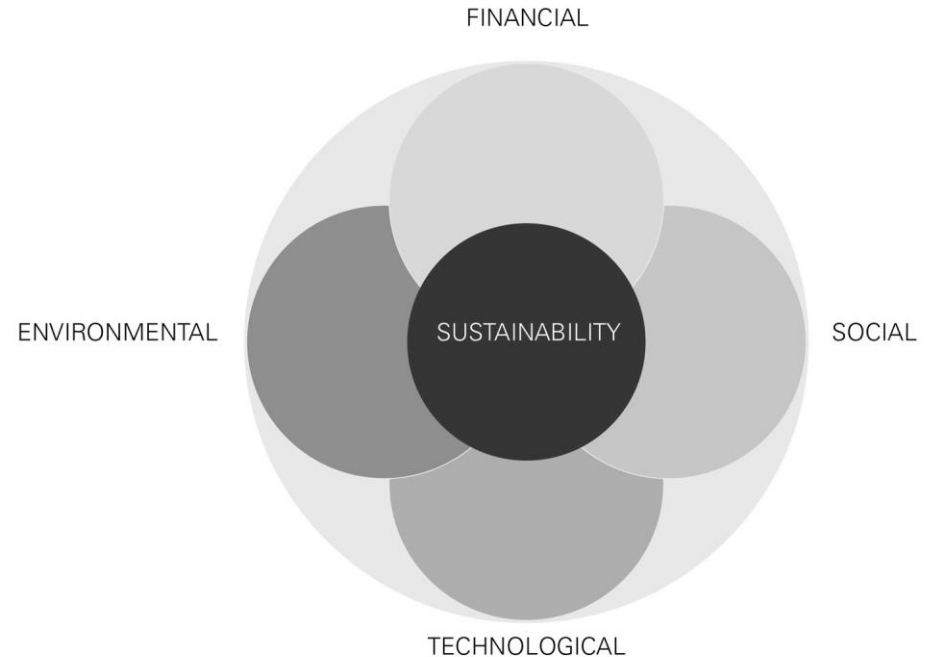
WHAT WE BELIEVE IN

A comprehensive approach to sustainability that creates present and future value at financial, social and environmental levels.

Business drives decision-making and real assets (real estate and infrastructure) sustainability decisions need to make business sense.

Creating value in real assets through using sustainability as a core strategy to enhance performance and financial returns.

Creation of `value` at a triple bottom line level that positively impacts not only balance sheets, but also connected financial, social, environmental systems.



ISSUES FOR ADDRESS

BUILT ENVIROMENT, REAL ESTATE AND INFRASTRUCTURE

Asset-level initiatives need to be scaled to portfolio, district and city levels and financing structures (and financiers) need to be there to support scale.

TRANSPORT

Opportunity to reduce congestion through distributed communities and more localisation. Increase technology impact and strive for improved methods of public and private funding.

WATER

Improve efficiency and reduce waste to mitigate what may become one of our next generation's largest costs and most precious assets.

DISTRIBUTED ENERGY AND RENEWABLE ENERGY

Smaller scale distributed facilities, CCHP, etc. With new technology, individuals will move from energy consumers to providers. Financing impacts will be large.

DIGITAL AND CONNECTIVITY

The nature of cities and how we live is evolving, as is how cities are designed and managed. New funding models that support this change will evolve.

The nature of `workplace` is evolving. Reduced need for `centralised` office commute.

Regression to more distributed/ less centralised communities?

Many impacts on systems financing.



WHAT DOES THE FUTURE LOOK LIKE?

Are we going to continue the `deemed inevitable` continued migration to centralised cities? The resulting pressures are large.

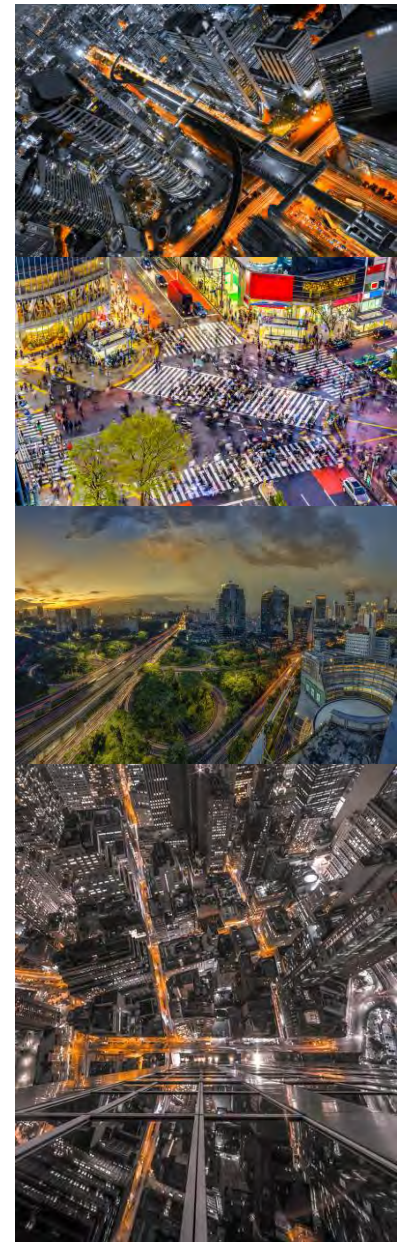
- ➡ Can we afford them?
- ➡ Are there other options?

Tomorrow's low carbon economy may look very different from today's.

- ➡ How do we establish financial mechanisms to achieve it?
- ➡ How do we encourage governments and investors to innovate and adapt?
- ➡ What reforms and innovations are required to support real assets investments that can play a meaningful role in a transition to a low carbon economy?
- ➡ How does this affect financing of where and how we live, work and recreate?

None of us yet have all the answers...so we must ask the right questions.

The low carbon economy beckons...how will we put the pieces in place to ensure we can truly achieve it?



GREENPLACE
A **SSETS**

PROFIT WITH RESPONSIBILITY

www.greenplaceassets.com

BANGLADESH

Dhaka North and South



KEY TAKEAWAYS from TDD

- Recognizing strategies of Public Private Academia Partnership for formulating sustainable and contextual strategies in Urban planning that will lead to smart/competitive city strategies
- Modes of frequent awareness programs to involve citizens in each step of the process
- Methods of recognizing strength of the city and focus areas which has the right conditions to lead the way and become places for the pilot initiatives

Core Problem to address

- Traffic Congestion and mobility within the city
- Water-Logging
- Waste Management
- Planned Open/green public spaces

Challenges



Most effective Approach learnt

- Compact City ideas used by Tokyo
- 100 smart city idea used by India
- Enhancing local beneficial attributes of the city to be a start point used by Yokohama

Clean Dhaka



Green Dhaka



1100 CCTV surveillance



Short term immediate steps

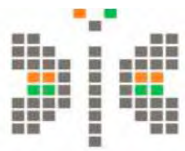
- Organize for a committee in the Local Government headed by Mayor to initiate dialogue with citizens through Ward-based awareness programs
- Propose for support from ICT Ministry in integrating national level ICT schemes and involve private sector to form a decision-making platform to identify relevant smart initiatives

Support Required

- Technical assistance on the technological aspects and thorough studies on the various systems such as traffic management, solid waste management, quality urban public space development.
- Funding for larger scale project once some success is achieved from the pilot projects.



SMART CITIES OPPORTUNITIES & CHALLENGES



Smart City Mission



AREA BASED DEVELOPMENT



- Non vehicle zones/streets.
- Visible improvement in the area
- Pedestrian friendly pathways
- Encouragement to NMT
- Innovative use of open spaces
- Robust IT connectivity and digitization
- Additional smart application (high tech multipurpose citizen cum tourist facilitation centre.



AREA BASED DEVELOPMENT



Interlinking Core city
and Patto area



Old & New City of Panaji



PROPOSED ROAD BRIDGE ACROSS CREEK

- * Reduces travel distance for vehicles entering city by 1.5 kms
- * Connecting Mala & Patto Plaza
- * Direct connection to NH 17 from the city
- * Alternate entry into the city

Area Based and Pan City Development Focus (Initial SCP)

INTERVENTION AREA



Area-based development initiatives focused upon:

1. Smart Municipal Infrastructure
2. Ecomobility (semi pedestrianization of Church square)
3. Heritage Conservation
4. Integrated Urban Water Management (IUWM)
5. Biodiversity Conservation
6. Upgradation of pockets of urban poor
7. Complementing urban spaces (interlinking core city and administrative hub)

Pan-City Initiatives focused upon:

1. Intelligent Transportation Systems (ITS) for Ecomobility
2. Information and Communications Technology (ICT) Enabled Municipal Services.

Key Takeaways

INTERVENTION AREA



1. Overall Strategic Planning
– inclusion, environment, competitiveness & innovation
2. Building a consortium of Partnerships especially with the private and academia which is a unique model

Key Problem to be addressed

INTERVENTION AREA



1. To weave in tourism as a part of Smart City Planning
2. Open Data for promoting job creation & economic opportunities

Possible Approaches

- Co-ordinated and integrated approach to planning and the vision that has been portrayed for holistic development – As seen in Kashiwa-No-Ha City & Minatomira
- Partnership with the academia and having number of leading universities in India – to ensure bringing them on Board as a part of integrated planning.
- Involving citizens and youth for co-creating of urban design spaces through innovation labs e.g.: UDCK and Yokohama Community Design Lab.
- Involvement of the private sector to lead the development process.

Steps to mitigate and address the issues

- Work towards an advisory forum with a panel of Global Experts to ensure inputs are regularly received to ensure building of world class smart interventions.
- Specific guidance from the City of Yokohama on tourism aspects, especially MM21, ports and riverfront developments.

Possible support from WB TDLC/ Japan:

- Support from the World Bank TDLC to formulate the Global Advisory Forum.
- Support for enhancing Capacity Building for Goa Smart City Team on key areas as discussed.
- Support in the work of Comprehensive Mobility Plan for the State.
- Technical Support to build the Community Innovation Labs for Urban Design.

Thank You!

swayan.chaudhuri@gclid.com



ACTION PLAN

TECHNICAL DEEP DIVE ON SMART CITIES
WORLD BANK GROUP
TOKYO DEVELOPMENT LEARNING CENTER
JAPAN 2016



General Information :

Population: 2.4 million
 Altitude City: 2,800 ms
 Altitudinal Range: 500 - 4,790 ms
 Area: 324 km²
 Average temperature: 14 ° C
 Natural Vegetable Cover: 62%
 Ecosystems: 18
 Percentage of Poverty: 43%
 GDP: 25 K Million (26% GDP of Ecuador)
 CURRENCY: U.S. Dollar
 Safer capital city of Latin America
 Third city in LA with the lowest cost of living.
 Quito is one of the greenest cities in Latin America.

Tourists' arrival to Quito



Quito is Strategically Connected





CITIZEN'S CITY

RESILIENT CITY

SOCIALLY INCLUSIVE CITY

URBAN GREEN CORRIDOR

DIVERSE AND CULTURAL CITY

INTEGRATED RURAL DEVELOPMENT

ENVIRONMENTALLY RESPONSIBLE CITY

NATURAL HERITAGE

COMPACT CITY

PEDESTRIAN-ORIENTED CITY

URBAN HERITAGE

COMPETITIVE AND GLOBAL CITY

EFFICIENT PUBLIC TRANSPORTATION

ORIENTED DEVELOPMENT

INCLUSIVE MOBILITY

SUSTAINABLE TRANSPORTATION

HUMAN CITY

GREEN CITY

CITY DESIGNED FOR LIFE

EFFICIENT MOBILITY



The Vision of Quito 2040 is the fruit of a participative process led by the Quito Mayor's Office. The Metropolitan Institute of Urban Planning (IMPU) brought together municipal authorities, academics, neighbourhood leaders, politicians, urbanists, artists, social collectives and hundreds of citizens, all committed to coming up with a long-term plan for the city. The support of the United Nations Development Program (UNDP) was vital for building this document around the United Nations Sustainable Development Goals. The ideas presented here sprang from that very process. This vision has to be thoroughly debated and enriched, so that people in Quito identify with it and defend it.

SMART CITY FOR PEOPLE

MOBILITY MANAGEMENT

-  Transporte Público Inteligente
-  Gestión de Tráfico
-  Placa Digital
-  Parqueo Inteligente
-  Bici Q

SECURITY AND HEALTH





-  Detección Incendios
-  Gestión de Crisis
-  Capacidad Hospitalares
-  Video Vigilancia



ENERGY AND ENVIRONMENT

-  Gestión de Desperdicios
-  Telemetría de Agua
-  Edificios Inteligentes
-  Alumbrado Público Inteligente
-  Gestión de Riego
-  Telemetría Eléctrica

CITY MANAGEMENT

-  Municipio Digital
-  e-Turismo
-  Cartelería Digital
-  Recaudación

QUITO METRO SYSTEM
22 KILOMETERS LENGTH
15 STATIONS

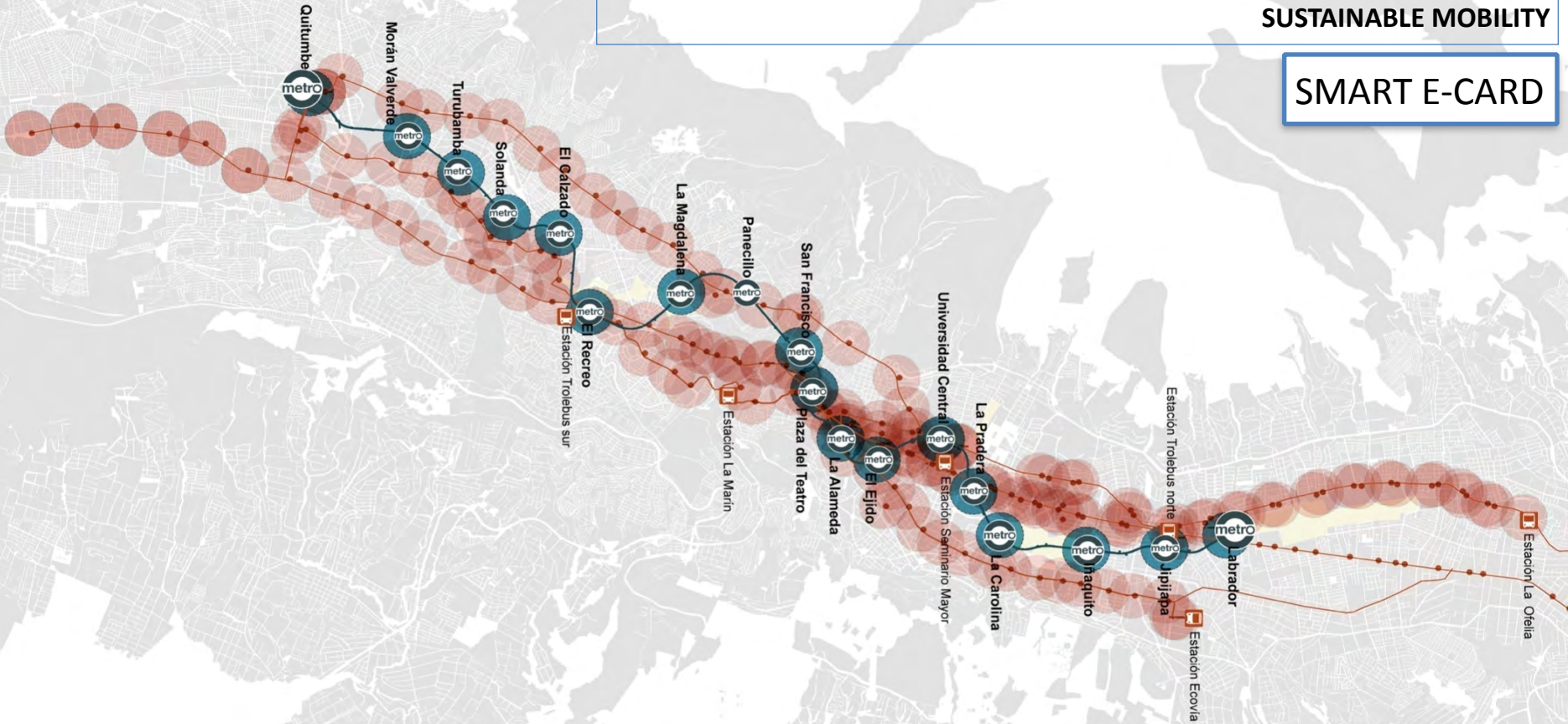
\$2.000MM



METRO

QUITO METRO SYSTEM - 22 KILOMETERS LENGTH - 15 STATIONS
INTEGRATED PUBLIC TRANSPORT SYSTEM
UNIQUE PAY CARD SYSTEM
URBAN DEVELOPMENT AROUND THE METRO STATIONS
DENSIFICATION AND COMPACTATION - DESIGN OF NEW URBAN CENTRALITIES
SUSTAINABLE MOBILITY

SMART E-CARD

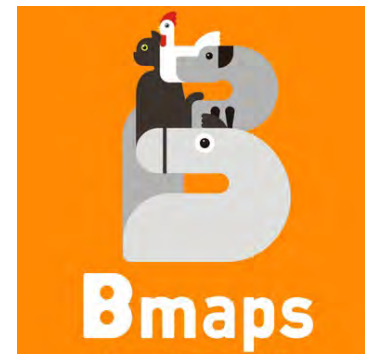
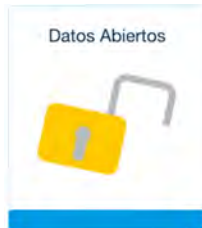


APPS - SMART CITY PROJECTS

DATOS ABIERTOS



Si presionas a móviles, ecomunicacion.gov.ec.



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@sebasoh

