



**Asia-Pacific  
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# **Quality Infrastructure Investment in Rapidly Urbanizing APEC Region *Summary Report***

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# Quality Infrastructure Investment in Rapidly Urbanizing APEC Region

17-18 October 2017,  
Grand Prince Hotel New Takanawa, Tokyo, Japan

## Summary Report

### I Overview

Under the CTI project “Capacity Building for Quality Infrastructure Investment in Rapidly Urbanizing APEC Region”, initiated by Japan and co-sponsored by Chile; Peru; The Republic of the Philippines; Thailand; United States, the **APEC High Level Meeting on Quality Infrastructure** was held in Tokyo, Japan on 17 and 18 October 2017.

This meeting was participated by 80 people including permanent secretary and director-general level participants and other government officials from ministries in charge of infrastructure from 15 economies, international organizations and private companies. The details of participants are included in **Annex A**. Co-chairs, speakers and moderators are as follows;

- **Mr Koichi Yoshida**, Vice-Minister, Ministry of Land, Infrastructure, Transport and Tourism, Japan (Co-chair)
- **Dr Nguyen Duc Canh**, Deputy Director-General, International Cooperation Department, Ministry of Construction, Viet Nam (Co-chair, Session1 Keynote)
- **Mr Hiroto Izumi**, Special Advisor to the Prime Minister, Japan (Opening Remarks)
- **Mr Yuji Sudo**, Assistant Vice-Minister, Minister's Secretariat, Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan (Session1 Keynote)
- **Mr Takuma Hatano**, President & CEO, Japan Overseas Infrastructure Investment Corporation (JOIN) (Session1 Keynote)
- **Ms Naoko Ueda**, Deputy Director, OECD Development Centre, OECD (Session2 Moderator)
- **Mr Yasushi TANAKA**, Officer-in-Charge/Principal Transport Specialist for Transport and Communications Division, Southeast Asia Department, Asian Development Bank (Session3 Moderator)

The meeting comprised of three sessions; 1) Plenary Session (opening remarks and keynote speeches, 2) Presentation & Discussion Session from participating economies,

and 3) Public Private Dialogue including seven private companies. The detailed agenda of the meeting is included in **Annex B**.

Through the meeting, the following three points were highlighted; 1) to ensure the participants raise awareness on the good practices and lessons learned, 2) to identify challenges and possible solutions in order to implement quality infrastructure development, 3) to provide the participants with opportunities to understand quality infrastructure investment cases.

In the meeting, the participants issued the “**Report on the Outcomes of APEC High-level Meeting on Quality Infrastructure**” (Attached as Annex C) including **Good Practice Quality Infrastructure Case Book** (Annex D). It was emphasized that recognizing the importance of “quality” in infrastructure projects and understanding diversity of APEC member economies, the economies were encouraged to promote quality infrastructure projects depending on the context of each economy.



## **II Background**

At the APEC Economic Leaders’ Meeting (AELM) held in Beijing on 10-11 November 2014, Leaders endorsed the “APEC Connectivity Blueprint for 2015-2025” based on the commitment at AELM in 2013 in Bali, Indonesia. The Blueprint stipulates that under physical connectivity, with regards to cross-sectoral issues, the Leaders will focus on, in addition to improvement of the investment climate and enhancement of infrastructure financing through public private partnership, 1) adopting comprehensive assessment methods that consider key quality elements in evaluation of infrastructure project proposals, and 2) enhancing the application of good practices and people-centered investment for planning and implementing infrastructure projects.

As a follow up of the APEC Connectivity Blueprint, the project was proposed to focus on capacity building of government officials in charge of infrastructure projects in APEC

economies in order to share their good practices and lessons learned and enhance their understanding on quality infrastructure from both institutional and technical perspectives.

This project aimed to build capacity among government officials in charge of infrastructure investment, share the good practices and lessons learned and identify challenges and possible solutions in order to implement QII. The project included the two meetings; 1) “**High Level Meeting on Quality Infrastructure**” which was held on 17-18 October 2017 in Tokyo Japan, and 2) Preparatory Workshop, the “**Expert Meeting on Quality Infrastructure Investment**” which was held on 19 August 2017 in Ho Chi Minh City, Viet Nam.

As a preparatory workshop of the “High Level Meeting on Quality Infrastructure”, the Expert Meeting on Quality Infrastructure Investment was held in the margin of SOM3 in Ho Chi Minh City, Viet Nam to share good practices and challenges in infrastructure projects, and identify and discuss important elements for promoting Quality Infrastructure Investment before the High Level Meeting with the working level participants from APEC economies. 24 experts from ministries in charge of infrastructure from APEC economies and 4 experts from MDBs and international organization such as World Bank, OECD, Asian Development Bank and ABAC participated in the Meeting.



### **III Discussions**

The meeting was co-chaired by **Mr Koichi Yoshida, Vice-Minister, MLIT, Japan** and **Dr Nguyen Duc Canh, Deputy Director-General, International Cooperation Department, Ministry of Construction, Viet Nam**. The meeting consists of three sessions; (Session1) Plenary Session (Opening Remarks and Keynote Speeches), (Session2) Presentation & Discussion, and (Session3) Public Private Dialogue.

#### **1. Session1: Plenary Session (Opening Remarks and Keynote Speeches)** **1-1) Greetings from Co-Chair**

Mr Yoshida and Dr Canh each welcomed the participants and expressed their appreciation for attendance.

## **1-2) Opening Remarks**

In his Opening Remarks, **Mr Hiroto Izumi, Special Advisor to the Prime Minister, Japan** mentioned as follows.

Mr Izumi expressed his gratitude for the participation of the APEC economy's executives in charge of Infrastructure development, ambassadors and officials of embassies, Multilateral Development Banks, and other international organizations. As demand for infrastructure was rising globally, the importance of quality infrastructure was confirmed at the past APEC meetings. He mentioned that Japanese experiences and advanced technologies of quality infrastructure, anti-disaster measures and environment, in particular would become grounds for deepened discussions. He concluded by expressing his wish that the discussions would be constructive and that the experiences of the meeting would lead to the further discussions.

## **1-3) Keynote Speech**

Following Mr Izumi's Opening Remarks, three Speakers, **Mr Yuji Sudo**, Assistant Vice-Minister, Minister's Secretariat, Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan, **Dr Nguyen Duc Canh**, Deputy Director-General, International Cooperation Department, Ministry of Construction, Viet Nam and **Mr Takuma Hatano**, President & CEO, Japan Overseas Infrastructure Investment Corporation (JOIN) gave keynote speeches in Session 1.

Mr Sudo introduced MLIT's Infrastructure Strategy and its three policy pillars laid out in accordance with Japanese government's initiative "Partnership for Quality Infrastructure" which was announced by Prime Minister Shinzo Abe in 2015. Reviewing outcomes of the Expert Meeting on Quality Infrastructure Investment which took place in Viet Nam in August, he explained important elements for promoting Quality Infrastructure Investment for today's discussion.

Dr Canh delivered a keynote speech on quality infrastructure in urban technical infrastructure; water supply, sewage treatment and solid waste treatment. Pointing Viet Nam's challenges such as limited financial sources, low capacity readiness and insufficient strategy for quality infrastructure, he described his expectations for APEC as expert exchanges and funding initiatives.

Mr Hatano gave the last keynote speech on JOIN's investment in High Quality Infrastructure Projects. Roles and focuses of JOIN, the public-private equity provider specializing in overseas infrastructure development were explained while presenting examples of quality infrastructure that JOIN has undertaken globally.

## **2. Session 2 : Presentations and Discussions**

### **2-1) Presentations and Discussions**

Session 2-1 (Presentations and Discussions) was moderated by **Ms Naoko Ueda, Deputy Director, OECD Development Centre, OECD**. Representatives of nine economies gave presentations each and shared their current state of quality infrastructure development, challenges and good practices. **Ms Morag, Baird of Global Infrastructure Hub (GIH)** delivered a special speech, sharing roles and objectives of

GIH, introducing products and services it provides to all countries promoting quality infrastructure. Between the presentations, Q&A sessions and discussions were undertaken.

#### **A) Presentation by China**

**Mr Fei Xie, Director, PPP Center, Ministry of Finance** presented China's current status and challenges, and introduced a good practice of Quality Infrastructure (QI). Some of the major challenges were large financing gap and lack of involvement of the private sector. He noted the importance of competitive procurement and adapting technologies and that the government set up PPP regulatory framework to tackle the identified issues. He concluded that the coordination among international organizations was expected for APEC.

#### **B) Presentation by Hong Kong, China**

After presenting the importance of QI and the government's commitment to investment, **Mr Hon Chi Keung, Permanent Secretary for Development (Works), Development Bureau** identified their challenges as high construction cost and manpower supply shortage. Some of the measures being taken were strengthened cost management and adopting innovative technologies to reduce manpower requirements.

#### **C) Presentation by Indonesia**

**Ms Alferia Riedatina, Head of Water Resources, Infrastructure Investment Planning Section, Indonesia Investment Coordinating Board** shared Indonesia's medium-term infrastructure development plan and their challenges. To tackle them, the government made reforms of policies and facilities, creating non-governmental funding scheme called PINA as well as created a good climate for PPP.

#### **Discussion/Q&A**

**(Malaysia):** Could you elaborate more on PINA, one of the Indonesia's financial initiatives?

**(Indonesia):** PINA is a newly established facility and non-governmental funds for infrastructure. Most of the investment comes from pension funds and other private funds.

#### **D) Presentation by Korea**

As **Mr Seung Hee, Yi, Deputy Director of International Cooperation and Trade Division, Ministry of Land, Infrastructure and Transport** went through achievements in PPP expressway projects, he revealed negative impacts of the projects such as high burden of guarantee, expensive tolls which resulted in negative public awareness toward PPP. Despite that, the government has implemented plans to maximize advantages of PPP.



## **E) Presentation by Malaysia**

**Mr Abdul Razak Bin Jaafar, Deputy Secretary General (Policy & Development), Ministry of Works** provided information on Malaysia's challenges, referring to financial inefficiency, limited resources and time frame. The government has implemented such measures as adopting new project delivery models and improved governance. He requested APEC to establish a forum to share knowledge, strategic funding scheme, and personnel exchange.

## **Discussion/Q&A**

**(ADB):** What are the top three factors that lead to successful PPP transaction?

**(China):** There are two aspects of the key factors; governance level and project level. In terms of projects, (1) transparency to encourage competitiveness, (2) how to design good business cases (3) monitoring to evaluate performance are considered as the keys.

**(Moderator):** I would like to ask all five presenters regarding the same question.

**(Hong Kong, China):** Long-term commitment and strong partnership of all players; the government, contractor, financier would be important. The arrangement of long-term projects by the owner contributes to successful collaboration between public and private.

**(Indonesia):** As good coordination is important, the government established an office dedicated to PPP and we have two state enterprises to deal with PPP. They do all the coordination throughout from planning to financial closure.

**(Korea):** The top three factors are appropriate user charge level; project planning accordance with the national master plan; precise forecast of traffic volume.

**(Malaysia):** Viability, strong partnership between public and private and the government's good facilitation are the important factors.

**(ABAC):** I would like to ask representatives from China, which plays a very important role in building the grand design of the APEC region how such issues as long-term maintenance of infrastructure overseas are to be addressed. Technology transfer, training and capacity building are possibly good approaches to the issue in my perspective.

**(China):** Though I am not an expert on overseas investment and not able to comment on it, I consider financial sustainability is critical. It is strongly encouraged that local governments which subsidize PPP projects should conduct a thorough financial assessment.

**(Chinese Taipei):** Could you tell us the reason why the government of Korea abolished the policy of MRG (Minimum Revenue Guarantee), financial compensation to the contractor?

**(Korea):** It was because the policy was not popular among the public.

#### **F) Special Speech by Global Infrastructure Hub (GIH)**

**Ms Morag Baird, Senior Manager, GIH** shared roles and objectives of GIH, introducing products and services it provides to all countries promoting QI. She stated such factors as project prioritization and delivery method, long-term viability were critical and GIH's online tools were highly recommended.

#### **G) Presentation by Peru**

**Mr Jorge Valverde, Investment Specialist, Investment Promotion Agency of Peru – ProInversion** explained the economy's issues regarding urban transport in its capital city. The government established new PPP laws to cover the financial gap and promote private investment. He introduced good practices of Lima Metro and upcoming development in the video.

#### **H) Presentation by the Philippines**

**Dr Maria Catalina E. Cabral, Undersecretary for Planning and PPP Department of Public Works and Highways** shared challenges facing the Philippines; limited sustainable funding, lack of technical expertise, the impact of a disaster and climate change, etc. Dr Cabral concluded by introducing the administration's campaign to prioritize and fast-track infrastructure development.

#### **Discussion/Q&A**

**(Moderator):** I would like to invite all the speakers in the earlier session to share three keys of successful projects.

**(GIH):** I observed that political will and all stakeholder's engagement, good preparations and tackling land acquisition issues at the early stage are important.

**(Peru):** Prioritizing sectors in accordance with the long-term national vision, building a collaborative relationship with the private sector and establishing legal framework are the keys.

**(Philippines):** There should be strong risk allocation metrics, appropriate time frame and effective legal framework.

#### **I) Presentation by Chinese Taipei**

Referring to climate change and extreme weather facing the economy, **Dr Chien-Hsin Lai, Director General, Water Resources Agency, Ministry of Economic Affairs** stated funding allocation shifted to disaster prevention and restoration of infrastructure. It was noted that such efforts as forward-looking planning and awareness to construction safety were conducted to overcome the challenges.

#### **J) Presentation by Thailand**

**Dr Vanchak Chayakul, Chief Engineer for Traffic Safety, Department of Highways, Ministry of Transport** stated that challenges in QI partly came from lack of clarity of PPP laws. He expressed his expectations for APEC to set up capacity

building program for government officials and concluded the presentation by showing good practices of QI.

### **Discussion/Q&A**

**(ADB):** PPP projects which were presented today have different subsidy rate each, which means not all projects are not commercially attractive to investors without the government's support. On what ground is Viability Gap Financing (VGF) decided and is there any rule of thumb on VGF rate which can be used cross-sector or cross-border?

**(Peru):** In case of Metro Lima, the government conducts a study of bankability and amount of subsidy is determined based on the result.

**(China):** As most of the PPP projects are not able to be covered by user's payment, the government provides subsidy to enhance attractiveness for private investors. It is critical to implement Value for Money analysis and financial affordability assessment.

**(GIH):** Responding to the question regarding a common rule of VGF, I would like to point out there is no such rule that can be applied generally. It is observed that there are some sectors easier than others in terms of VGF assessment such as transport and energy.

### **2-2) Wrap-up**

At the end of Session 2, Co-Chairs, **Mr Koichi Yoshida**, Vice-Minister, MLIT, Japan and **Dr Nguyen Duc Canh**, Deputy Director-General, International Cooperation Department, Ministry of Construction, Viet Nam, wrapped-up the meeting by proposing a draft of **Report on the Outcomes of APEC High-level Meeting on Quality Infrastructure (Annex C)** including **Good Practice Quality Infrastructure Case Book (Annex D)**. The draft Report was approved as it was after the circulation among the participants on the High Level Meeting. Additionally, the representatives of the member economies confirmed their continuing efforts to promote quality infrastructure investment.

## **3. Session 3 : Public Private Dialogue**

### **3-1) Presentations**

In Session 3, seven private companies made presentations of their quality infrastructure cases utilizing their technologies and services which vary from engineering to transport, real estate and water. The participants and representatives of the companies had opportunities to communicate through Q&A sessions. The session was moderated by **Mr Yasushi Tanaka**, Officer-in-Charge/Principal Transport Specialist for Transport and Communications Division, Southeast Asia Department, ADB.

**A) Presentation by The Overseas Construction Association of Japan, Inc (OCAJI)**

**Mr Yoshihiro Yamaguchi, Chief Executive Director** introduced the organization and overseas activities of Japanese construction contractors. Presenting strengths of Japanese construction industry, he explained five directions that the member companies of OCAJI take outside Japan.

**B) Presentation by Japan Airport Terminal Co, Ltd**

**Mr Kazuo Inaba, Executive Officer** provided an outline of Tokyo International (Haneda) Airport. Pointing out its advantages and qualities, he described what the passenger-oriented operation aims at.

**C) Presentation by Mitsubishi Estate Co, Ltd**

**Mr Taku Tanikawa, Manager, Area Management Promotion Office, Urban Development Promotion Department** presented its flag-ship “OMY District” development in the central Tokyo referring to its history and successful practices as well as examples of PPP urban development.

**D) Presentation by Japan Dredging and Reclamation Engineering Association**

**Dr Takahiro Kumagai, Member of International Committee** shared port construction and reclamation technologies owned by the organization’s member companies which enable to minimize life-cycle cost and to realize sustainable development.

**Q&A**

**(Question):** Demand for more frequent flights to Haneda and Narita airports is increasing. Is there any plan to increase the capacity at Haneda?

**(Japan Airport Terminal):** To welcome increasing visitors to the 2020 Olympic Games, the Japanese government plans to raise the number of international flights per day by 50 to 150, which is to become a full capacity. I understand Narita airport, which is also working to expand the capacity, has yet more capacity to fill.

**(Question):** (1) What is the mechanism to receive services of OCAJI? (2) How do you cooperate with local governments?

**(OCAJI):** (1) OCAJI is a gateway organization as explained in the presentation. You can contact directly to OCAJI, then we arrange the communication with our member companies. (2) As there are not so many opportunities to communicate with local authorities than with the central government, we wish they can join the meetings to be held in the capital city.

**E) Presentation by Japan Bridge Association (IHI Infrastructure Systems Co, Ltd )**

**Mr Yuji Nose, Associate, Secretary-general, Overseas Business Development Committee, Japan Bridge Association (Manager, Sales Section No 1, Overseas Sales Department, IHI Infrastructure Systems Co, Ltd)** described superiority of Japanese bridge technologies. He introduced bridge business of the company and showcased its global track records as well.

**F) Presentation by Sekisui Chemical Co Ltd**

**Mr Noriaki Kobayashi, Manager, Overseas Pipeline Renewal Division, Urban Infrastructure & Environmental Products Company** explained its Sewage Pipe Renewal (SPR) technology, which realizes such advantages as shortened construction period, effective use of existing pipes and small environmental impact.

**G) Presentation by Hitachi, Ltd**

**Mr Yasunari Oka, Unit Leader, Regional Sales Group, Business Development & Sales Department, International Business Development & Sales Division, Hitachi, Ltd Railway Systems Business Unit** showed turnkey services of its overseas railway business. Projects in the UK and the future smart solution for rail were introduced as well.

**Q&A**

**(Question):** What was the biggest challenge in OMY District development?

**(Mitsubishi Estate):** Some of the biggest challenges were to acquire the consent to the redevelopment of all landlords and to reach an agreement with the local government.

**(Question):** What is the concept of development of Haneda Airport which is located close to downtown Tokyo?

**(Haneda Airport):** As it is located on the sea and suffers from land shortage, the airport has become compact. Taking an advantage of the location and the good transport system including monorails, it is considered as one of the most convenient airports in the world. Our dedicated staff is also a key to the acclaimed reputation.

**(Question):** (1) Can SPR technology be applied to rainwater drainage? (2) Is the technology patented in Japan? How can it be used outside Japan? (3) What is the smallest diameter of the pipe?

**(Sekisui Chemical):** (1) It is able to use the technology in drainage unless it has high pressure. (2) We owned the patent all over the world. We work with local partners, which implement construction works. (3) The applicable diameter range is 150mm-5,500mm

**(Question):** We have very big Danjiang Bridge project underway with the cost of 200 million US dollars in Chinese Taipei. We would like to invite IHI's bidding.

**(IHI):** We are well aware of the project and keen to consider bidding.

At the end of the session, Mr Tanaka briefly introduced ADB's initiatives on QI, introducing its high-level technology funds established in April 2017. ADB's new procurement policy, which stipulates two new pillars, quality and value for money was explained as well.

#### **4. Infrastructure Tour**

In order to provide an opportunity to see and experience quality infrastructure investment accumulated in the City of Tokyo, the "**Infrastructure Tour**" was arranged on 18 October 2017. Participants visited three locations in Tokyo area; **Komatsu IoT Center**, **Panasonic Center Tokyo** and **Tokyo Sky Tree Town**.

At Komatsu IoT Center, the demonstration site of the global construction machinery manufacturer, its ICT-integrated strategy "Smart Construction" was introduced. The participants experienced demonstrative driving of intelligent ICT machines.

Participants also visited the Panasonic Center Tokyo, a show-room of Japanese leading electronics company, exhibiting solutions of the next generation such as ICT-based home appliances, smart town development and sustainable technologies.

The participants lastly visited Tokyo Sky Tree Town, which consists of a 634m broadcasting tower and its surrounding building. While architectural and engineering technologies were introduced by the designer Nikken Sekkei, the developer and owner of the tower explained the development of the tower and its retail complex. The participants then climbed the tallest structure in Japan to the observatory and studied Tokyo's transit-oriented development (TOD).

## **IV Conclusions**

The participants shared good practices of quality infrastructure investment and discussed challenges and elements that are conducive to quality infrastructure investment as well as their expectation for APEC, which contributed to the participant's capacity building. The commitment to promote investment with a focus on infrastructure, and thereby strengthening connectivity and contributing to opening up new sources of sustainable economic growth, fostering inclusive and interconnected development, and advancing regional economic integration of the APEC Region was affirmed.

Public Private Dialogue and Infrastructure Tour helped the participants raise awareness of the importance of quality infrastructure and initiate networking among the public and

private sector. It was encouraged that the APEC economies will continue the discussion to deepen understanding and nurture shared view on quality infrastructure investment.

## **V Next Steps**

As confirmed in the **Report on the Outcomes of APEC High-level Meeting on Quality Infrastructure**, the economies were encouraged to promote quality infrastructure projects depending on the context of each economy, recognizing the importance of “quality” in infrastructure projects and understanding diversity of APEC member economies.

At the meeting, continuing efforts was suggested through measures including utilization of such meetings of relevant ministries in charge of infrastructure planning and implementation with a view to:

- Share information of project identification, preparation and procurement of each economy, which is of great importance and influence for promoting quality infrastructure projects, as already pointed out in APEC Multi-Year Plan on Infrastructure Development and Investment in 2013.
- Share good practices of quality infrastructure project planning and implementation.
- Consider effective monitoring and stock taking on quality infrastructure projects.

It was encouraged APEC economies to continue sharing good practices and related information and exchange opinions among APEC economies, international organizations, and private sector to promote quality infrastructure in APEC economies.

**List of Participant for the APEC High Level Meeting on Quality Infrastructure**

**(1) APEC Economies**

Australia	<p><b>Mr Christopher Connan LEE</b> First Secretary, Australian Embassy</p> <p><b>Mr Brenton GOLDSWORTHY</b> Minister Counsellor from Australia's Department of the Treasury, Australian Embassy</p> <p><b>Ms Jane OGGE-COWAN</b> Counsellor (Trade and Economic), Australian Embassy</p> <p><b>Mr Kazutaka SAKURAI</b> Research Officer (Trade and Economic), Australian Embassy</p>
China	<p><b>Mr Fei XIE Director</b> PPP Center, Ministry of Finance</p> <p><b>Mr Chunyang WANG</b> Commercial Attache, Ministry of Commerce</p> <p><b>Ms Yikun HE</b> Attache, Embassy of the People's Republic of China</p>
Hong Kong, China	<p><b>Mr HON Chi Keung</b> Permanent Secretary for Development (Works) Development Bureau</p> <p><b>Mr KWONG Ka Sing, John</b> Head of Project Cost Management Office Development Bureau</p> <p><b>Mr Tommy CHEUNG</b> Assistant Secretary (Programme Management) Development Bureau</p>
Indonesia	<p><b>Ms Alferia RIEDATINA</b> Head of Water Resources, Infrastructure Investment Planning Section Indonesia, Investment Coordinating Board (BKPM RI)</p> <p><b>Mrs Armi YUNIANI</b> Assistant to Deputy Director of APEC Investment Access, Ministry of Trade</p>
Korea	<p><b>Mr SeungHee, YI</b> Deputy Director of International Cooperation and Trade Division, Ministry of Land, Infrastructure and Transport</p> <p><b>Mr HyunSik, YUN</b> Assistant Director of International Cooperation and Trade Division, Ministry of Land, Infrastructure and Transport</p>
Malaysia	<p><b>Mr Abdul Razak Bin Jaafar</b> Deputy Secretary General (Policy &amp; Development), Ministry of Works</p> <p><b>Ms Norsuriani MD Saleh</b> Principal Assistant Secretary (Policy &amp; International Division), Ministry of Works</p>
Peru	<p><b>Mr Jorge VALVERDE</b> Investment Specialist Investment, Promotion Agency Of Peru - ProInversion</p> <p><b>Mr Lenin MAYORGA</b> Public Private Partnership (PPP), Legal Expert, Ministry of Economy and Finance</p> <p><b>HE Mr Harold W. FORSYTH</b> Ambassador, Embassy of the Republic of Peru</p> <p><b>Mr Mario Bustamante</b> Counselor Embassy of the Republic of Peru</p>
Philippines	<p><b>Dr Maria Catalina E. CABRAL</b> Undersecretary for Planning and PPP Dept of Public Works and Highways</p>



**Mr Manuel Antonio TAMAYO**  
Undersecretary For Aviation And Airports, Department of Transportation

**Mr Ruben Santibañes REINOSO, Jr.**  
Undersecretary For Planning And Project Development, Department of Transportation

**Mr Eduardo M.R. MEÑEZ**  
Deputy Chief of Mission Embassy of the Republic of the Philippines

Russia **Mr MARIN Sergei**  
Counsellor Embassy of the Russian Federation

**Mr KLASSEN Aleksey**  
2nd Secretary Embassy of the Russian Federation

Singapore **HE Mr LUI Tuck Yew**  
Ambassador Embassy of the Republic of Singapore

**Ms Emily LEK**  
First Secretary (Political) Embassy of the Republic of Singapore

Chinese Taipei **Mr Yu-Hsing, Ho**  
Director, Department of Construction Management, Public Construction Commission, Executive Yuan

**Dr Chien-Hsin, Lai**  
Director General, Water Resources Agency, Ministry of Economic Affairs

**Mr Kuo-Chu, Tseng**  
Deputy Director, Water Resources Planning Institute, Water Resources Agency, Ministry of Economic Affairs

Thailand **Dr Vanchak CHAYAKUL**  
Chief Engineer for Traffic Safety, Department of Highways, Ministry of Transport

**Dr Piyapong JIWATTANAKULPAISARN**  
Civil Engineer, Senior Professional Level, Bureau of Planning, Department of Highways, Ministry of Transport

United States **Mr Keith KIRKHAM**  
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**Mr Olivier GARAUD**  
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Deputy Director-General, International Cooperation Department, Ministry of Construction

**Mr LUONG Ngoc Khanh**  
Deputy Director, Water Supply Management Division, Administration of Technical Infrastructure Department, Ministry of Construction

**Mr Tri Minh NGUYEN**  
Official, APEC-ASEM Division, Multilateral Trade Policy Dept, Ministry of Industry and Trade

## **(2) Government of Japan**

Cabinet	<b>Mr Hiroto IZUMI</b> Special Advisor to the Prime Minister
MLIT	<b>Mr Koichi YOSHIDA</b> Vice-Minister for Land, Infrastructure and Hokkaido Development, Ministry of Land, Infrastructure, Transport and Tourism <b>Mr Yasuhiro Shinohara</b> Director-General for International Affairs, Ministry of Land, Infrastructure, Transport and Tourism <b>Mr Yuji SUDO</b> Assistant Vice-Minister, Minister's Secretariat, Ministry of Land, Infrastructure, Transport and Tourism <b>Mr Kazuo Ohzawa</b> Counsellor for Global Strategies, Minister's Secretariat, Ministry of Land, Infrastructure, Transport and Tourism <b>Ms Kazuko ISHIGAKI</b> Director, International Planning for Construction Industry, Ministry of Land, Infrastructure, Transport and Tourism <b>Mr Tadashi OKADA</b> Director for Global Market Development, Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism
MOFA	<b>Mr Shinya FUJITA</b> Director, APEC Division, Economic Affairs Bureau, Ministry of Foreign Affairs <b>Mr Hiroshi AKAI</b> Deputy Director, APEC Division, Economic Affairs Bureau, Ministry of Foreign Affairs <b>Ms Shiho ISHIKAWA</b> APEC Division, Economic Affairs Bureau, Ministry of Foreign Affairs
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## **(3) International Organizations**

OECD	<b>Ms Naoko UEDA</b> Deputy Director, OECD Development Centre, OECD
ADB	<b>Mr Oily NOROJONO</b> Director, Transport, Energy and Natural Resources Division, Pacific Department, Asian Development Bank <b>Mr Yasushi TANAKA</b> Officer-in-Charge/Principal Transport Specialist for Transport and Communications Division, Southeast Asia Department, Asian Development Bank
World Bank	<b>Mr Daniel LEVINE</b> Senior Officer, Social, Urban, Rural and Resilience Global Practice Tokyo Development Learning Center (TDLC) Program, World Bank Group

GIH                   **Ms Morag BAIRD**  
Senior Manager, Global Infrastructure Hub

ABAC               **Mr Motomu Takahashi**  
Japan ABAC Member, APEC Business Advisory Council (ABAC)  
(Counselor , Mitsui & Co, Ltd)

**Mr Koji HASEGAWA**  
ABAC Alternate Member (Japan), APEC Business Advisory Council (ABAC)  
(Executive Vice President , Mitsubishi Heavy Industries, Ltd)

**Mr Taro NARUSE**  
Deputy Executive Director, Support Council for ABAC-JAPAN

#### **(4) Private Sectors**

Private           **Mr Takuma HATANO**  
Sectors           President & CEO, Japan Overseas Infrastructure Investment Corporation for Transport &  
                      Urban Development

**Mr Yoshihiro YAMAGUCHI**  
Chief Executive Director, COO, The Overseas Construction Association of Japan, Inc

**Mr Hidetoshi TOGAWA**  
Executive Fellow, The Overseas Construction Association of Japan, Inc

**Mr Kazuo INABA**  
Executive Officer, Japan Airport Terminal Co, Ltd

**Mr Taku TANIKAWA**  
Manager, Area Management Promotion Office, Urban Development Promotion  
Department, Mitsubishi Estate Co, Ltd

**Dr Takahiro KUMAGAI**  
International Committee, Japan Dredging and Reclamation Engineering Association  
(Penta-Ocean Construction Co, Ltd)

**Mr Yuji NOSE**  
Associate, Secretary-general, Overseas Business Development Committee, Japan  
Bridge Association (Manager, Sales Section No 1, Overseas Sales Dept, IHI  
Infrastructure Systems Co, Ltd)

**Mr Noriaki KOBAYASHI**  
Manager, Overseas Pipeline Renewal Division,  
Urban Infrastructure & Environmental Products Company, SEKISUI CHEMICAL CO, LTD

**Mr Yasunari OKA**  
Unit Leader, Regional Sales Group, Business Development & Sales Dept, International  
Business Development & Sales Division, Hitachi, Ltd Railway Systems Business Unit



Asia-Pacific  
Economic Cooperation

## Annex B



# APEC High Level Meeting on Quality Infrastructure

17–18 October, 2017, Tokyo Japan

Tuesday 17 October, 2017

Time	Item	Facilitator / Presenter
9:00-9:30	Registration	All

### OFFICIAL PROGRAM

**DAY 1: Tuesday 17 October, 2017**

**Venue: Grand Prince Hotel New Takanawa**

#### Session 1 : Plenary

**Co-Chair: Mr Koichi YOSHIDA, Vice-Minister,**

**Ministry of Land, Infrastructure, Transport and Tourism, Japan**

**Dr NGUYEN Duc Canh, Deputy Director, International Cooperation Department,**

**Ministry of Construction, Viet Nam**

Time	Item	Facilitator / Presenter
9:30-9:45	Greetings from Co-Chair	<b>Mr Koichi YOSHIDA</b> <b>Dr NGUYEN Duc Canh</b>
	Opening Remark	<b>Mr Hiroto IZUMI</b> Special Advisor to the Prime Minister, Japan
9:45-10:15	<u>Keynote Speech (I):</u> Quality Infrastructure Investment for Sustainable Development	<b>Mr Yuji SUDO</b> Assistant Vice-Minister, Minister's Secretariat, Ministry of Land, Infrastructure, Transport and Tourism, Japan
	<u>Keynote Speech (II):</u> Quality Infrastructure Investment In Urban Technical Infrastructure	<b>Mr NGUYEN Duc Canh</b> Deputy Director, International Cooperation Department, Ministry of Construction, Viet Nam
	<u>Keynote Speech (III):</u> JOIN's Investments in High Quality Infrastructure Projects	<b>Mr Takuma HATANO</b> President & CEO Japan Overseas Infrastructure Investment Corporation
10:15-10:20	Photo Session	All
10:20-11:00	Coffee Break and Exhibition Tour (1)	All

<b>Session 2-1: Presentation &amp; Discussion Session</b>		
<b>Moderator: Ms Naoko UEDA, Deputy Director, OECD Development Centre, OECD</b>		
<b>11:00-12:00</b>	Presentation from China	<b>Mr Fei XIE</b> Director, PPP Center, Ministry of Finance
	Presentation from Hong Kong, China	<b>Mr HON Chi Keung</b> Permanent Secretary for Development (Works), Development Bureau
	Presentation from Indonesia	<b>Ms Alferia RIEDATINA</b> Head of Water Resources, Infrastructure Investment Planning Section Indonesia Investment Coordinating Board
	Q&A, Discussion (1)	All
	Presentation from Korea	<b>Mr SeungHee, Yi</b> Deputy Director of International Cooperation and Trade Division, Ministry of Land, Infrastructure and Transport
	Presentation from Malaysia	<b>Mr Abdul Razak Bin Jaafar</b> Deputy Secretary General (Policy & Development), Ministry of Works
	Q&A, Discussion (2)	All
<b>12:00-14:00</b>	Lunch and Exhibition Tour (2)	All
<b>14:00-15:00</b>	<u>Special Speech:</u> Introduction of Global Infrastructure Hub	<b>Ms Morag Baird</b> Senior Manager, Global Infrastructure Hub
	Presentation from Peru	<b>Mr Jorge VALVERDE</b> Investment Specialist, Investment Promotion Agency Of Peru - ProInversion
	Presentation from the Philippines	<b>Dr Maria Catalina E. Cabral</b> Undersecretary for Planning and PPP Dept. of Public Works and Highways
	Q&A, Discussion (3)	All
	Presentation from Chinese Taipei	<b>Dr Chien-Hsin Lai</b> Director General, Water Resources Agency, Ministry of Economic Affairs
	Presentation from Thailand	<b>Dr Vanchak CHAYAKUL</b> Chief Engineer for Traffic Safety, Department of Highways, Ministry of Transport
	Q&A, Discussion (4)	All
<b>15:00-15:30</b>	Coffee Break and Exhibition Tour (3)	All

<b>Session 2-2: Wrap-up Session</b>		
<b>Co-Chair: Mr Koichi YOSHIDA, Vice-Minister,</b> <b>Ministry of Land, Infrastructure, Transport and Tourism, Japan</b> <b>Dr NGUYEN Duc Canh, Deputy Director, International Cooperation Department,</b> <b>Ministry of Construction, Viet Nam</b>		
<b>15:30-16:00</b>	Wrap-up	All
<b>16:00-16:10</b>	Move to the room for the Public-Private Dialogue	All
<b>Session 3: Public Private Dialogue</b>		
<b>Moderator: Mr Yasushi TANAKA, Officer-in-Charge/Principal Transport Specialist</b> <b>for Transport and Communications Division, Southeast Asia Department, ADB</b>		
<b>16:10-17:30</b>	The Overseas Construction Association of Japan, Inc.	<b>Mr Yoshihiro YAMAGUCHI</b> Chief Executive Director The Overseas Construction Association of Japan, Inc.
	Japan Airport Terminal Co., Ltd	<b>Mr Kazuo INABA</b> Executive Officer Japan Airport Terminal Co, Ltd
	Mitsubishi Estate Co., Ltd.	<b>Mr Taku TANIKAWA</b> Manager, Area Management Promotion Office, Urban Development Promotion Department, Mitsubishi Estate Co, Ltd.
	Japan Dredging and Reclamation Engineering Association	<b>Dr Takahiro KUMAGAI</b> Member of International Committee, Japan Dredging and Reclamation Engineering Association(JDREA)
	Q&A, Discussion (1)	All
	Japan Bridge Association (IHI Infrastructure Systems Co., Ltd )	<b>Mr Yuji NOSE</b> Associate, Secretary-general, Overseas Business Development Committee, Japan Bridge Association (Manager, Sales Section No 1, Overseas Sales Department, IHI Infrastructure Systems Co, Ltd)
	Sekisui Chemical Co. Ltd.	<b>Mr Noriaki KOBAYASHI</b> Manager, Overseas Pipeline Renewal Division, Urban Infrastructure & Environmental Products Company, Sekisui Chemical Co Ltd.
	Hitachi, Ltd.	<b>Mr Yasunari OKA</b> Unit Leader, Regional Sales Group, Business Development & Sales Dept, International Business Development & Sales Division, Hitachi, Ltd. Railway Systems Business Unit
	Q&A, Discussion (2)	All
<b>18:00-19:30</b>	Reception with Private Sectors	All

**DAY 2: Wednesday 18 October, 2017****Infrastructure Tour**

<b>Time</b>	<b>Item</b>
<b>8:45</b>	Meeting at main lobby in Shinagawa Prince Hotel
<b>8:50-10:00</b>	[Bus] Shinagawa Prince Hotel → Komatsu IoT Center
<b>10:00-11:30</b>	Infrastructure Tour (1) at Komatsu IoT Center - Visiting a construction machinery company to experience ICT based Construction Technology
<b>11:30-12:00</b>	[Bus] Komatsu IoT Center → Ariake Washington Hotel
<b>12:00-13:15</b>	Lunch at Ariake Washington Hotel
<b>13:15-13:30</b>	[Bus] Ariake Washington Hotel → Panasonic Center Tokyo
<b>13:30-15:30</b>	Infrastructure Tour (2) at Panasonic Center Tokyo - Visiting an exhibition facility to experience ICT based society and infrastructures
<b>15:30-16:15</b>	[Bus] Panasonic Center Tokyo → Tokyo Sky Tree Town
<b>16:15-17:45</b>	Infrastructure Tour (3) at Tokyo Sky Tree Town - Visiting a landmark tower of Tokyo to experience Transit Oriented Development (TOD)
<b>17:45-18:45</b>	[Bus] Tokyo Sky Tree Town → Shinagawa Prince Hotel

**Report on the Outcomes of APEC High-level Meeting on Quality Infrastructure**

Promoting Quality Infrastructure Investment in APEC Region

1. The APEC High-level Meeting on Quality Infrastructure was held in Tokyo, Japan on October 17-18, 2017. The meeting was co-chaired by Mr Koichi Yoshida, Vice Minister of Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Government of Japan, and Dr Nguyen Duc Canh, Deputy Director General of International Cooperation Department, Ministry of Construction, Government of Viet Nam.
2. Participants shared good practices of quality infrastructure investment and discussed challenges, good practices and elements that are conducive to quality infrastructure investment as well as their expectation for APEC.
3. Taking into account the diverse inputs presented and discussed at the meeting, the discussions within APEC and in the international arena as well as Sustainable Development Goals, the Co-Chairs present the following views of APEC economies' experts.
4. Based on the Leader's Declaration of APEC Peru 2016, the Meeting underlined the aspirations towards balanced, inclusive, sustainable, innovative and resilient growth in the APEC region to advance regional economic integration and promote quality growth.
5. Building upon the "APEC Connectivity Blueprint 2015-2025," and noting global and regional initiatives that promote infrastructure development, the Meeting affirmed the commitment to promote investment with a focus on infrastructure in terms of both quantity and quality, thereby strengthening connectivity and contributing to opening up new sources of sustainable economic growth, fostering inclusive and interconnected development, and advancing regional economic integration of the APEC Region.
6. The Meeting reiterated the importance of quality infrastructure for sustainable economic growth and people-centered urbanization, and encouraged the



practice of quality infrastructure investment by APEC economies. The Meeting also pointed out that challenges remain in each economy and at APEC level, such as difficulty of measuring direct and indirect impact of quality infrastructure investment, lack of experience in PPP and proper management of procurement process to assure selection of quality infrastructure proposals. The participants also shared their views on QII elements and good practices.

7. The Co-Chairs appreciate China; Hong Kong, China; Indonesia; Japan; Korea; Malaysia; Philippines; Chinese Taipei; Thailand; and Viet Nam for sharing good practices, which are attached as Annex A. The Meeting encourages the collection of more good cases in order to continue sharing good practices by cooperation of APEC economies and international organizations while utilizing such meetings.
8. Taking into account the diverse inputs and opinions presented in the meeting, the discussions within APEC and in the international arena as well as Sustainable Development Goals, the Meeting discussed possible aspirational targets/elements in realizing quality infrastructure investment. The Meeting encourages the APEC economies to continue the discussion to deepen understanding and nurture shared view on quality infrastructure investment.
9. The Meeting also appreciates contribution from international organizations including the OECD, World Bank, Asian Development Bank, Global Infrastructure Hub and APEC Business Advisory Council as well as several private companies to provide perspective from private sector. The Meeting recommends public-private dialogue on infrastructure will be continued in APEC.

### **Looking Forward**

10. Recognizing the importance of “quality” in infrastructure projects and understanding diversity of APEC member economies, the Meeting encouraged APEC member economies to promote quality infrastructure projects depending on the context of each economy.
11. The Meeting suggested continuing efforts through measures including utilization of such meetings of relevant ministries in charge of infrastructure planning and

implementation with a view to:

- Share information of project identification, preparation and procurement of each economy, which is of great importance and influence for promoting quality infrastructure projects, as already pointed out in APEC Multi-Year Plan on Infrastructure Development and Investment in 2013.
- Share good practices of quality infrastructure project planning and implementation.
- Consider effective monitoring and stock taking on quality infrastructure projects.

12. The Meeting encourages APEC economies to continue sharing good practices and related information and exchange opinions among APEC economies, international organizations, and private sector to promote quality infrastructure in APEC economies.

# **Good Practice Quality Infrastructure Case Book**

**17 October 2017  
APEC High Level Meeting on  
Quality Infrastructure**

# Contents

No	Economy	Case
1	China	Waste Interception around Erhai Lake PPP Project in Dali of Yunnan Province
2	China	Changsha Mid-Speed Maglev Express PPP Project, Hunan Province
3	Hong Kong, China	Kai Tak Development
4	Indonesia	UMBULAN WATER SUPPLY
5	Japan	Nhat Tan Bridge Construction Project
6	Japan	Jakarta Mass Rapid Transit
7	Korea	Incheon Bridge
8	Korea	Incheon International Airport Expressway
9	Korea	Seoul Outer Ring (Ilsan – Toegyewon) Expressway
10	Malaysia	Pan Borneo Highway Project
11	Peru	Line 2 and Branch Line 4 Concession of the Lima and Callao Basic Metro Network
12	Philippines	Rehabilitation of Ayala Bridge, Manila
13	Philippines	Metro Manila Skyway Stage 3
14	Philippines	Fort Bonifacio Retarding Tank
15	Chinese Taipei	Zengwen Reservoir Sediment-Sluice Tunnel Project
16	Thailand	PPP Motorways for Operation and Maintenance
17	Thailand	National Program on Roadside Safety Improvement

## 1. China

### Good Practice 1: <Waste Interception around Erhai Lake PPP Project in Dali of Yunnan Province>

#### Project Summary

- ✓ In recent years, the water pollution of Erhai Lake, a famous tourist attraction, has become severe although local government paid great efforts. In order to control the pollution efficiently and effectively, the local government decided to carry out this project via PPP.



#### <The impacts>

- ✓ The total investment of the project full-life cycle cost, from planning, design, construction to operation, decreases to US\$445M from US\$521M, the planned investment;
- ✓ The construction period is 6 months ahead of schedule; and
- ✓ The winner of the project, selected by competitive consultation, uses a systematic solution approach with advanced technology, including building up sewage pipe network to collect waste water in the area, 6 underground waste water treatment plants, and landscape planting.

#### Good Practices

\*Please explain why you think this project is a good practice of QII.

- ✓ Water quality is foreseen and guaranteed during PPP agreement period;
- ✓ Government makes performance-based payment to improve the performance of fiscal fund;
- ✓ Best contractor is selected through high competitive procurement; and
- ✓ The private sector provides systematic solution approach and innovative technology.

## 2. China

### Good Practice 2: < Changsha Mid-Speed Maglev Express PPP Project, Hunan Province >

#### Project Summary

- ✓ Total length is about 18.5km. It runs from the Railway Station, through crowded downtown, to the Airport;
- ✓ The train has three carriages, each carrying 363 passengers at maximum. Designed top speed is 100km/h; and
- ✓ Began in May 2014, conducted trial operation in May, 2016.



#### <The impacts>

- ✓ Low Cost. RMB 195 million (USD 29 million) per kilometer due to a smaller turning radius such as 50 meters at minimum. So it can save a lot of cost for displacement and resettlement;
- ✓ Low Noise, more safety and zero emission. Maglev train basically “holds” the track while running. It floats about 8mm above the F track, thus avoiding risks of derailing in traditional rail transport with low noises and vibrations, and zero emission; and
- ✓ More smooth, convenient transportation with better services.

#### Good Practices

\*Please explain why you think this project is a good practice of QII.

- ✓ Use the most appropriate technology like mid-speed instead of high-speed maglev train;
- ✓ The success of this project is copied by Beijing and other cities; and
- ✓ Fully use the advantages of consortium, which has 5 shareholders including constructor, operator, investor and equipment supplier.

### 3. Hong Kong, China

## Good Practice: <Kai Tak Development>

### Project Summary

#### Background

- 320 ha brownfield site from relocation of international airport from Kai Tak to Chek Lap Kok
- Infrastructure investment > HK\$100 billion

#### Planning Vision

- A distinguished, vibrant, attractive and people-oriented community by the Victoria Harbour
- Home for 130,000 people

#### Planning Themes/ Initiatives

- Quality living environment
- Green web for sustainable development
- Heritage, green, sports and tourism hub of Hong Kong, China
- Pilot area for smart city, strategic site for transforming Kowloon East into CBD2



### 3. Hong Kong, China

## Good Practice: <Kai Tak Development>

### Good Practices

#### Major Features

- A world-class cruise terminal together with a tourism and entertainment hub (Kai Tak Fantasy) to promote Hong Kong, China as a regional cruise centre
- A mega Kai Tak Sports Park with a 50,000-seat world-class stadium for major international sports and other events
- Efficient and green transport infrastructure for high connectivity
- The first district cooling system in Hong Kong, China to enhance cooling efficiency and lower energy consumption
- 100 ha green open space with a 24 ha Metro Park and 11km long waterfront promenade



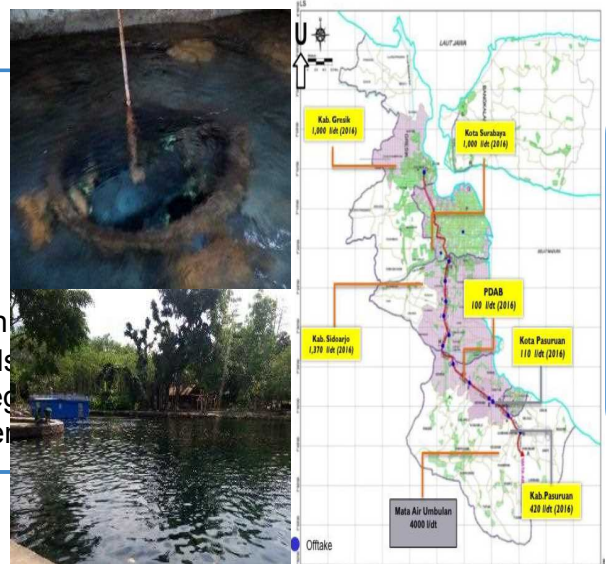
#### Project Implementation Policies

- Government commitment for sustained long-term development
- Comprehensive planning under statutory procedures and widespread public engagement
- Phased implementation to allow better control on budget as well as programme
- Dedicated multi-disciplinary professional major project leaders overseeing planning, design, construction, operation and maintenance of infrastructure



Summary

**Investment value:** US\$ 140.7 million  
**Capacity:** 4.000 L/sec  
**Cooperation period:** 25 years start when COD  
**VGF:** 818 Billion IDR, awared 25 January 2016  
**Financial Close:** January 2017  
**Private Role:** BOT for Production and transmission  
**Buyer:** 5 regional owned enterprises (called PDAMs) in 5 Cities/Regencies (Pasuruan City, Pasuruan Reg, Surabaya City, Sidoarjo Regency, and Gresik Regency)



IMPACT

✓ 1.3 million people or 310.000 houses receive benefit of clean water

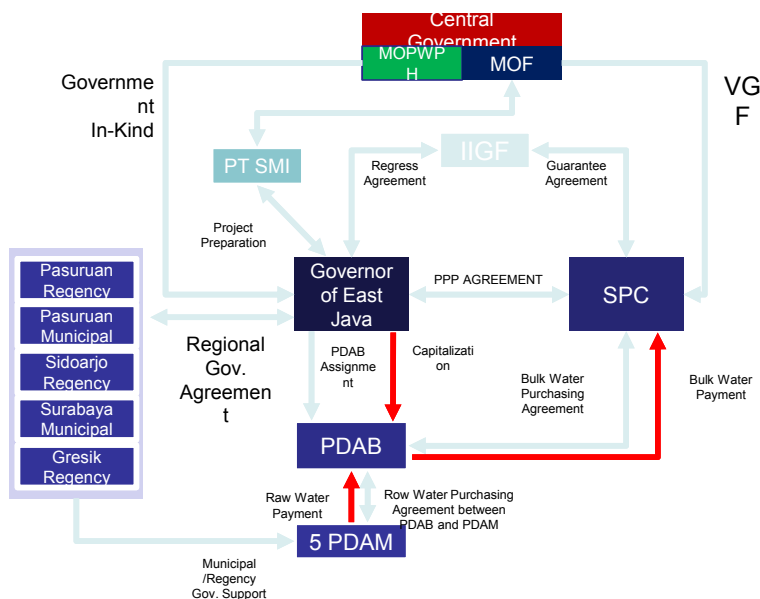
GOOD PRACTICES OF QII

- ✓ Effective governance with transparent in whole project cycle
- ✓ Sustainable finance scheme with VGF from Ministry of Finance
- ✓ Promoting private investment with PPP scheme
- ✓ Good evaluation with on time financial close
- ✓ Big impact to the local communities



PPP with Tariff and Viability Gap Fund (VGF)

Umbulan Water Supply (US\$ 140.7 million)



Viability Gap Fund

- VGF is a Government support facility in the form of fiscal contribution.
- VGF is given to infrastructure projects which are built under the PPP scheme and aims to improve the project's financial viability.
- The maximum value of VGF is 49% of project investment value.
- Tariffs are set by Regional Water Company (PDAB) based on a bulk water supply agreement with 5 Municipal Water Companies (PDAM).

Legal basis :

- Ministry of Finance Decree Number 223/PMK.11/2012 concerning the Provision of Viability Support for Part of Construction Costs on Government Partnership Projects with Business Entities in the Provision of Infrastructure.

## 5. Japan

### Nhat Tan Bridge (Vietnam-Japan Friendship Bridge) Construction Project (Vietnam, Japanese ODA Loan)

#### Background, summary, etc.

##### [Background]

##### ○ Deterioration of traffic conditions

Deterioration of traffic conditions due to rapid increasing of automobiles as a result of population growth in the central part and suburbs of the metropolitan area.



##### [Project summary]

To meet increasing traffic demand, a bridge (3.9 km long; 8 lanes) over the Song Hong River, which runs across Hanoi City, and approach roads (north and south roads of 5.9 km in total) were constructed under the STEP (Japan-tied loan conditions). Japanese ODA Loans (54.1 billion yen in total) were provided for Phase I (approved in March 2006; 13.7 billion yen), Phase II (approved in January 2011; 24.8 billion yen) and Phase III (approved by March 2013; 15.6 billion yen). The bridge opened in January 2015.

##### [Result]

Efficiency improvement of distribution, mitigation of traffic congestion (required time between Noi-bai airport and Hanoi City was reduced by about 20 min)

Promotion of economic development and improvement of international competitiveness in Hanoi City and the northern part of Vietnam

#### Characteristics as a "Quality Infrastructure" project

- |  |   |  |
|--|---|--|
| 4) Economic efficiency<br>(e.g. low life-cycle cost) | } | ✓ A Japanese company contributed to the reduction of environmental burdens and the improvement of cost efficiency in the construction, applying "Steel Pipe Sheet Pile Wall structure," its soft-ground construction method, for the foundation of the bridge.   |
| 6) Safety / resilience                               | } | ✓ The above-mentioned structure was used in Vietnam for the first time. As a result of the application for this project, the method was adopted as the country's bridge design standard, contributing to safe construction of bridges.   |
| 8) Convenience / amenities                           | } | ✓ The procurement of equipment and materials for construction and labor management was carried out by Japanese companies to secure the quality and safety of the construction.<br>✓ The Noi Bai International is connected with central Hanoi by a high-standard highway and bridges to shorten the required time for transportation by about 20 min (i.e. 55 min → 35 min). |
| 9) Contribution to the local society and economy     | } | ✓ Japanese skilled engineers transfer skills to Vietnamese engineers.<br>✓ Bridge parts and materials are manufactured local subsidiary of a Japanese company (many of whose employees are Vietnamese).  |

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## 6. Japan

### Jakarta Mass Rapid Transit (Indonesia, Japanese ODA Loan)

#### Background, summary, etc.

##### [Background]

##### ○ Sharp rise in the population of the Jakarta metropolitan area

21 million in 2000 → 28 million in 2010

##### ○ Air pollution and greenhouse gas

Taking measures for reducing air pollution and greenhouse gas is acutely necessary due to the worsening traffic congestion.

##### ○ Deterioration of traffic condition

The traffic congestion deteriorated as a result of an increase in the population of the center and suburbs of the metropolitan area and an increase in the total number of registered vehicles.

Number of registered vehicles (two-wheeled vehicles and passenger vehicles): 2.67 million in 2000 → 9.63 million in 2010

##### [Project summary]

The purpose of the project is to construct a mass rapid transit system in the Jakarta metropolitan area, where traffic congestion is serious, in order to improve the passenger transport capacity and mitigate traffic congestion.



#### Characteristics as a "Quality Infrastructure" project

- |   |   |   |
|---|---|---|
| (2) Ensuring alignment with socioeconomic development and development strategies of developing countries/regions as well as comprehensive response to the needs | } | ✓ In the "National Railway Master Plan" (2011), Ministry of Transportation of Indonesia designated this project as one of the main projects for dealing with an increased railway demand expected by 2030.  |
| (3) Application of high-quality standards (e.g. guidelines for environmental and social considerations)   | } | ✓ This project assists the Indonesian Government to address issues, such as environmental consideration (by contributing to the reduction of air pollution) and urban problems (by mitigating traffic congestion through the development of a public transit system).                                   |
| (4) Economic efficiency of reduction in life-cycle cost   | } | ✓ Public works: The mud pressure shield method, for which Japanese companies have comparative advantage, is used to minimize impact on the ground surface and mitigate traffic congestion.  |
| (8) Convenience / amenities   | } | ✓ Railway system: The project adopted train cars in accordance with "STRASYA," the standard specification of urban railway system which enables the public and private sectors in Japan to promote exports to Asian countries. The project also adopted Japan's signal system and the IC card "FeliCa." |

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## 7. Korea

# Incheon Bridge

### Project Summary

- ▶ Reinforced concrete bridge connecting Incheon Airport and mainland of Korea
- ▶ Construction Period: '05.7-'09.10(52 months)
- ▶ 21.348km long with 12.34km on the sea
- ▶ Six lanes, 31.4m wide, main span 800m
- ▶ Funded by private sector and public sector
  - \* Private 1.3 billion USD, Public 0.75 billion USD
- ▶ Developed by PPP (BTO)
- ▶ The world's fifth-longest long-span, cable-stayed bridge



### Good Practices

- ▶ An excellent case of public private partnership (PPP) where the government's pursuit of the public interest and the contribution of foreign capital and technologies are well combined
- ▶ With shorter time and distance between the southern parts of Seoul and the Metropolitan area to the Incheon International Airport by 40 minutes and 13km
- ▶ The anticipated economic effects of USD 7.3 billion in total production inducement, USD 2.14 billion in value-added inducement, and 76,000 in job creation
- ▶ Can be utilized as tourism resources and an alternative to the Yeongjong Grand Bridge in case of emergency such as natural disasters

## 8. Korea

# Incheon International Airport Expressway

### Route Map



### Outline

- Extension : 40.3Km(6~8-lane-road)
- Section : Incheon ~ Goyang
- Investment Cost : 1.74 trillion won (1.6 billion dollars)
  - PI 1.46 Const. Subsidy 0.12 Land Cost 0.16
- Implementation Type : BTO (for 30yrs)
- Construction period: 1995.11 ~ 2000.11
- Rate of Return : 9.7% (after-tax)

- ※ No. 1 PI Project implemented by PI Promotion Act
  - ▶ Connected the Airport with capital area

## Seoul Outer Ring (Ilsan – Toegyewon) Expressway

### Route Map



### Outline

- Extension : 36.3Km(8-lane-road)
  - Section : Goyang ~ Namyangju
  - Investment Cost : 2.28 trillion won (2.1 billion dollars)
    - PI 1.48 Const. Subsidy 0.5 Land Cost 0.3
  - Implementation Type : BTO (for 30yrs)
  - Construction period
    - 1st : 2001.6~2006.6(Ilsan~Songchu, Uijeongbu~Toegyewon)
    - 2nd : 2001.6 ~ 2008. 6 (Songchu~Uijeongbu)
  - Rate of Return : 8.51% (after-tax)
- ※ Dispersed traffic in outskirts of Seoul, solved severe traffic problem in capital area



## Good Practice: Pan Borneo Highway Project

### Project Summary

1<sup>st</sup> highway project to be implemented by the Government of Malaysia utilizing the Project Delivery Partner concept that is monitored on Key Performance Indicators (KPIs). Involving works of upgrading current trunk road from 2-lane single carriageway to a 4-lane dual carriageway and other amenities. Development period of 5 years with target completion by 2021. The estimated total length of Pan Borneo Highway is 2300 km (Sarawak - 1,089 km, Sabah - 1,236 km).

### Benefits of project

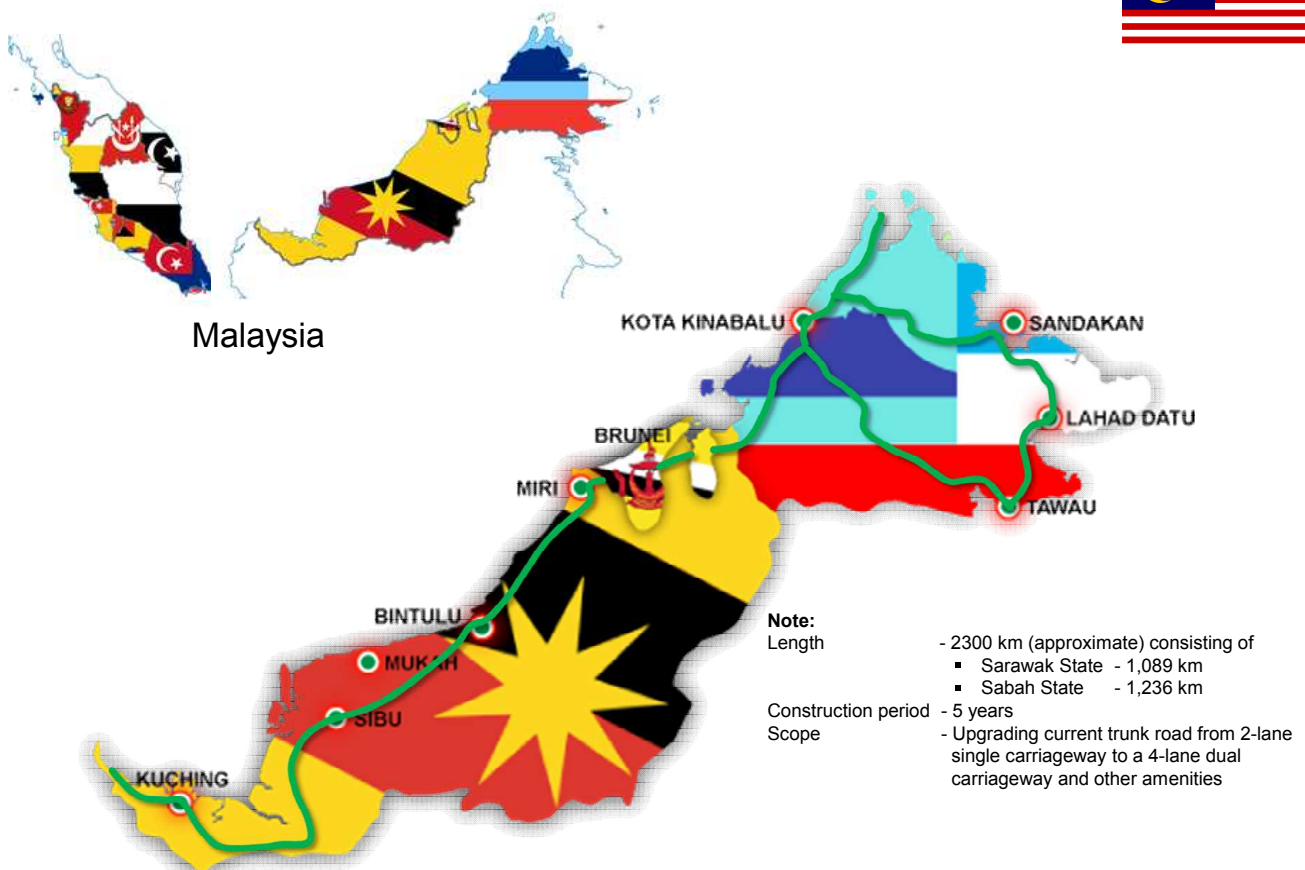
- **Improving road users' journey** – safer, faster, cheaper travel
- **Highway spin-offs** – economic multiplier, job creation in various areas
- **Spill over effects** – knowledge/technology transfer, human resource development and talent management
- **Socio economic catalyst** – boosts economic and development corridor

### Good Practices

- ✓ Effective governance, operations and economic efficiency
- ✓ Employment creations and knowledge transfer to local communities
- ✓ Successful management of social and environmental impacts
- ✓ In line with economic and development strategies
- ✓ Effective resource utilisation and management



## Good Practice: Map of Pan Borneo Highway Project



## 11. Peru

### Line 2 and Branch Line 4 Concession of the Lima and Callao Basic Metro Network

#### Project Summary

- ✓ \*Integral concession including design, financing, construction, equipment systems provision, electromechanical equipment, acquisition of rolling stock, operation and maintenance.
  - ✓ Type of Infrastructure: Underground - Type of Tunnel: bidirectional - Internal diameter of the Tunnel: 9.20 m - Operation: GoA4 – Self-drive
  - ✓ The Line 2 Subway Covers 13 districts of Lima Metropolitan area and Callao. It has 35 stations to serve directly to 1.15 million people per day.
  - ✓ It comprises 27 stations, plus 8 stations corresponding to the Line 4 Subway. It will be connect with the “Metropolitano”(rapid bus system) at the Central Station, with (Metro) Line 1 at 28 de Julio Station, and with future Lines 3 and 4 of the Lima and Callao Subway (Metro).
  - ✓ Investment on the Project: USD 5.7 billion (VAT excluded).
- Co-financing
- ✓ Concession term: 35 years – Award Date: 28 March 2014



#### Good Practices

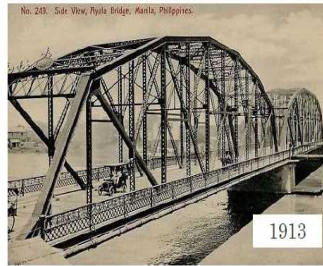
- \*The project will transform the quality of life of the population of Lima and Callao. It will improve user travel times, optimize vehicles operating costs, reduce accidents, and reduce pollution. Likewise It will generate economic benefits by revalorizing the land near the stations.
- ✓ Reduction of traffic and vehicular chaos.
- ✓ Reduction of pollution.
- ✓ 1.15 million people live 500 meters from the track.
- ✓ 2.3 million single passengers / year are estimated from 2020.

## 12. Philippines

### Good Practice: <Rehabilitation of Ayala Bridge, Manila>

#### Project Summary

- ✓ Rehabilitation of the 2-lane (per direction) 142 meter bridge
- ✓ Raising the bridge by 0.70 meters to provide adequate navigable clearance and prevent damage cause by vessels passing under the bridge.
- ✓ Retrofitting to restore the original configuration and increase bridge capacity to 20 tons.



#### Good Practices

- ✓ Enhances **resilience** against major earthquake
- ✓ Reduces **traffic disruption** compared to conventional way of replacing the bridge, the cost of replacement would have been estimated at P1.2 Billion and would require total closure for 24 months.

## 13. Philippines

### Good Practice: <Metro Manila Skyway Stage 3>

#### Project Summary

- ✓ 14.8 kms., 6-lane expressway that will connect Balintawak, Quezon City to Buendia, Makati
- ✓ Will decongest EDSA and other major roads in Metro Manila (e.g., Quezon Ave., Araneta Ave., Nagtahan, and Quirino Ave) by as much as 55,000 vehicles daily.
- ✓ Will reduce travel time from Buendia to Balintawak from 2 hours to 15 to 20 minutes
- ✓ Provides direct employment of around 6,000 jobs during construction plus additional of around 10-12 thousand indirect jobs.

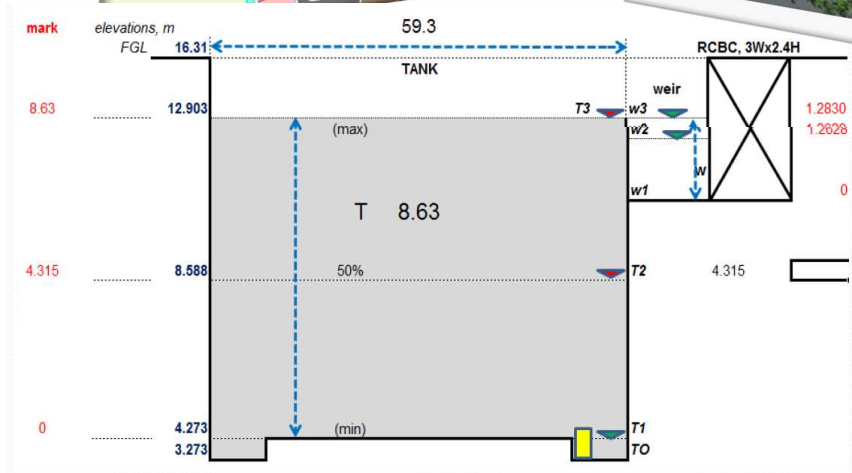


#### Good Practices

- ✓ Reduces **traffic disruption** by using Sosrobahu Technology.
- ✓ Adopts **24/7 construction schedule**.

## 14. Philippines

### Good Practice: <Fort Bonifacio Retarding Tank>



#### The Detention Tank

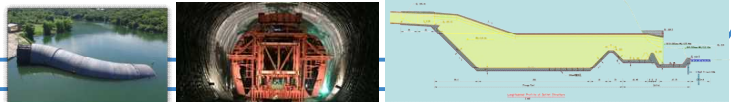
- is not meant to detain water for other uses
- is meant to temporarily detain “post development run-off” only
- should always be empty
- is fully automated

## 15. Chinese Taipei

### Good Practice: Zengwen Reservoir Sediment-Sluice Tunnel Project

#### Project Summary

- ✓ 1,266m in total length, with a maximum discharge capacity 995m<sup>3</sup>/s.
- ✓ Primary structures: Steel intake pipe (10m in diameter, 60m in length), Vertical shaft (with maintenance/ emergency fixed gear gate), Tunnel (9m in diameter, 860m in length), Plunge pool, two Tunnel-outlets (10m in width).
- ✓ Plunge pool excavated in the rock: 168.3m in length, 18m in width, one of the largest in the world.
- ✓ The project began construction in 2014, expected to be completed by December 2017.
- ✓ The expected annual sediment sluicing: 1.04 million m<sup>3</sup>. (averaged)
- ✓ Total budget: 136 million US dollars.



#### Good Practices

- ✓ **Reservoir keeps operating** for water supply and power generation during project constructing.
- ✓ **Effective working**: Construction period is 48 months only, faster than other same kind of infrastructures.
- ✓ **Construction safety**: No accident occurred, won a Public Construction Golden Safety Award.
- ✓ **Reducing expenses** of removing sediment, annual cost can be saved 23 million US dollars.
- ✓ **Resilience against natural disasters and climate change adaptation**: Increasing discharge capacity, reducing reservoir siltation, contributing to sustainable use of facilities.
- ✓ **Creates local jobs** during construction.
- ✓ **Eco-friendly**: Protecting Russet sparrows, the measures including the designation of non-disturbance zones; preservation of habitats, plants artificial nests.
- ✓ **Circular economy**: Supplement sediments to downstream channel and coastline; sediment can be used as the back-filling material, recycling for concrete products.



## 16. Thailand

### Good Practice: PPP Motorways for Operation and Maintenance

#### Project Summary

- ✓ A total 146 km. of motorways no. 7 and 9 operated by Department of Highways requires more than 2,000 staff for operation and maintenance, causing undesirable workloads for efficient operation and human resource management. Public sector capacity and capability to introduce and implement advanced technology and innovation for improving motorway services are quite limited.
- ✓ A Public Private Partnership (PPP) for operation and maintenance has been introduced to new motorway projects connecting Bangkok to North Eastern region (196 km of Motorway No. 6) and Western and Southern regions (96 km of Motorway No. 81) which are currently under construction of civil work.
- ✓ Scope of private financing for these two motorway projects includes construction of toll plaza, installation of toll collection and traffic control system (approx. 420 M.USD) as well as long term operation and maintenance of the entire route for the period up to 30 years.
- ✓ Private sector receives availability payment based on output and performance (irrespective of demand)



#### Good Practices

- ✓ Enhance effective resource mobilization from both public and private sector through PPP
- ✓ Introduce private sector efficiencies due to the whole life cycle approach of the PPP
- ✓ Encourage innovation from expertise and experience of the private sector
- ✓ Reduce operational and project execution risks for public sector
- ✓ Reduce government budgets and budget deficits, allowing public funding to be re-directed to other infrastructure or social services

## 17. Thailand

### Good Practice: National Program on Roadside Safety Improvement

#### Project Summary

- ✓ Thailand has been suffering from massive economic loss due to road traffic accidents for decades.
- ✓ Roadside crashes (e.g. run-off road vehicle hitting a fixed object) account for very significant proportions of total highway accidents and fatalities. While the application of the forgiving road concept has been clearly needed, allocation of resources to improve roadside environment and safety has been relatively low, compared to roadway capacity and mobility improvement.
- ✓ Given this evidence, Department of Highways by Bureau of Highway Safety made their greater efforts than ever to implement national program on roadside safety improvement in late 2016 by allocating a budget of over 43 million USD to highway districts nationwide for installation of guardrails on highways with roadside crash records or high-risk locations.
- ✓ The number of fatal cases and deaths from roadside crashes during the first 6 month after the implementation (March to August 2017) started to decrease, compared to the same period over the past 5 years.



#### Good Practices

- ✓ Efficient resource allocation to solve the problem
- ✓ Improve road safety and reduce economic loss from road accidents