

Global Agenda

Global Overview of International Knowledge Support across the Infrastructure Project Cycle

January 2016



World Economic Forum
91-93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland
Tel.: +41 (0)22 869 1212
Fax: +41 (0)22 786 2744
Email: contact@weforum.org
www.weforum.org

World Economic Forum®

© 2016 – All rights reserved.

No part of this publication may be reproduced or
Transmitted in any form or by any means, including
Photocopying and recording, or by any information
Storage and retrieval system.

REF 120116

Contents

1. The Consensus for Increased Infrastructure Investment Support
2. A broad Typology of Knowledge Products for Infrastructure
 - 2.1 Mapping the Knowledge Products
 - 2.2 Cross-Cutting Knowledge Products
 - 2.3 Data and Content-Based Knowledge Products
 - 2.4 Peer-to-Peer Learning Knowledge Products
 - 2.5 Process Oriented Knowledge Products
 - 2.6 Learning and Training-Oriented Knowledge Products
 - 2.7 Private Sector Education Programmes
 - 2.8 Collaborative Role of International Financial Institutions (IFIs)
3. Next Steps: The Proposed Conceptual Framework
4. Bibliography
5. Annex: Overview of IFI-led Project Preparation Facilities

Lead Authors

Julia Prescott, Chief Strategy Officer, Meridiam Infrastructure, France
Matthew Jordan-Tank, Head of Infrastructure Policy, EBRD

Editors

Thomas Maier, Chair, Global Agenda Council on Infrastructure
Managing Director, Infrastructure, European Bank for Reconstruction and Development United Kingdom

Vangelis Papakonstantinou, Project Lead, Infrastructure Initiatives, Global Agenda Council Manager, World Economic Forum

Members of the Global Agenda Council on Infrastructure

Norman Anderson, President and Chief Executive Officer, CG/LA Infrastructure, USA

Solomon Asamoah, Vice-President, Infrastructure, Private Sector and Regional Integration, African Development Bank (AfDB), Cote d'Ivoire

Amer Baig, Adviser to the Managing Director and World Bank Group Chief Financial Officer, World Bank, USA

Gordon Brown, Chair and Adviser, Global Strategic Infrastructure Initiative, Member of UK Parliament

Peter Chamley, Director: Chair, Global Infrastructure Practice, Arup Group, United Kingdom

Edwin Charnaud, Managing Director and Chairman, Global Infrastructure Practice and Managing Director, Private Equity and M&A Practice, EMEA, Marsh & McLennan Companies, United Kingdom

Matthew Farnum-Schneider, Chairman, Global Infrastructure Investor Association, United Kingdom

Guido Fürer, Group Chief Investment Officer and Member of the Executive Committee, Swiss Re, Switzerland

Reuben Jeffery, Chief Executive Officer, Rockefeller & Co., USA

Rashad R. Kaldany (Vice-Chair), Executive Vice-President, Growth Markets, Caisse de dépôt et placement du Québec, Canada

Samer S. Khoury, President, Engineering and Construction, Consolidated Contractors Company (CCC), Greece

Spencer Lake, Group General Manager; Global Head, Capital Financing, HSBC Bank, United Kingdom

Thomas Maier (Chair), Managing Director, Infrastructure, European Bank for Reconstruction and Development United Kingdom

Paul Moy, Global Head, Infrastructure and Private Equity, UBS Global Asset Management, United Kingdom

Julia Prescott, Chief Strategy Officer, Meridiam Infrastructure, France

Robert Prieto, Senior Vice-President, Fluor Corporation, USA

James Stewart, Chairman, Global Infrastructure, KPMG, United Kingdom

Ramesh Subramaniam, Director-General, Operations Service and Financial Management Department (OSFMD) Asian Development Bank, Philippines

Hélcio Tokeshi, Managing Director, Infrastructure Investments, GP Investments, Brazil

Sandra Wu Wen-Hsiu, Chairperson and Chief Executive Officer, Kokusai Kogyo, Japan

Deborah Zurkow, Chief Investment Officer and Head, Infrastructure Debt, Allianz Global Investors, United Kingdom

Foreword

In Brisbane in 2014 the G20 outlined the importance of infrastructure creation as a primary lever for fuelling global growth and improving living standards. This was the first time that a vision of infrastructure as a driver of global productivity and growth was given a significant voice.

This view of infrastructure as a global, not national, challenge is important as it allows countries to look at the broader benefits created by unlocking growth in other countries, rather than focusing on any potential detriment to their own. In infrastructure it is accepted that the need for global growth is a higher priority than the existing competition between countries for capital.

And capital is looking for new opportunities. The lack of growth, historically low interest rates and fully valued equity markets are driving investors to look for alternate long term investments with manageable risk characteristics. As there is a growing willingness for investors to look further afield to put their money to work, investments into infrastructure in emerging markets is beginning to attract substantial attention. However, for capital to flow to less developed markets, infrastructure projects need to be attractively structured and public sector support is needed to “crowd in” private funding. Hence the importance of this paper which recognises the complicated nature of the infrastructure markets as well as the wide and varied nature of the different bodies involved in it. The World Economic Forum has a long and distinguished history of recognising the important issues of the day and promoting dialogue between the Public and Private Sectors. They have had strong focus and involvement in the infrastructure markets and their membership includes many world leading infrastructure companies.

The paper provides the most comprehensive list to date of entities available in the market and usefully seeks to categorise them into four (4) broad areas. It also looks in greater detail at some of the new organisations which have been recently formed, and raises interesting questions about the potential for disruptive digital technologies to improve communication and networking, leading to more efficient procurement processes.

The paper envisages the GIH forming a portal allowing easy access to this information and we are well advanced in creating such a portal. This paper complements our work in this area and will provide easier access to people, knowledge and products. I commend this paper as an excellent entry point to gain a better insight into the infrastructure market.

Chris Heathcote
Chief Executive Officer
G20 Global Infrastructure Hub

Foreword by the World Economic Forum's Global Agenda Council on Infrastructure

Today, there is a global consensus of the importance of increased infrastructure investment – to drive economic growth, improve connectivity, and, in so doing, improve basic living standards. By World Bank projections, some 80 per cent of this fresh investment will need to happen in emerging market economies in order for global growth targets to be met. However, as a broad spectrum of international bodies acknowledge, such as the World Economic Forum, the G20's new Global Infrastructure Hub, the OECD and the International Financial Institutions (IFIs) community, it is equally clear that an acceleration of investment will be difficult indeed without a significant improvement in the knowledge base of individuals in emerging markets to plan, prioritise, procure and deliver investment programmes. Simply put, a step-change is needed in this area for accelerated investment to be realised at scale.

As this paper shows, there is a wide range of infrastructure 'knowledge products', from data and content approaches, to peer to peer learning, process-related support mechanisms, on to training and educational offerings. While by no means exhaustive, this paper provides an overview of the various products in the hope that emerging market decision makers, working on their individual projects often in very complex institutional settings, will be able to tap into a wider network of likeminded and similarly engaged people across the globe. We also think that all these products can now be better and more widely utilised by making them interactive using the IT tools that social networking affords us.

The international infrastructure sector is diverse, and the breadth of the programmes and activities presented in this paper illustrate this. It is, however, also a sector that is bound by a collaborative spirit – no infrastructure project has ever been built by a single individual and very few indeed by single organisations – and so the time is now right for joined-up thinking and products to foster the next phase of global infrastructure investment. We hope that this paper contributes in its way to that important goal.

Thomas Maier
Chair, Global Agenda Council on Infrastructure, World Economic Forum
Managing Director, Infrastructure, European Bank for Reconstruction & Development (EBRD)

1. The Consensus for Increased Infrastructure Investment Support



Over the past few years, an international consensus has emerged that infrastructure investment is needed to boost global growth. However, there is also widespread recognition that this enhanced investment can happen only if a concerted and multipronged effort is made to boost various forms of support mechanisms, which must seek to increase institutional and human resource capacity for delivery at the local emerging market level. It is equally clear that this broad agenda will necessarily involve entities at the multilateral, bilateral, national and local levels. Across the range of entities, the effort involves public sector organizations – such as multilateral development banks (MDBs), other supranationals, development finance institutions (DFIs) and governments – and also private sector companies, academic institutions and think tanks. Each has a role to play, but the sheer number, varying scope and method of delivery of “knowledge products” on offer makes it difficult for the “customer” – typically, a public official responsible for delivering infrastructure in an emerging market country – to understand where to go, what is offered and how to best use the products. Over the long term, infrastructure may indeed emerge as an asset class through these types of persistent efforts.

The aim of this paper is to:

- **define the breadth and depth** of knowledge products for infrastructure support;
- **map the principal efforts** across the various entities, using the project cycle as a guide to articulate who does what, with a more detailed description of a set of knowledge products;
- **propose a conceptual framework** for focusing the task of knowledge-sharing and dissemination of best/good practice; and
- given their unique status and relationships, we **suggest a specific role for the G20 Global Infrastructure Hub (GIH)** for knowledge-sharing with the creation of a single website portal through which knowledge products and preparation facilities can be accessed.

A wide selection of knowledge products has emerged over the past few years in response to the concerted calls to do more to address the infrastructure gap by the G20, the World Economic Forum, the wider shareholders of the IFIs (including those from the emerging markets), and other influential bodies such as the OECD. The private sector, through such bodies as the B20, has also stepped up a push for governments worldwide to do more. In this context it is important to note that infrastructure players are increasingly aware and supportive of the advantages of open standard platforms for better knowledge and expertise exchange.

A Broad Typology of Knowledge Products for Infrastructure

There is a wide and expanding range of knowledge products offered to emerging markets officials. While it is recognised that there is some overlap between the definitions presented below, these can be broadly categorized as follows:

- **Data and content-based products:** These platforms gather, analyse, synthesise and disseminate information on infrastructure policies and projects for their users. These are offered by multilateral and supranational organizations – e.g., MDB's Public Private Partnerships (PPPs) Knowledge Lab and G20's Global Infrastructure Hub (GIH), see below for descriptions – to national/bilateral agencies – e.g., GIZ, DFID, USAID, SIDA, IE Singapore – to the private sector – e.g., IJ Journal (Euromoney), Infra-News (FT), Inspiratia, Partnerships Bulletin; etc. Payment is required for these private sector information sources. The users access such data content housed on these platforms typically in the mode of recipient.
- **Learning and training-based activities:** The user here is an active participant in a more structured manner over a period of focused learning. The emphasis is placed on the concept of knowledge transfer to either emerging markets participants in the public sector seeking to prepare and deliver infrastructure projects, or in the mode of trainees or students for more intensive courses. The MDBs' new PPP Certification Programme (see below) and the many private sector training products are examples of such a training product, but there are many established and academic degree courses which offer more structured approaches. These include Harvard's Infrastructure in a Market Economy executive course, UCL's Masters Programme in Infrastructure Finance, Oxford's Said Business School Masters in Major Programme Management, courses at the École Pont et Chaussées in Paris, EDHEC in Singapore and at Stanford University in

Programme Management. It is important to note that many of these learning products are now offered online, using Massive Open Online Courses (MOOCs).

- **Process-oriented products:** These products include legal framework elaboration/adaptation, pipeline building, project prioritization and project preparation, as well as tendering and implementation support. The host of new project preparation facilities (PPFs) created recently by the MDBs and emerging market governments are good examples of this, as is the work done by UNECE, OECD and some MDBs on legal and institutional frameworks.
- **Networking-based products:** These activities encompass the whole range of small-scale seminars and workshops involving just one country to major international conferences on infrastructure and PPPs (e.g., PPP Days) and online peer-to-peer services based on social networking. The range of actors involved includes not only international organizations, donor governments and national governments on their own accord but also industry-based private sector companies as service providers either for sector-based content or conference/seminar organization – e.g., Euromoney, Capital City training and International Project Finance Association (IPFA). Indeed, there is a cottage industry firmly established worldwide that specializes in such infrastructure events. Finally, some companies (such as CG/LA with its GlobalViP product, see below) now offer active peer-to-peer matching through an online social networking-based approach. Interactivity between knowledge creators and knowledge users is a key element of these types of products and is quickly becoming the way to augment the users' experience following on from participation in traditional conferences and website searches for repository-based data or documentation.

Mapping the Knowledge Products

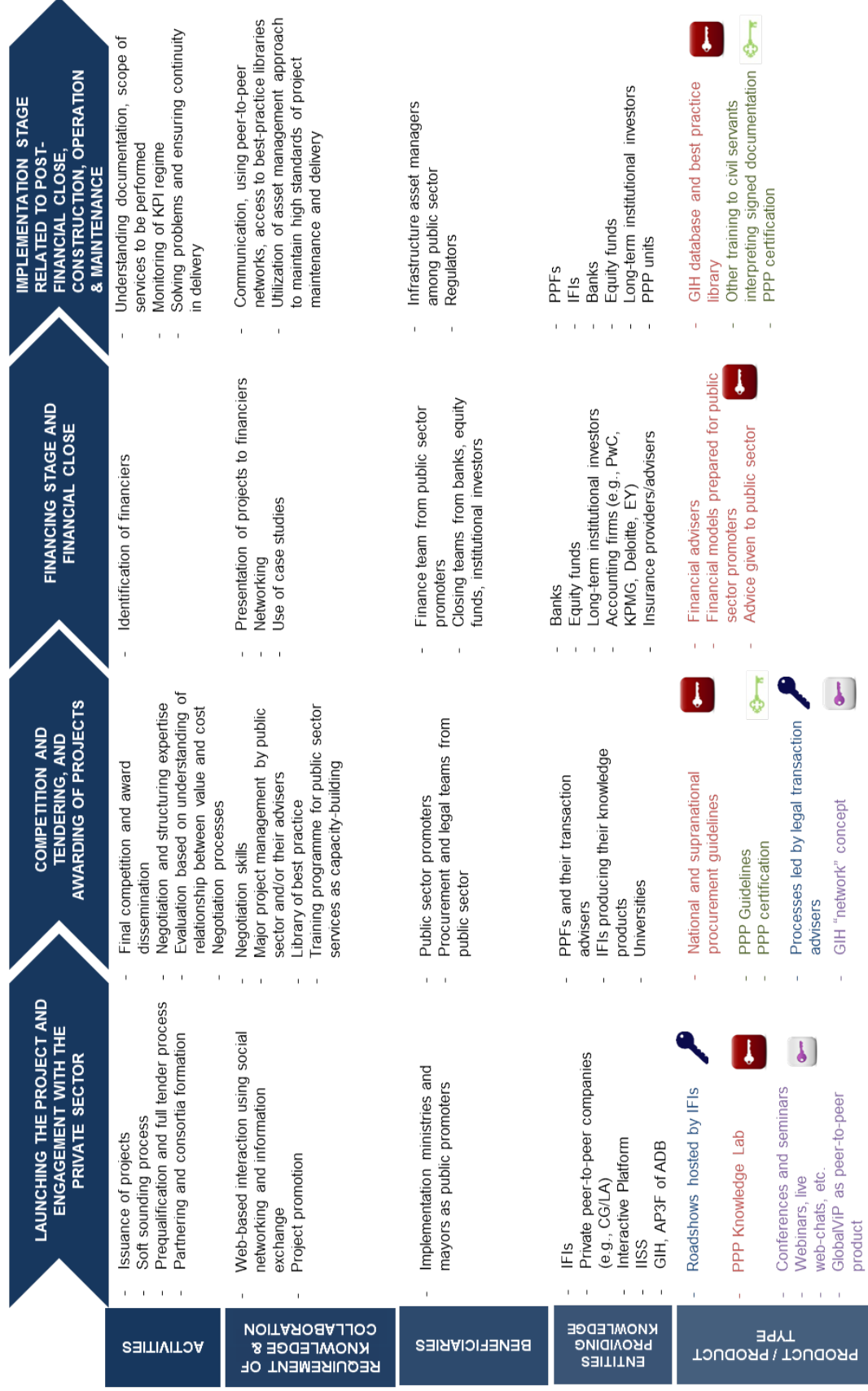
The following mapping has been prepared in the form of a matrix to give some sense of the scope and range of products on offer by late 2015. It attempts to identify the entities and beneficiaries involved in knowledge products at the different stages of an infrastructure project. The mapping has been structured on a hierarchical basis, considering the support information available when projects are at a conceptual stage, as national infrastructure plans are formulated, through to development at ministerial, regional or municipal departmental level and then on to execution on-site and in the field. The mapping analyses sources of knowledge to assist policy-makers, civil servants and others working to develop projects. It has been prepared with the intention of identifying sources of input and

also highlighting knowledge gaps that are required to be filled. It is not meant to be an exhaustive, comprehensive listing of all such activities (and the exclusion of important efforts is inevitable in such exercises). However, it does purport to organize the various types of knowledge products with examples along the project cycle, as this is how a typical emerging market-based project manager would think when confronted with the task of planning, preparing, tendering, implementing and monitoring a complex infrastructure. An entity such as the GIH, with its remit to aggregate data and information on infrastructure, might take up the task of filling out the below to provide a fuller picture of the full range of products on offer now.



Figure 1: Matrix of Activities & Main Actors Involved in Knowledge and Collaboration for Infrastructure throughout the Project's Cycle (non-exhaustive)

	NATIONAL PLANNING	DEPARTMENTAL OR REGION / CITY LEVEL PLANNING	STRUCTURING & ISSUANCE OF PROSPECTIVE PROJECTS BY EXECUTING AGENCY	SECURING ADMINISTRATIVE APPROVALS WITHIN THE PUBLIC SECTOR
ACTIVITIES	<ul style="list-style-type: none"> - Political decision-making concerning national infrastructure master plans - Early pipeline development and prioritization/selection of projects for further development 	<ul style="list-style-type: none"> - Enabling frameworks, delivery planning and methodology - Feasibility studies, requiring resources, experience and technical capacity, comprehensiveness of approach, and process standardization - Practical project structuring systems (e.g. project preparation support platform offering training to public servants) - Management support & Improved delivery mechanisms for capacity-building - Procurement standards - Enhancing structures through inter-benchmarking - Facilitating dialogue between public sector entities ("privileged communication") & knowledge providers - International case studies - Creation of pipelines for project planning 	<ul style="list-style-type: none"> - Developing laws and legislative guidance to enable infrastructure investment, especially with private sector - Structuring standardized documents - Applying well-conceived regulatory practices and sector policy issues - Standardized documentation (e.g., tender documentation, project documents) - Creating central resources for overarching regulatory information - Improving interregional connectivity initiatives to provide forum for exchange and communication between countries and cities - Input from data stored centrally - Use of case studies with successful outcomes to show successes and the potential for replication 	<ul style="list-style-type: none"> - Preparation of financial and commercial analyses needed to achieve cross-departmental approval, ideally backed by political support - Calculation of value for money to determine best procurement strategy - Obtaining financial commitment for project delivery and agreement to support the chosen procurement methodology - Standardized documentation (e.g. tender documentation, project documents) - Creating central resources for overarching regulatory information - Improving interregional connectivity initiatives to provide forum for exchange and communication between countries and cities - Input from data stored centrally - Use of case studies with successful outcomes to show successes and the potential for replication
REQUIREMENT OF KNOWLEDGE & COLLABORATION	<ul style="list-style-type: none"> - Creation of a central library of completed plans and associated actions available online - Dissemination of successful outcomes across different markets, using conferences and the use of online data support systems 			
BENEFICIARIES	<ul style="list-style-type: none"> - National ministries involved in planning, investment, finance, delivery, control and monitoring 	<ul style="list-style-type: none"> - National/regional / local government bodies (ministries of finance, line ministries, PPP units, mayors' offices) responsible for project preparation and delivery 	<ul style="list-style-type: none"> - Line ministries, Municipalities, National PPP centres or equivalent 	<ul style="list-style-type: none"> - Finance ministry or equivalent, Line ministries, Mayors and local assemblies, Regional entities involved in major connectivity initiatives (e.g. European Commission)
ENTITIES PROVIDING KNOWLEDGE	<ul style="list-style-type: none"> - IFIs through sector-wide support - GIH - Developed countries planning agencies/commissions - Think-tanks and academic institutions - Consultants 	<ul style="list-style-type: none"> - IFIs, GIH, Sustainable Infrastructure Foundation (SIF) – IISS, OECD, EPEC, World Economic Forum, Economist Intelligence Unit (EIU), (*cont'd in next page) 	<ul style="list-style-type: none"> - UNECE, EPEC, IISS, World Economic Forum, GIH, Sustainable Development Investment Partnership (SDIP), National and IFI-led PPFs - FIDIC, Academic institutions, National/PPP support (e.g., UK partnerships; PPP Canada), National PPP units - World Economic Forum's Strategic Infrastructure Series - GIH's voluntary standards - WBG's standard PPP contractual clauses - Template feasibility studies by sector/sub-sector/ project type - PPP Guidelines - OECD PPP Series - PPP certification - Model PPP Laws and Concession Laws 	<ul style="list-style-type: none"> - National and IFI-led PPFs, Specialist legal support and policy dialogue (e.g., EBRD's Legal Transition Team), EU – EPEC, PPP units, Specialized PPP support entities (e.g., PPP Canada), Project databases (IJ Journal, PPIAF, MSCI, EDHEC, and GIH as aggregator and disseminator of good practice case studies/ papers to ensure understanding among key decision-makers) - PPP tender documents and project agreements - Model PPP legal frameworks - Papers on technical information on such matters as Value For Money - Seminars/conferences
PRODUCT / PRODUCT TYPE	<ul style="list-style-type: none"> - IFI provision of sector-wide planning technical assistance to support national infrastructure investment plans - MDB PPP Knowledge Lab - GIH Guide web-platform - Repository of best-practice of national infrastructure plans 	<ul style="list-style-type: none"> - PPP Knowledge Lab, Infrascope, PPI database - Global PPP certification sponsored by IFIs - IFI and OECD PPP Guides - In-depth training of public officials - World Economic Forum's Strategic Infrastructure Series - PPFs & other Technical Assistance support - International Infrastructure Support System (IISS) - GlobalVIP as peer-to-peer product 	<ul style="list-style-type: none"> - World Economic Forum's Strategic Infrastructure Series - GIH's voluntary standards - WBG's standard PPP contractual clauses - Template feasibility studies by sector/sub-sector/ project type - PPP Guidelines - OECD PPP Series - PPP certification - Model PPP Laws and Concession Laws 	<ul style="list-style-type: none"> - PPP tender documents and project agreements - Model PPP legal frameworks - Papers on technical information on such matters as Value For Money - Seminars/conferences



* Continued from previous page

Public Private Infrastructure Advisory Facility, Public Private Partnership Infrastructure Resource Center, ICC, International Federation of Consulting Engineers (FIDIC), G20 Infrastructure and Investment Working Group (IIWG), United Nations Economic Commission for Europe (UNECE), International associations (e.g., International Association of Public Transport, UITP, International Road Federation), IFIs' Project Preparation Facilities, CG/LA, Fund-finders, Subscription-based data providers (e.g., Infrastructure Journal, Inspiratia, etc.), Long-term Infrastructure Investment Association (LIIA), Specialized academic institutions (e.g., Said School at Oxford University, Kennedy School at Harvard, UCL, Stanford, Brookings), Bilateral agencies (e.g., GIZ, Agence Française de Développement (AFD), State Secretariat for Economic Affairs (SECO), Department for International Development (DFID), US Trade and Development Agency (USTDA), Japan International Cooperation Agency (JICA), Swedish International Development Cooperation Agency (SIDA), Australian Agency for International Development (AusAID), ICDf Taiwan, IE Singapore

Data and content-based products 

Learning and training-based activities 

Process-oriented products 

Networking-based products 

The following set of knowledge product descriptions is included here by way of example and to provide more detail of what each product type offers and how the “customer” in an emerging market country

might use the product. The presented examples are only, of course, a small sub-set of the universe of products and activities currently under way in the infrastructure sector.

Cross-Cutting Knowledge Products

GIH: The Global Infrastructure Hub was established in November 2014, following an agreement by G20 leaders to increase the volume and quality of public and private infrastructure investment during the presidency of Australia. GIH is headquartered in Sydney and will have a staff of up to 20 professionals, headed by its CEO. GIH will report to the G20 and its Infrastructure and Investment Working Group (IIWG) and work collaboratively with all governments globally, international organizations, development banks and the private sector. GIH has a four-year mandate (2015-2018) from G20 leaders focused on the following main areas:

1. Developing a knowledge-sharing network to aggregate and share information on infrastructure projects and financing between governments, international organizations, development banks, national infrastructure institutions and the private sector
2. Addressing key data gaps
3. Developing approaches to implement the voluntary G20 Lending Practices on Promoting and Prioritizing Quality Investment, including model documentation covering project identification, preparation and procurement
4. Building the capacity of government officials by sharing best-practice approaches
5. Developing a consolidated database of infrastructure projects to help match potential investors with projects.

The Australian government has contributed the base funding for the establishment and operation of GIH until 2018, with additional financial and in-kind resources from China, Mexico, New Zealand, the Republic of Korea, Saudi Arabia, Singapore and the United Kingdom. Given its broad remit, GIH provides knowledge products across all five types of products presented above.

In a first manifestation of its work, GIH intends to map out an online Guide to Infrastructure Resources to infrastructure initiatives, organizations and documentation to help better connect existing resources and improve coordination at national, regional and

multilateral level. The guide will be organized in line with the GIH capability framework. It will be searchable by key parameters with scope for comment by users and resource authors. It will ultimately be a publicly accessible resource on the GIH website, with a planned launch at the April 2016 meeting of finance ministers and central bank governors. Progress so far includes: populating the guide with key content; circulating a copy to the IIWG for feedback on functionality and content; conceptualizing features and search functionality; and procuring web design and IT services to support the guide. The guide will be interactive with further features, updates and content added over time.
<http://globalinfrastructurehub.org/>

GIF: The Global Infrastructure Facility was established in March 2015 as a partnership programme housed at the World Bank Group (WBG), with support from a number of donors, including China, Singapore, Canada, Australia, Japan and the World Bank. It has an initial capitalization of \$100 million. GIF has envisaged two window facilities: an initial upstream project preparation facility focusing on project structuring and preparation, followed by a downstream project financing support window that focuses on risk-sharing and credit enhancement to mobilize long-term private capital. In its three-year pilot phase, GIF will focus on providing technical assistance to EMDE governments for project preparation and structuring of selected infrastructure projects and programmes to increase the deal flow of bankable projects in these markets. While these projects are being prepared and structured, GIF is also preparing to capitalize the downstream financing support window to fill the gaps of existing instruments that can be used to finance infrastructure projects through capital market issuances or long-term commercial bank lending in EMDE. GIF is now operational with its first project level activities launched by year-end 2015. During its initial pilot phase of three years, GIF expects that approximately 10-15 PPPs will be fully supported globally. GIF’s business model relies on its technical partners, which include

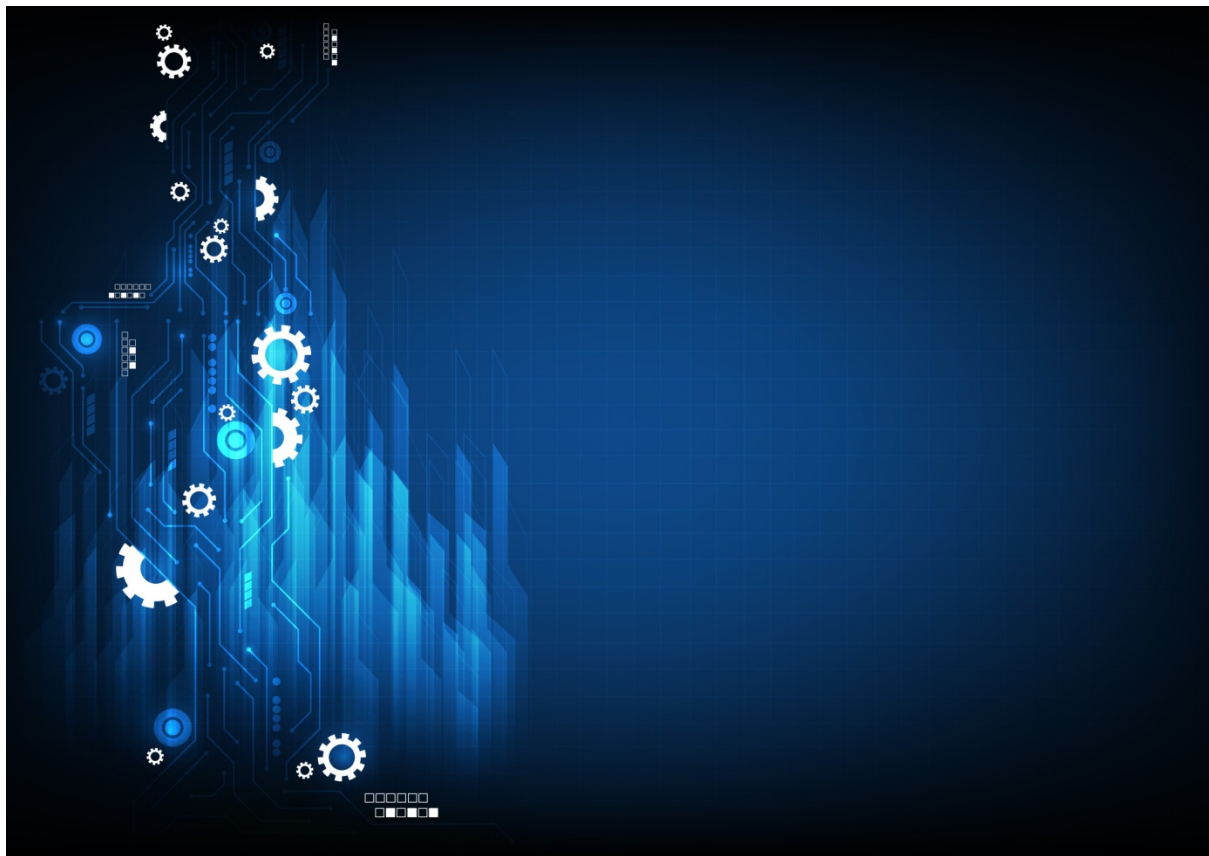
not only the WBG's IFC but also the main regional multilateral development banks (e.g., EBRD, ADB, IADB, EIB) to work with GIF to bring appropriate projects for funding. On approval by GIF's Governing Council comprised of donors and regional MDBs, GIF transfers the funds to the technical partners to implement those projects. In addition to the project preparation funding focus, GIF has been designed as a collaborative platform through its Advisory Council to enable its advisory partners, which include major institutional investors, commercial banks and DFIs, to bring to bear their collective expertise for the benefit of emerging market clients. GIF's Advisory Council meetings feature sessions where GIF emerging market beneficiaries present their GIF-funded projects and interact with the broad grouping of private sector actors to create knowledge-sharing on projects. GIF's management unit will be responsible for preparing written briefs and other materials in the context of these regular

meetings, as well as supervising the use of GIF's resources.

<http://www.worldbank.org/en/programs/global-Infrastructure-facility>

IFC InfraVentures: The IFC Global Infrastructure Project Development Fund helps develop public-private partnerships and private projects for infrastructure in developing countries. It provides early-stage risk capital and actively participates in the project development phase to create private infrastructure projects that are commercially viable and able to more rapidly achieve financial close. Through IFC InfraVentures, the World Bank Group has set aside a \$150 million fund, from which IFC can draw to initiate infrastructure project development. IFC serves as a co-developer and provides expertise in critical areas, while partially funding project development.

http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Infrastructure/IFC_InfraVentures



Data and Content-Based Knowledge Products

PPP Knowledge Lab: The PPP Knowledge Lab is a curated, comprehensive and easy-to-use online resource on public-private partnerships provided collectively by a large group of MDBs. Although the use of public-private partnerships to design, build and deliver infrastructure worldwide has grown enormously in the past decade, the availability of information to support governments and their advisers has not kept pace. The PPP Knowledge Lab fills that gap. The Lab is built on the PPP Reference Guide and is supported by the Asian Development Bank (ADB), the Inter-American Development Bank's (IDB) Multilateral Investment Fund (FOMIN), the <https://pppknowledgelab.org/>

Public-Private Infrastructure Advisory Facility (PPIAF) and the World Bank Group. The platform was also developed with the collaboration of the European Bank for Reconstruction and Development (EBRD) and the Islamic Development Bank (IDB). The Lab was created in recognition of the need to consolidate in one online platform the large number of documents, policies, case studies, reference materials and databases on infrastructure housed heretofore among the various MDBs on their own websites. The Lab is a good example of an improved product for data and content offered by the MDBs.



Public-Private Infrastructure Advisory Facility (PPIAF): A multi-donor trust fund housed under the World Bank PPP CCSA, providing up to \$20 million a year in grants for upstream regulation, policy, institutional development and project selection for infrastructure PPPs, with a particular focus on LICs. Grants range from about \$50,000 to \$1 million or more. PPIAF provides grants to help governments create a sound enabling environment for private participation in infrastructure through different types of technical assistance, such as: framing infrastructure development strategies; helping governments draft legal and regulatory frameworks; supporting the design and implementation of policy and institutional reforms; organizing stakeholder consultation workshops; building government institutional capacity; enabling access to market infrastructure finance both for national and

subnational entities; and developing and prioritizing project pipelines. PPIAF also produces and disseminates knowledge and best practices on private participation in infrastructure. <http://www.ppiaf.org>

Infrascope: This is an ongoing effort by the Economist Intelligence Unit (EIU) to analyse and create a benchmarking index and learning tool that assesses the capacity of countries in emerging markets across the Asia-Pacific region, Latin America, Africa and Eastern Europe and the CIS to deliver sustainable public-private partnerships. The work has been commissioned by the ADB, IADB, EBRD, and the World Bank Group. The methodology was developed by the EIU and has been developed

over time using a series of separate analyses (i.e., the 2011 Infrascope for the Asia-Pacific and similar studies of Eastern Europe and the CIS in 2012 and Latin America and the Caribbean in 2009, 2010 and 2014, respectively). The index was built by, and its assessments made by, the EIU.
http://www.eiu.com/public/thankyou_download.aspx?activity=download&campaignid=Asialnfrscope2014
Standards for PPP Procurement: In addition to extensive work on PPP legal frameworks and sustainable development, the World Bank Group has prepared a pilot report on Benchmarking PPP Procurement, building in an approach developed for public procurement for the G20 IIWG. The pilot was also presented at PPP Days 2015 and is providing a systematic way of assessing how procurement of PPPs is undertaken throughout the life cycle of projects. The pilot

covers 10 countries which will be expanded to about 80 in 2016. This review can provide enhanced data to overall assessments such as Infrascope. A session at PPP Days discussed standard contractual provisions for PPP, which centred on a set of recommended contractual clauses for selected provisions typically found in PPP agreements, including provisions dealing with force majeure, termination rights, dispute resolution, etc. While not meant to be mandatory clauses for use in all PPP transactions, the discussion aimed to set out the benefits of contractual language that has been found to be appropriate in many PPP transactions. The EBRD's Legal Transition Team has a dedicated programme to working with countries to create appropriate legal frameworks for PPPs and other forms of private sector participation in infrastructure. A sample of these can be accessed through the below links:

GENERAL INFORMATION

Legal Reform – Public-Private Partnerships / Concessions: <http://www.ebrd.com/what-we-do/sectors/legal-reform/ppp-concessions.html>

INTERNATIONAL STANDARDS

PPP / Concessions International Standards: <http://www.ebrd.com/what-we-do/sectors/legal-reform/ppp-concessions/international-standards.html>

EBRD Core principles for a modern concession law:

<http://www.ebrd.com/cs/Satellite?c=Content&cid=1395239038112&d=&pagename=EBRD%2FContent%2FDownloadDocument>

EBRD Core Principles for a Modern Concessions Law – selection and justification of principles:

<http://www.ebrd.com/downloads/legal/concessions/coreprin.pdf>

ASSESSMENTS

PPP / Concessions Assessments: <http://www.ebrd.com/what-we-do/sectors/legal-reform/ppp-concessions/sector-assessment.html>

Concession / PPP Laws Assessment 2011 – Cover Analysis Report 2011:

<http://www.ebrd.com/downloads/legal/concessions/pppreport.pdf>

ANALYTICAL MATERIALS

PPP – Practice, Problems and Perspectives:

<http://www.ebrd.com/downloads/legal/concessions/book2011.pdf> (in Russian)

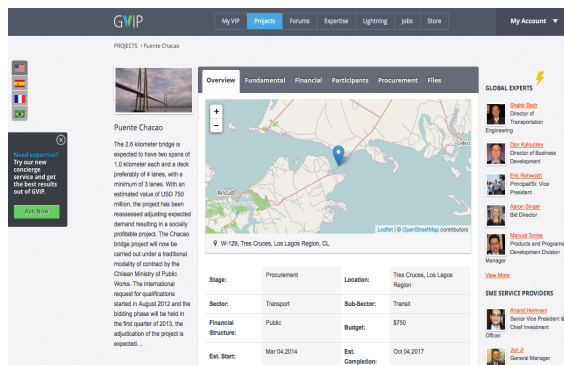
Improving Legal Underpinnings for PPP:

<http://www.ebrd.com/cs/Satellite?c=Content&cid=1395240793968&d=&pagename=EBRD%2FContent%2FDownloadDocument> (in Russian)

Peer-to-Peer Learning Knowledge Products

Interactive Platform: The data and content-oriented knowledge products are primarily repositories of valuable information on infrastructure. With initial support from the EBRD, the Interactive Platform is complementary to such existing knowledge products by filling a gap in the international architecture to facilitate knowledge exchange and expertise-sharing. Designed to be a social networking tool, it will use virtual working groups, with the ability to create public and private conversations online to discuss infrastructure. It has been designed to link specifically to the PPP Knowledge Lab and the G20's GIH and could be used potentially by other platforms such as IISS (see below).

GlobalViP: Operational under an expanded product in May 2015, GlobalViP (GViP) is designed as a public utility tool for infrastructure project decision-makers, giving public and private sector users just-in-time access to expertise worldwide. GViP is designed to address project development and project preparation by allowing project developers (public and private) rapid, accurate and constant access to global expertise. The platform allows infrastructure project owners (at country, state and local levels) to access expertise on a just-in-time basis. GViP also allows project developers to feature their projects to a global audience, early, regularly and targeted, taking advantage of crowdsourcing technology. Through rich algorithms, class experts are identified; similar projects can be accessed, anywhere in the world, and the range of third-party resources that project decision-makers need to make good decisions is brought to the attention of developers. GViP offers users the ability to access information from global experts in a way that saves money, increases project quality and accelerates project development. Currently, there are over 1,500 projects represented on GViP, from early stage to construction phase, across a number of sectors (energy, transport, water), across over 140 countries. The platform hosts about 1,600 experts, 70% of whom are from the private sector at a senior level. An example of the interface is presented below: <http://www.cg-la.com/advisory/globalvip>



Process-Oriented Knowledge Products

I/ISS: The International Infrastructure Support System (I/ISS) was originally developed in 2011 by the Asian Development Bank (ADB) under a technical assistance programme funded by the Republic of Korea. It was known in its initial conceptualization as the National Infrastructure Information Systems (NIIS). The NIIS objective was to offer governments (public sector) a secure and standardized basis for preparing infrastructure projects and sharing project information. NIIS was noted in the Multilateral Development Bank (MDB) Action Plan (2011) as one of the key solutions to project preparation issues raised by the G20. In 2013, a group of MDBs and other public and private stakeholders decided to establish the Sustainable Infrastructure Foundation (SIF¹) to make NIIS become available on a long-term, global and sustainable basis. This tool requires public, private and multilateral participation. I/ISS is a tool to be used initially by the public sector for free and to be subsequently accessed by the private sector with the aim of improving the quality, consistency and transparency of project preparation, eventually for a subscription fee. One of the main areas of focus is standardization and online templates are available on the I/ISS platform that encompasses 150 detailed questions covering the following six thematic issues:

- Governance
- Technical
- Legal
- Financial
- Environmental & Social
- Economic

These thematic issues cover 42 separate subsectors² across several regions and subnational areas. These are objective questions that the public sector entity

¹ The establishment of the SIF provided a number of development banks a counterparty that could act as a global coordinator for the enhancement of NIIS and its transformation into the International Infrastructure Support System to act effectively as a conduit for grants and financial support from various parties during the start-up phase (2014-2018). SIF is a not-for-profit foundation headquartered in Geneva, Switzerland.

²Transport (airports, bicycle lanes, bridges (toll/non-toll), bus rapid transit (BRT), city roads, ferry transport systems, high speed rail, highways (toll/non-toll) intercity rail, mass rapid transit systems (MRT); energy (biomass, solar array, wind farm, run of river); urban services (street lighting, warehouses bio-digesters, hazardous waste disposal; landfills with methane capture, landfills, solid waste incinerators, sorting stations, waste collection systems); social infrastructure (housing); and water (mixed, residential, water supply network).

undertaking project development and preparation – and by extension any project preparation facility (PPF) providing support to the given project – is required to answer. Answering the templates enables a project structure to be created that can be subsequently completed over time. The purpose of completing the project template is to create a project that may be taken forward for financing. This platform is not a PPF as such; rather it is a platform for disseminating accurate and consistently presented information regarding individual projects using a standardized template. In addition, the completion of templates enhances capacity through public sector organizations by providing online guidance on how infrastructure projects may be put together and developed. I/ISS is an online workspace environment and a knowledge environment. I/ISS, which is in its pilot phase at present, will include several other features:

- A dynamic user template review function
- Links to existing PPP knowledge resources
- Private sector exchange feature (market comments, reporting and project search)
- A full project management capability (task & team management, scheduling & security)

SIF has garnered widespread support from MDBs, the World Economic Forum and other international organizations, and a host of leading private sector companies, including the provision of start-up capital as well as in-kind expert support for the creation of the various templates. These include the following partners working in association with SIF:



Learning and Training-Oriented Knowledge Products

The Global Certification Programme for PPP Professionals: The World Bank Group selected APMG to be the delivery partner for the development and management of the Global Public-Private Partnership (PPP) Certification programme. APMG has extensive experience in the creation and delivery of certificates in related fields, including project management. The certificate will be linked to specific stages in a PPP project. Candidates will earn the certificate on demonstration of a mastery of a body of knowledge and an ability to apply this knowledge in practical circumstances. It is

designed to be analogous to the CFA or PMI qualifications. A consultative committee has been set up to steer the programme. It includes the World Bank Group, the Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank (through its Multilateral Investment Fund), Islamic Development Bank and PPIAF. This will allow public sector officials to learn about PPPs through a dedicated training programme spread over a number of learning modules. <http://ppp.apmg-international.com/home.aspx>



Private sector education programmes

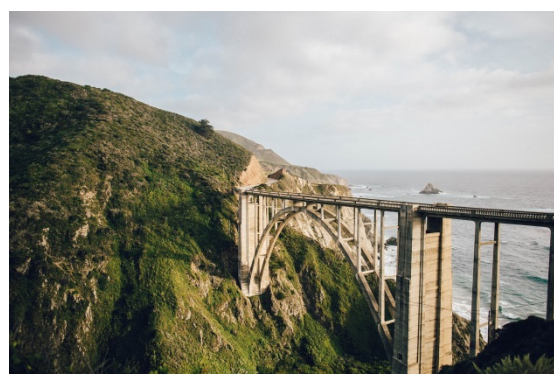
University College London Masters in Infrastructure Finance: The MSc in Infrastructure Investment and Finance (IIF) is designed to enable infrastructure specialists to develop the multidisciplinary skills essential to the effective financing and delivery of complex infrastructure projects. The UCL MSc IIF is the only course in the United Kingdom, and one of few globally, to focus on the finance, funding and commercial issues associated with global infrastructure needs. With a strong commercial focus, this course provides masters students with a well-balanced mix of economic and financial theory as well as industry practice, including modules exploring:

- The history and future of infrastructure investment at global, national and sector levels and the key determinants of total and sector investment levels
- The impact of government policy, funding and private capital markets on investment in infrastructure
- The role of regulation in incentivizing private investment
- The cost of capital for infrastructure investment and the allocation of risk in contracted delivery
- The commercial perspective of infrastructure project sponsors, lenders, investors and contractors throughout the procurement, design, construction and operation of infrastructure assets

The aim of the course is to equip graduates with the relevant skills for a career in infrastructure procurement and development, whether as public sector officials, private sector financing specialists or consultants within advisory firms.

Saïd School, Oxford University – Masters in Project Management: The MSc is the only master's degree to focus entirely on the management of major programmes, which go far beyond merely scaled-up projects and thus need to be managed effectively as temporary organizations in their own right. Distinct from the traditional practices of project management, the MSc in Major Programme Management provides a broad range of competencies central to the successful delivery of integrated solutions, which can be found among the best executive officers and general managers in organizations around the world. This master's programme strives to go well beyond pure project management course content by providing participants access to senior project managers from many sectors worldwide.

École Pont et Chaussées, Paris: The primary focus of this Masters in Financing of Projects, based within a French institution with a long-established history in engineering, is to train professionals in project finance. The second priority is the study of sectors associated with project finance, such as the fast-growing real estate and venture capital sectors, as well as other infrastructure.

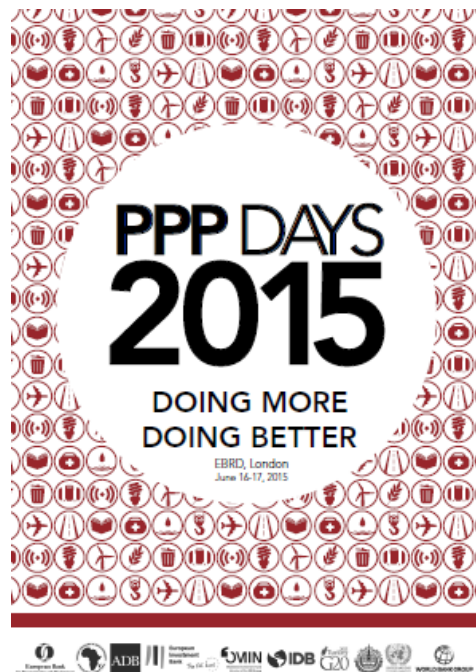


MDB's PPP Days: The MDBs have jointly prepared and hosted six versions of PPP Days since 2002. PPP Days 2015 was hosted by EBRD in London on 16-17 June and was co-sponsored by G-20, the African Development Bank (AfDB), Asian Development Bank (ADB), European Investment Bank (EIB), Inter-American Development Bank Group (IADB), Islamic Development Bank (IsDB), United Nations Economic Commission for Europe (UNECE) and the World Bank Group (WBG). The main theme of the conference was, "Doing More, Doing Better: What would it take to double the right private infrastructure investment in emerging markets?" The successful conference brought together about 300 participants from 30 countries, comprising PPP experts from both the public and private sectors. The wide-ranging agenda included multiple panels comprised of public and private sector panellists, 16 country presentations of mature PPP projects, and a presentation of the MDBs' joint infrastructure support agenda. PPP Days manifests, from the perspective of the MDBs, how cooperation has advanced significantly. The MDBs have an agreement on specific steps forward, such as support for the GIH and the PPP Knowledge Platform launched at PPP Days 2015, the use of Infrascope, the collective efforts of the new MDB-led PPFs, support for IISS, and capacity-building for PPPs. The MDBs use PPP Days to

bring this diverse set of emerging market practitioners located within PPP units and other public sector entities to marshal their combined influence and wherewithal alongside the political impetus given by the G20 to achieve more coordinated multilateral support

in terms of quality, project preparation, policy inputs and, ultimately, the level of investment in the sector.

<http://www.ebrd.com/news/events/publicprivate-partnerships-ppp-days.html>



Collaborative Role of International Financial Institutions (IFIs)

Due to their unique position and relationship with emerging market countries, IFIs must play an important role in the realization of the above described agenda. Specifically, the IFIs can play a critical role in project development, promotion and training of public officials regarding PPPs. Firstly, the IFIs have come together to create a new one-stop shop for knowledge on PPPs, launched in June 2015 as the PPP Knowledge Lab. Secondly, the Lab will be open to others and would be a natural point of collaboration with the GIH, for example. Regarding project development, many IFIs (e.g., ADB, WBG and EBRD) have created specific project preparation facilities (PPFs) during the past 12 months. These PPFs should allow the IFIs to accelerate the preparation of PPPs in particular, with more efficacy, improved quality and greater replicability of approaches. Thirdly, IFIs play an important role in promoting PPPs. EBRD, for example, has hosted several roadshows at

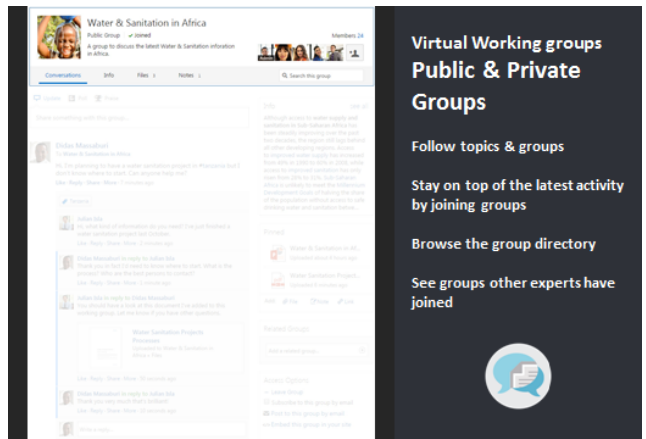
its London headquarters to good effect, as this helps to communicate to the wider investor community and potential bidders that an IFI stands behind the proposed projects and structures. IFIs could mainstream this approach by hosting all roadshows as a matter of course for all well-prepared PPP taking place in their respective regions. Fourthly, all IFI PPFs could commit to uploading all projects prepared under their facilities into the new IISS to create a critical mass of projects prepared on a more standardized template basis. Finally, IFIs are actively developing a PPP certification training module that is being vetted by WBG, ADB, IADB, and EBRD. The 40-day module-based training will be ready for a beta-launch by first quarter 2016. The standardization of tried and tested approaches to PPPs should be effective at improving the likelihood of projects being successfully tendered through to contract award and financial close and implementation.



Next Steps: The Proposed Conceptual Framework

The breadth of the international infrastructure support agenda laid out above is plainly very significant. The ability to coordinate the entire scope of the various activities is beyond the abilities of any single organization. However, gathering this information together will significantly assist those involved in project delivery by helping them with advice, experience and examples to expedite the development of new infrastructure. In an effort to achieve a tangible effect, one approach would be to task GIH as a G20 entity to break down the knowledge product types into four separate groupings, or bring together existing similar groupings under a single entity that can be tracked and coordinated in working groups. These working groups, comprised of leading entities active in the infrastructure sector,

would each have a lead coordinator, responsible for taking on the task of convening members virtually to create and maintain a level of coordination under GIH auspices. The newly created Interactive Platform could be a good way to perform this desired coordination using the social networking-based functionality that is embedded within the platform. For example, the Interactive Platform allows private discussion groups to be formed, which would be ideal for the working group coordinator to create and convene. Two snapshots of the platform are provided below: In this way, the task of coordinating in a virtual manner could be realized using an online platform designed specifically for the infrastructure sector.



Bibliography

École Pont et Chaussées. <http://www.enpc.fr/en/training>

Economist Intelligence Unit (EIU). Infrascopie.

http://www.eiu.com/public/thankyou_download.aspx?activity=download&campaignid=AsiaInfrascopie2014

European Bank for Reconstruction and Development (EBRD). Public-Private Partnerships “PPP Days 2015”. <http://www.ebrd.com/news/events/publicprivate-partnerships-ppp-days.html>

Global Infrastructure Hub (GIH). <http://globalinfrastructurehub.org/>

GlobalViP. <http://www.cg-la.com/advisory/globalvip>

International Finance Corporation (IFC). Industries. Global Infrastructure Project Development Fund (“InfraVentures”).

http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Infrastructure/IFC_InfraVentures

PPP Knowledge Lab. <https://pppknowledgelab.org/>

Public-Private Infrastructure Advisory Facility (PPIAF). <http://www.ppiaf.org>

The Public-Private Partnerships Certification Programme.

<https://ppp.apmg-international.com/home.aspx>

University College London (UCL). Infrastructure Investment and Finance MSc.

<http://www.ucl.ac.uk/prospective-students/graduate/taught/degrees/infrastructure-investment-finance-msc>

World Bank. Global Infrastructure Facility (GIF).

<http://www.worldbank.org/en/programs/global-Infrastructure-facility>

University of Oxford. Said Business School. MSc in Major Programme Management.

<http://www.sbs.ox.ac.uk/programmes/degrees/mpm>

Annex: Overview of IFI-led Project Preparation Facilities

Note: The following table of PPFs led by IFIs represents only a portion of the universe of PPFs that have been created over the past years, and are included here to provide an indication of the activity in project preparation. This table is expected to be expanded over the coming months to capture the wider scope of PPFs globally.

Overview of IFI-led Project Preparation Facilities										
	Infrafund	PSP BNDES	GIF	IPPF	IFC C3P Advisory	AP3F	NEPAD-IPPF	MED 5P	Arab Financing Facility for Infrastructure (AFFI)	Africa 50
Organization	IABD	Brazilian government; IFC; IADB	China, Canada, Australia, Singapore, World Bank	EBRD	IFC	Japan, Canada, Australia, AsDB	Spain, Germany, Norway, Denmark, Canada, AfDB	EIB, EBRD, European Union, Commission, KfW, Union for the Mediterranean, AfDB	World Bank, IsDB, EIB, IFC	20 African countries (top five shareholders: Congo; Morocco; Egypt, Cameroon) and AfDB
Amount	\$83m disbursed to date; \$50m in pipeline	\$12m	\$100m	€40m	Annually about \$50m	\$75m	\$75m since 2002; \$200m additional planned	€15m		\$500m
Approximate number of projects supported	140+ (on-going since 2006)	11 to date	15 (pilot phase to 2018)	10 PPP & 25 public sector (pilot phase to 2018)	Since 1989, advised on 360+ projects; annually about 25 new projects prepared	10 to 15	51 projects prepared as of mid-2015 since 2004	10		50
Source of funds	Ordinary capital	Brazilian government; IFC; IADB	Donor funds; World Bank Group capital reserves	EBRD net reserves	IFC capital reserves and donor funds	Donor funds; ADB reserves	Donor funds; AfDB reserves	Grants contributions from participating organizations	World Bank, IsDB, EIB, IFC	20 African sovereigns and AfDB
Type of projects covered	Public, Private, PPPs	PPPs	PPPs	PPPs and commercialized public sector	PPPs and disposal of publicly owned assets	PPPs	PPPs and public sector projects	PPPs	PPPs	PPPs
Reimbursability	No	Yes	Yes	Yes for PPPs; grants for public sector support	Yes	Yes for PPPs; some non-reimbursable grants	No	No	No	Yes

Geographic Scope	IADB countries of operations	Brazil	Global	EBRD countries of operations	Global	Asia-Pacific region	Africa	Egypt, Jordan, Lebanon, Morocco and Tunisia	Middle East and North Africa (MENA) region	Africa
Eligibility criteria	Bankability of project, with focus on link to IADB country strategies/link to IADB loan/sustainable transport	Bankability of project, with focus on degree of national/subnational support/innovative practice or sector	Bankability of project, with focus on climate smart/trade enabling/project complexity	PPPs: bankability, business case; public sector projects; commercialised structures	Bankability of project	Bankability of project, with focus on climate resilience/sustainability/regional integration	Bankability of project	Bankability of project	Bankability of project	Bankability of project
Sectors covered	Transport/energy	Health/education/transport	Transport/Energy/Water	Transport, water, solid waste, district heating/cooling, facilities management for social infrastructure	Roads, rail, power, airports, ports, water, waste, mining, education and health	Transport/energy/water/social infrastructure	Energy/water/IT/Transport	Transport, water and waste water, solid waste, energy and renewable energy, social and urban infrastructure	Energy, transport and roads, water, ICT, and social infrastructure	Infrastructure

The list below provides the website references for the respective PPFs above:

InfraFund:

<http://www.iadb.org/en/topics/transportation/infrafund,1635.html>

PSP BNDES :

<http://www.slideshare.net/portugaliribeiro/brazilian-psp-program-a-partnership-between-ifc-bndes-and-idb>

GIF:

<http://www.worldbank.org/en/programs/global-infrastructure-facility>

IPPF:

<http://www.ebrd.com/news/2014/ebrd-launches-infrastructure-project-preparation-facility.html>

AP3F:

<http://asiapacificsd.iisd.org/news/adb-public-private-project-facility-kicks-off-with-us64-million/>

NEPAD-IPPF:

<http://www.nepad-ippf.org/>

MED5P:

<http://www.nepad-ippf.org/about-ippf/ippf-philosophy/>

AFFI:

<http://www.ifc.org/wps/wcm/connect/d75c10804aee4412a0f3fa888d4159f8/AFFI+Brochure.pdf?MOD=AJPERES>

Africa50:

<http://www.africa50.com/>

IFC C3P Advisory:

http://www.ifc.org/wps/wcm/connect/as_ext_content/what+we+do/ifc+and+ppps



COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

World Economic Forum
91–93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland

Tel.: +41 (0) 22 869 1212
Fax: +41 (0) 22 786 2744

contact@weforum.org
www.weforum.org