

Emerging Partnerships



TOP 40 PPPs IN EMERGING MARKETS



Emerging Partnerships



TOP 40 PPPs IN EMERGING MARKETS



Emerging Partnerships was researched and written by James Kenny and René Lavanchy and edited by John Kjorstad and James Kenny.

A special thanks to the following individuals from Infrastructure Journal and IFC for their tireless work and valued contributions: Victoria Adams-Kotsch, Dana Babb, Kimberly Coates, Jeanine Delay, Chrysoula Economopoulos, and Tanya Scobie Oliveira.

This publication was made possible through the generous support of PPIAF.

Terms of use and copyright conditions

This publication is copyrighted. All rights reserved and no part may be reproduced, stored in retrieval system or transmitted in any form without prior permission of the publishers.

This publication was commissioned and partly funded by IFC, a member of the World Bank Group, through its IFC Advisory Services in Public-Private Partnerships department, with additional funding from PPIAF.

While IFC and Infrastructure Journal make every attempt to provide accurate and timely information to readers of this publication, neither IFC nor Infrastructure Journal guarantee its accuracy, timeliness, completeness or usefulness, and are not responsible or liable for any such content. The views and opinions expressed herein are those of the interviewees and authors and do not necessarily represent the views and opinions of Infrastructure Journal, PPIAF, IFC or its Board of Directors, the World Bank or its Executive Directors, or the countries they represent.

Emerging Partnerships

TOP 40 PPPs IN EMERGING MARKETS

Foreword

Well-planned and thoughtfully implemented infrastructure is the foundation for reliable access to quality basic services such as clean water, education, health care, power, and transportation. Research shows that infrastructure investment correlates with higher growth and poverty reduction.

Yet worldwide, nearly 1.3 billion people lack access to electricity while 780 million people—or one in seven—lack access to clean water. These stark realities, felt most acutely in the developing world, are compounded by a large infrastructure funding gap facing emerging market governments.

Particularly in challenging economic times, well-structured public-private partnerships are one solution for helping governments raise the large sums of capital required to meet infrastructure needs and, consequently, spur development.

IFC, a member of the World Bank Group, has been providing advice to national and municipal governments on designing and implementing PPP transactions to improve infrastructure and access to basic services such as water, power, agribusiness, transport, health and education since 1989. Working with the private sector to promote investment in infrastructure is a priority for IFC, and we have a global group dedicated to providing transaction advice and an investment group providing financing for PPPs.

By partnering with Infrastructure Journal to produce this publication, along with the generous support of PPIAF, our intention is to highlight these top 40 PPPs as a source of inspiration and as a catalyzing element for governments, the private sector, donor partners, other multilaterals, and PPP practitioners at large to embark on this path.

Ultimately, the goal is this: To improve the quality of life in local communities in emerging markets where the gaps are greatest and the benefits of infrastructure investment can be most widely felt.

As you read through *Emerging Partnerships*, we invite you to consider how similar ideas and the broader concept of partnership between the public and private sectors can positively impact your own communities. We congratulate all those who played a role in each of the Top 40 PPPs for serving as a source of inspiration, responding to some of the greatest challenges in international development.



NENA STOILKOVIC,
Vice President, IFC Business
Advisory Services



LAURENCE CARTER,
Director, IFC Advisory Services
in Public-Private Partnerships

Welcome

Partnership is a word you often hear in the world of infrastructure, but it can be widely misunderstood. Developing a true partnership is not easy. It requires commitment from all parties to work together for mutual benefit. Success is measured not by individual gains, but the combined results achieved by all stakeholders. Partnership is more than a successful transaction or a service contract—it's a shared vision and collective achievement.

In infrastructure, public-private partnerships (PPPs) have to be more than a means to an end. PPPs are about transparency, service, risk transfer and delivering long-term quality and affordability from procurement and financing through construction, operation and maintenance. Value-for-money extends beyond a project's capital expenditure. Partnership is about delivering critical infrastructure for local development and long-term economic growth. This is especially true of emerging markets, which present unique growth opportunities but often lack the political framework to facilitate local or international PPP investment.

IFC and Infrastructure Journal, along with PPIAF through its generous support, are pleased to present this publication, *Emerging Partnerships*, a selection of 40 impressive and noteworthy PPPs from around the world—each at the heart of development in the markets that need it most. By giving these projects the visibility they deserve, our partners—the esteemed judges that supported us with their time and expertise—have provided an independent and objective appraisal of the rapidly developing world of PPPs. They have rewarded and recognized those applied partnerships that tackle difficult issues and those that may be replicated, paving the way for further development.

Throughout the selection process, which included more than 130 submissions from all over the world, a story began to unfold. The PPP dynamic is changing. In emerging markets, it has shifted from predominately utility and transportation concessions ten years ago to include many more social infrastructure projects including hospitals, schools, prisons and even agribusiness. The partnership model is an effective tool for addressing global infrastructure funding challenges, and within some of the examples here, we can already see it evolving yet further to overcome new obstacles including climate change, urbanization, and water and food security.

Private sector development in public infrastructure requires more than just finance. It requires partnership. Please join us in reading this publication, and celebrating true partnership and best practice in infrastructure and international development.



VIPUL BHAGAT,
IFC Advisory Services in
Public-Private Partnerships



JOHN KJORSTAD,
Editor, Infrastructure Journal

10 EAST ASIA, PACIFIC, & SOUTH ASIA

- 12 Regional Overview
- 14 Judges Profiles
- 16-28 Project Profiles
 - 16 Punjab Grain Silos
 - 20 CLIFF Community Sanitation
 - 22 Bhutan Education City
 - 24 Nong Saeng Power Plant
 - 24 Central Java IPP
 - 25 Gorai Dumping Ground Closure
 - 26 NKTi Hemodialysis Project
 - 26 24/7 Water Supply
 - 27 Aurangabad Water Supply
 - 28 Gujarat Rooftop Solar
- 30-33 Project Data

34 EUROPE, CENTRAL ASIA, MIDDLE EAST, & NORTH AFRICA

- 36 Regional Overview
- 38 Judges Profiles
- 40-52 Project Profiles
 - 40 Queen Alia International Airport
 - 44 Pulkovo Airport
 - 46 New Cairo Wastewater
 - 48 R1 Expressway
 - 48 Medina Airport
 - 49 Rosvodokanal
 - 50 Amman East Power Plant
 - 50 KAIA Desalination
 - 51 Jeddah Water Contract
 - 52 Sabiha Gökçen International Airport
- 54-57 Project Data

58 LATIN AMERICA & THE CARIBBEAN

- 60 Regional Overview
- 62 Judges Profiles
- 64-76 Project Profiles
 - 64 São Paulo Metro Line 4
 - 68 Atotonilco Wastewater Treatment Plant
 - 70 IIRSA Norte
 - 72 Porto Maravilha
 - 72 Toluca and Tlalnepantla Hospitals
 - 73 Peru Health Care Portfolio Bond Financing
 - 74 Panama Pacifico SEZ
 - 74 Hospital do Subúrbio
 - 75 Ciudad Victoria Hospital
 - 76 Ribeirão das Neves Prison Complex
- 78-81 Project Data

82 SUB-SAHARAN AFRICA

- 84 Regional Overview
- 86 Judges Profiles
- 88-100 Project Profiles
 - 88 KivuWatt
 - 92 Chiansi Irrigation Project
 - 94 Port of Cotonou
 - 96 Lekki Toll Road
 - 96 Addax Makeni Bioenergy
 - 97 Cape Verde Wind Power PPP
 - 98 Centrale Thermique de Lomé
 - 98 Lesotho: National Referral Hospital
 - 99 Gautrain Rapid Rail Link
 - 100 Henri Konan Bédié Bridge
- 102-105 Project Data

Criteria

In order to find the most unique and groundbreaking PPP's for *Emerging Partnerships*, IJ and IFC undertook a global outreach campaign to encourage governments, industry, academia, nongovernmental organizations, multilaterals and anyone with a vested interest in PPPs to nominate projects that have set new standards for efficiently developing and financing critical global infrastructure.

Nominations were accepted from August 6, 2012 until September 14, 2012. During this period, over 130 online submissions were received with 120 eventually being put forward as eligible to be considered by regional judging panels.

Candidate projects were distributed geographically among four regions and must have been implemented in a qualifying emerging market country within these regions (see www.emerging-partnerships.com/Criteria?Length=4 for country listing):

- East Asia, Pacific and South Asia
- Europe, Central Asia, Middle East & North Africa
- Latin America & the Caribbean
- Sub-Saharan Africa

In order to be considered for *Emerging Partnerships*, projects nominated must also have reached financial close for at least part of the project between January 2007 and June 2012, and could encompass both hard and soft infrastructure, such as agribusiness, education, forestry, health, hospitality, information technology, mining, municipal services, power/energy, telecommunication, transport, waste, water and any other form of critical infrastructure.

Finalists were then selected by four independent judging panels, with each judging panel comprised of an esteemed group of PPP industry experts from that region.

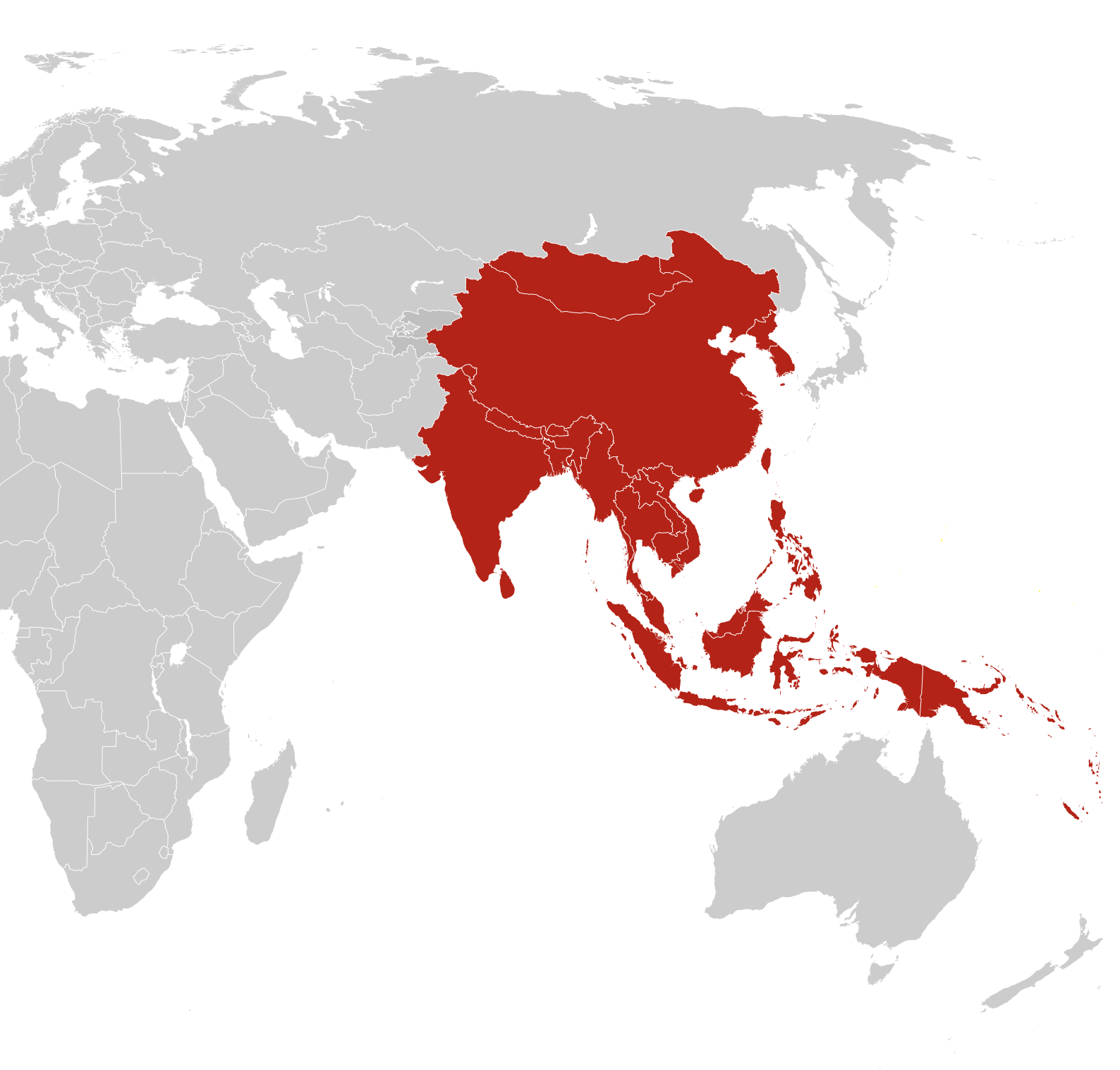
Each project that was eligible for consideration in a region was scored by the judging panel based on the following criteria:

- **Financial Innovation:** Delivery of infrastructure through the use of creative finance structures
- **Technological Innovation:** Delivery of infrastructure using new technologies
- **Developmental Vision:**
 - Does the infrastructure project have a social impact and promote further advancement?
 - Does the infrastructure project promote sustainability and put minimal stress on the environment?
- **Replicability** that sets a commercial standard and can be repeated elsewhere in the country or region.
- **Impact** on the population and the number of people who will directly benefit as a result of the PPP.

Judges who had any affiliation with a project up for consideration recused themselves from scoring on that project in order to maintain independence.

During the judging panels, scores for all of the projects were tallied and, based on these numbers as well as additional judging panel deliberation, the top 10 PPP projects were selected for each region. Then from the top 10 list in each region, the top three highest scoring projects which the judges also felt had a particularly significant impact and embodied all the *Emerging Partnerships* selection criteria are now showcased through in-depth profiles within this publication.





East Asia, Pacific & South Asia

Regional Overview

East Asia, Pacific & South Asia

by James Kenny

In terms of regions, Asia is probably the most polarized when it comes to PPP activity with countries like India, Singapore and China forging ahead with new and innovative infrastructure while others such as Mongolia, Bangladesh and Pakistan make tenuous steps on the PPP ladder.

Most countries in East Asia, Pacific and South Asia have ambitious plans and programs for increasing the role of the private sector in closing the infrastructure gap through PPPs. With the exception of China, few have yet to achieve concrete results. However, this is beginning to change and countries such as the Philippines, an early leader in PPPs during the 1990s, Indonesia, Vietnam, as well as smaller countries in the Pacific have either completed PPP transactions or are actively working on developing a pipeline of PPP projects.

Of those featured in this publication, India proved to be the dominant country with unique projects such as the \$6 million Punjab Grain Silos and \$15 million Gujarat Solar Rooftop project. This is hardly surprising considering the country has the second highest population in the world and PPP activity has been entrenched since the early 1990s with the opening up of India's electricity generation to private players in 1991, which set up the structure of Independent Power Producers (IPPs).

However according to Isabel Chatterton, manager of IFC's Advisory Services in PPPs for the South Asia region, there is still polarization within the country itself with PPP projects and their success altering between different states:

“In India, although successful in the PPP market, we can see opportunities vary dramatically with the replicability of existing PPP models in wealthy states compared to ones with lower incomes. Outside of road projects, other sectors are not always successful models of government PPPs across the country so this is something we are trying to work on and advise to change.”

According to Chatterton, IFC is working on a number of projects to address this imbalance, such as engagement in the health PPP sector and forming different state partnerships with specific governments to move beyond certain projects and problematic PPP initiatives. IFC is also attempting to establish health networks that will comprise primary, secondary and tertiary care and enable the building of larger health facilities.

Work is also ongoing in the renewable energy space. A successful model has already been implemented in the state of Gujarat and IFC is now assisting in developing it across the lower income states in the north and northeast.

While positive steps are being made in India, it has not been the case across the wider region as the country still towers above others when it comes to PPP activity. Help is on hand however with the Asian Development Bank (ADB) implementing its Public-Private Partnership Operational Plan 2012-2020 in order to promote project financing in cooperation with the private sector across other countries in the region.

According to the ADB, the Asia and Pacific region requires infrastructure investment of at least \$8 trillion until 2020, 68 percent of which will be for new capacity and 32 percent for maintaining and replacing existing infrastructure. The average annual infrastructure investment during this period is about \$750 billion.

Available funding from traditional sources falls far short of the investment need. In order to address these massive infrastructure requirements, the ADB states countries have three principal options: review traditional sources of funds and explore additional funding from them, investigate mechanisms for generating more resources from off-budget sources, and finally consider a greater role for PPPs in procuring infrastructure and identifying and addressing impediments to the development of PPP transactions.

As well as the implementation of the overall plan, the ADB is also doing its part to help countries: more specifically by providing assistance to the government of Mongolia in preparing a concession law to support private-sector infrastructure projects; in Cambodia, it is working to provide technical assistance on policy and pathfinder projects; and most recently announced it is open to extending more funds for the pre-feasibility studies of PPP projects in the Philippines, should the government require it.

The IFC is also assisting in the spread of PPP growth in newer frontier countries. “Outside of India we are trying to facilitate the first PPP transaction within certain countries or aid countries with an already burgeoning PPP market,” Chatterton said.

In Sri Lanka, she added that it’s the right time for the government to work with PPPs. IFC is advising on several aspects of real estate PPPs and development of assets that have to do with the country’s core infrastructure. Other regional examples of IFC work that she noted included a health transaction in Bangladesh, hotels in Nepal, and an urban transport project in Bhutan.

Judges Profiles

THE JUDGES

Sanjay Mehta

Victor (Chuan) Chen

Layth Irani

Steve Gross



Sanjay Mehta is Director of Essar Global Limited, London, the holding company of Essar Group. He is also CEO of Essar Shipping & Logistics Limited, Cyprus.

Mehta joined Essar Shipping Limited in June 2000 as Managing Director and CEO. During his tenure he successfully restructured and made further investment decisions for the Ruia family (major shareholder of Essar Group of companies) in their shipping and logistics portfolio. Essar Shipping & Logistics Limited today is the world's leading integrated sea logistics company with a focus on crude oil transportation and crude oil transportation management services for the global oil majors. In addition, it provides integrated supply chain logistics services to the steel making industry and thermal power generators based in South East Asia and Asia Pacific.

Mehta has an MBA from London Business School, London. He graduated with an Honours degree from London School of Economics, London. Mehta has over 15 years experience in the international shipping and investment banking sectors. Prior to joining Essar Shipping Limited, from 1994-2000 he headed up the investment banking desk (South East Asia and Asia Pacific) at American Marine Advisors, Inc., New York. Prior to his tenure with American Marine Advisors, he was with Goldman Sachs, New York, and Hambros Bank, London. Mehta sits on the board and audit committee of Protection & Indemnity Club, Steamship Mutual, London. He is also a board member at the American Bureau of Shipping.



Chuan Chen is the Professor of Engineering Management at the Business School of Sichuan University, Chengdu, Sichuan Province, China. Chen previously worked at Tsinghua University as an assistant professor and then Melbourne University as a lecturer in construction management. He also acts as a consultant to the Private Participation in Infrastructure (PPI) Database of the World Bank and a member of the World Economic Forum Global Agenda Council on Infrastructure. He holds a B.Eng. from Tsinghua University, M.Eng. from National University of Singapore, and Ph.D. from Pennsylvania State University, with specialization in construction and project management. Chen also received a master's degree in applied finance from Melbourne University under a staff scholarship. Chen's research and teaching interests include risk management, project financing, strategic infrastructure development, and public-private partnership. Chen is an author of more than 50 publications.



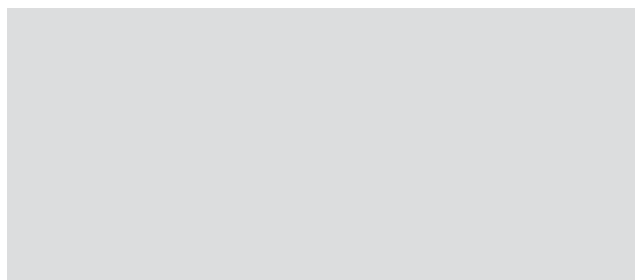
Layth Irani is joint General Manager and head of the Infrastructure Finance Unit at Sumitomo Mitsui Banking Corporation Europe Ltd. He has 25 years experience of acting as advisor, arranger and lender in the transport, infrastructure and telecoms sectors. He has experience in arranging financing for road, rail, port, airport and rolling stock project and acquisition financing. He has worked on projects in Europe, the Middle East, Africa, North and South America and Asia. Clients have included local and national governments, multilaterals and export credit agencies, construction companies and financial sponsors.



Steve Gross is Head of the Asian Business Development team for Macquarie Infrastructure and Real Assets (MIRA). Gross sits on the boards of a number of portfolio companies in China and oversees a team based across Asia that develops all new Asian funds and separate managed accounts as well as managing key stakeholder government and client relationships. This team led the successful development of MIRA's third Korean infrastructure fund, first Chinese infrastructure fund, the Macquarie Everbright Greater China Infrastructure Fund, and the first Philippines infrastructure fund. Prior to this, Gross was the Chief Operating Officer (COO) of the European infrastructure fund business with €7.3 billion under management. During his time as COO, the team grew from 25 to over 60 staff and capital invested increased to €6.3 billion including investment in the largest water and wastewater business in the United Kingdom - Thames Water. Other projects Gross has been involved in include the acquisition of Bristol International Airport and acquisition of DCT Gdansk SA, a greenfield container terminal in Poland.

Gross holds a Bachelor of Commerce (degree with honors) from the University of Melbourne, where he developed research into the crowding in of private sector expenditure by government infrastructure spending. Following that Gross completed a Master in Business Administration from the London Business School where he graduated with distinction.

GOLD
selection



Punjab Grain Silos

PUNJAB STATE, INDIA

As the world plunged into the global recession in 2008, food prices began to rise, causing panic in many countries with violence even erupting in places such as Bangladesh and India as citizens rioted to protest soaring costs. Since then governments and policymakers have been taking tentative steps at stockpiling food supplies.

With wheat a basic staple of nutrition in India, the Punjab State Grain Silos is a project that was called “hugely important” and one that “addresses a very serious issue,” according to the judging panel. It not only provides a real alternative to future food shortages but is also a replicable model that can and is already being adopted by other countries concerned about storage and feeding their growing populations.

The idea was spawned in India’s Punjab State, known as the breadbasket of the country. According to a report published by the Planning Commission of India in late 2011, the warehousing capacity for rice and wheat in the public, cooperative and private sector in India was estimated to be 108.75 million metric tonnes (MT) however there was need for an additional 35 million MT. As one of India’s prime grain producers which also faced critical shortage of storage capacity, the state government of Punjab engaged IFC to advise on a pilot PPP scheme that would develop state-of-the-art, long-term storage silos with a capacity for 50,000 metric tons.

The concession, which was one of the first of its kind, had a number of bidders and was awarded in July 2010 to LT Foods Limited, a large Indian grain exporting, commodity trading and handling company. Under the terms of the 30-year concession LT Foods agreed to finance, build, own, operate and maintain grain silos using state-of-the-art technology and inventory management methods. At the end of the concession, the operator will be able to use the facility for private purposes. The new silos now ensure that, on a yearly basis, 500,000 of India’s poorest will receive better nutrition.

IFC estimated the total project cost, including the cost of land and preliminary expenses, at approximately INR 400 million (\$8 million). The IFC’s advisory work was supported by DevCo, a multi-donor program affiliated with the Private Infrastructure Development Group. The project was implemented in April 2011 and operational by March 2012.

According to Neeraj Gupta, senior investment officer for South Asia with IFC, the move towards grain silos and storage is a global strategic issue with parts of Sub-Saharan Africa and the Middle East investigating storage facilities.

“In the context of what’s happening globally with food shortages, this silo project, its influence and reach are extremely important. The success of the silos means we

“ *In the context of what’s happening globally with food shortages, this silo project, its influence and reach are extremely important.* ”

have been able to push the boundaries of reform and now we are seeing the results with 10 other states in India attempting to adopt a similar strategy. We are also seeing replication internationally, where plans for similar silos are in various states of process in both Pakistan and Africa.”

As a result of Punjab Silos’ success, IFC is now advising on a similar program, albeit on a much larger scale, in Pakistan’s Punjab and Sindh provinces.

Speaking about the project, panel judge Chuan Chen said: “To date there are very few PPPs in the agriculture sector in the Asian region and the silo project not only fulfills an important role but can also be adapted elsewhere. This makes it very exciting.”

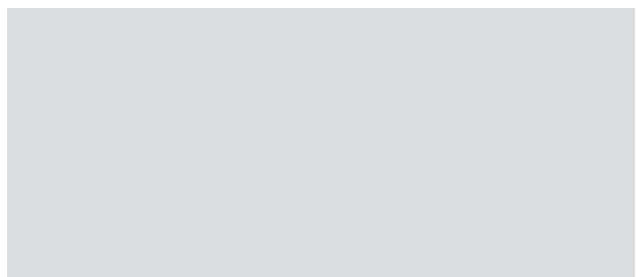
IFC is now advising on a similar program, albeit on a much larger scale, in Pakistan’s Punjab and Sindh provinces.

**For more information on this project and others in the region please see the project data at the end of this chapter.*





SILVER
selection



CLIFF Community Sanitation

MAHARASHTRA AND TAMIL NADU, INDIA

As a partnership between the public and private sectors and based on the enthusiasm of the judges, the Community-Led Infrastructure Finance Facility (CLIFF) Community Sanitation Project in India saw the development rise to the top of the list. CLIFF provides nonprofit organizations working in the developing world access to flexible finance, enabling them to deliver housing and infrastructure for the urban poor.

With this project, CLIFF provided approximately \$1.5 million to Samudaya Nirman Sahayak (SSNS), a non-profit arm of the Indian-based nongovernmental organization (NGO) Society for the Promotion of Area Resource Centres (SPARC). The funding enabled SSNS to deliver sanitation schemes worth over \$7.2 million. This has resulted in the construction of over 230 toilet blocks, totaling 4,610 toilet seats, serving an estimated 230,000 slum dwellers in the states of Maharashtra and Tamil Nadu. SSNS continues to replicate the program, and by the end of 2013 it will have completed another 630 toilet blocks serving an estimated additional 630,000 people.

Speaking about the project, the judges said although it is not a formal PPP model, it should really be considered as it addresses such an important and sometimes overlooked issue.

Judge Sanjay Mehta, said: “It will be very interesting if such a project can be replicated elsewhere and it involves two very important issues, sanitation and urbanization.”

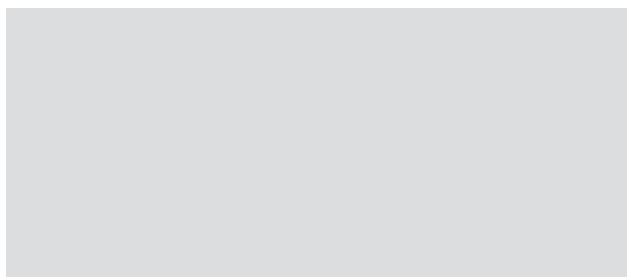
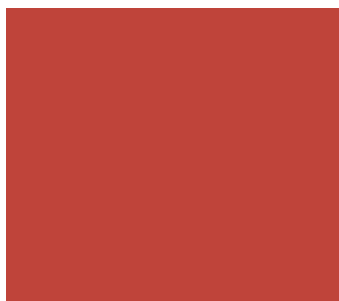
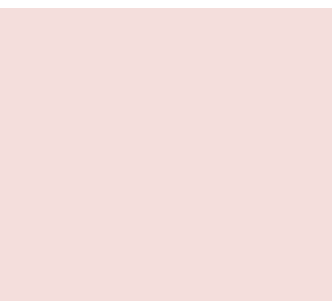
One-hundred thirty million households in India currently lack latrines. Community sanitation blocks, when delivered and managed correctly, can be an

effective means of providing sanitation in India's dense slums. This program introduced a number of innovations, including a genuine partnership between local government, NGOs and communities of slum dwellers. The local government provided water and sewerage connection, access to land, and funds for the construction; SSNS was responsible for construction management, and in many cases slum dwellers themselves built the toilets. The local communities were also involved in assessing the demand.

Importantly, rather than the municipality managing the toilets, the program supported local communities to do this. Communities collected regular fees from users and employed a caretaker to maintain the toilets. The government only released payments for toilet blocks once set construction milestones were met. This meant that to initiate the construction, SSNS needed substantial working capital, which was not available from commercial financial institutions at affordable rates. To overcome this, CLIFF initially granted funds to SSNS which they were able to recycle locally. Today, however, SSNS also receives returnable funds from CLIFF. As SSNS' reputation and capital base grew, and with support of a loan guarantee from Homeless International, SSNS was able to approach banks for loans. Now, SSNS is able to secure bank finance to partially fund construction.

CLIFF is managed by Homeless International and funded by U.K. and Swedish governments. SSNS works in partnership with SPARC, and community-based organizations Mahila Milan and the National Slum Dwellers Federation.

BRONZE
selection



Bhutan Education City

THIMPHU, BHUTAN

A pamphlet outlining the concept and strategy behind the Bhutan Education City (BEC) presents the Kingdom of Bhutan, nestled in the foothills of the Himalayas, as a land of happiness and natural beauty committed to sustainable development.

“Economic growth,” it states, “must be subject to the happiness and wellbeing of the people.”

As the country’s first major PPP infrastructure project (and the first to require its own legislation), the BEC is the cornerstone of the Royal Government of Bhutan’s plan to develop the country’s knowledge economy within its Gross National Happiness framework.

Rather than continue to export bright young minds to universities abroad, the BEC aims to keep students in Bhutan while having robust international standards that will attract students from neighboring India and other parts of the world.

“The main market for the education hub is India and the region, where the demand for good quality education is huge,” said Kinga Tshering, the chief executive of Druk Holding & Investments (DH), in a released statement. “India has only 450-odd universities against a demand for almost 1,000. Foreign universities are not keen to open campuses in India because of its regulatory environment, which makes it difficult for them to earn profit. Therefore, Bhutan would like to offer an alternative destination for higher education.”

On this premise, the Bhutan Education City Act was passed by parliament in 2012 with \$9 million committed to ancillary infrastructure development. Since then, the BEC has institutionalized the governance structure, completed the bid process and

signed memoranda of understanding to work with leading global educational institutions such as the Indian Institute of Management, Ahmedabad; Raffles Institution in Singapore; TERI University in New Delhi; and the Earth Institute of Columbia University in New York.

Plans for the BEC include student and faculty accommodation, a sports complex, retail areas, service apartments and research facilities. The campus will include 500 acres of reserved green space, and employ renewable energy and sustainable development techniques.

In terms of urban development, the campus will provide an extension to Thimphu, the country’s capital and largest city, as well as direct and indirect jobs to over 30,000 people. All economic industries including tourism, construction, the service sector, and the financial sector are expected to benefit from this project.

The BEC is being spearheaded by DHI which is the investment arm of the Royal Government of Bhutan. In October 2012, a 13-member board comprising secretaries from key ministries including education, economic affairs, finance, home and labor and the Gross National Happiness Commission was announced under the chairmanship of the works and human settlement minister to oversee the project. Having the board formed, DHI will hand over the project to the statutory body, which will manage it according to the roles, responsibilities and powers defined in the BEC Act.

Initial ground works on the project were expected to begin in early 2013.

Nong Saeng Power Plant

NONG SAENG, THAILAND

Thailand has long had strong support for PPPs in its infrastructure projects and continues to push for growth in the sector. In 2012 the country engaged the Asian Development Bank for project preparatory technical assistance on a PPP motorway project and policy and advisory technical assistance on Reform and Renewal of Thailand's Railway Sector.

Thailand is also launching a 1,600 megawatt (MW) gas turbine combined-cycle power generation plant in the Nong Saeng district of the Saraburi Province. The plant will consist of two 800 MW power generation plant trains and is being aimed at responding to increasing power demand in a country associated with robust economic growth. It aims to provide reliable and least-cost power to prevent supply shortfalls; promote efficient combined cycle technology and baseload alternatives to coal-fired generation; and support PPPs that enhance efficiency in the sector.

The project is part of the governments' electricity plan, which expects the country's demand for electricity to grow by an annual average of 4.19 percent by 2030. To meet such increasing demand, the Thai authorities have formulated the plan to increase the national capacity of power generation from 31,349 MW in 2010 to 65,547 MW by 2030. The project is also the first PPP project since the credit crisis of over \$1 billion in Thailand that taps international financial markets. The two units are slated to go on-stream in June and December 2014, respectively.

The plant is being developed and implemented under a 25-year power purchase agreement with the Electricity Generation Authority of Thailand (EGAT), and a 25-year gas supply agreement with PTT Public Company Limited (PTT). Project costs and fuel are passed through an offtake agreement. An interconnecting pipeline from the plant connects to PTT's existing Wangnoi-Kaengkoi transmission pipeline 20 kilometers away. A new transmission line is also being constructed to connect to EGAT's system 1.5 kilometers away. The plant is being developed by Japan's electric power development company J-Power with long-term debt provided by the Asian Development Bank, which funded around \$170 million. The other lenders are the Japan Bank for International Cooperation (JBIC), Siam Commercial Bank, Kasikornbank, and Mizuho.

Central Java IPP

CENTRAL JAVA, INDONESIA

The \$4 billion Central Java IPP (independent power producer) project involves building a new 2,000 megawatt (MW) coal-fired power plant in Central Java, Indonesia in order to keep up with growing electricity demand and to attract further private investment into the country. An equity bridge loan was signed in August 2012 with full financing on-going at the time of publication. It is estimated that the plant will improve access to electricity to 7.5 million people and mobilize over \$3 billion in investment. The project is the first to benefit from a new form of government guarantee provided by the Indonesia Infrastructure Guarantee Fund (IIGF), established not only to guarantee PPP projects, but also to provide consistent risk assessment of PPP projects. The project is set to go online by 2016.

A consortium of Indonesian company Adaro Energy and Japan's Itochu and J-Power won the bid for the 25-year power purchase agreement. The plant will use ultra-supercritical coal-fired facilities, which will be able to burn domestic sub-bituminous coal as fuel. The project ties into a Japanese government initiative to "project package" abroad to promote its growth. The Deployment of Integrated Infrastructure Systems Overseas initiative, focused

mainly in the generation and transportation sectors, is being planned for various emerging Asian countries, including Indonesia.

Indonesia's demand for electricity is expected to rise by 9 percent annually and the Central Java project is one of the first in state-utility PLN Persero's second fast track program to add more than 10 GW of new capacity by 2014.

IFC was transaction advisor to PT Perusahaan Listrik Negara (PLN), the government-owned Indonesian electricity company, and proposed the risk allocation structure in the power purchase agreement to maximize bankability of the IPP while minimizing the risks to PLN.

The guarantee mechanism and revised PPP regulations will pave the way for future PPPs in infrastructure in Indonesia, bringing much-needed investment to the sector.

Gorai Dumping Ground Closure

GORAI, INDIA

Considered a groundbreaking initiative in India, the Gorai Dumping Ground Closure was an essential PPP that transformed an area of densely populated Mumbai that had been used for dumping waste since 1972. The site spanned 19.6 hectares and had approximately 2.34 million tons of waste, up to 26 meters in height. Closure of the site was completed in 2009. The dump had contaminated water supplies and was killing surrounding mangroves, while local residents were unable to open windows that faced in the direction of the dump because of the overpowering smell. Creek waters were also being contaminated due to the inflow of leachate.

The Municipal Corporation of Mumbai (MCGM) appointed Infrastructure Leasing & Financial Services (IL&FS) to manage the scientific closure of the site, which was the first of its kind in the country. MCGM received a carbon advance of Rs 250 million (\$4.5 million) against future delivery of carbon credits from the Asia Pacific Carbon Fund of the Asian Development Bank for the project. The project was contracted out on a design, build, own, operate and transfer framework for a 25-year period. The PPP structure ensured that the municipality retained a high degree of control over the project while bringing in the expertise of the private sector.

The dumping ground closure was implemented by United Phosphorous Limited (UPL) along with their consortium partner, Van Der Wiel, Netherlands, over a period of 15 months. The project proved important for the country as it provided a model PPP structure that could be implemented elsewhere, while also demonstrating that carbon financing can catalyze management of solid waste projects and enhance the financial viability. On a practical scale the closure of the dump has seen a marked improvement in the quality of life of people in Gorai living within these 19 hectares of green space in Mumbai. Property value in the area increased with higher property tax collection for the municipality. Improvement in the environmental quality is also noticed with elimination of foul odor in the atmosphere after three decades. Elimination of fire, health hazards and breeding of flies and rodents in the area helps improve public health and hygiene.

NKTI Hemodialysis Project

QUEZON CITY, PHILIPPINES

Although relatively small in scale compared to some of the other projects considered, the National Kidney Transplant Institute (NKTI) Hemodialysis Project in the Philippines proved popular among the judges due to its more personable impact and its innovative procurement of equipment. NKTI initially invested in a new hemodialysis center, however due to an annual budget deficit, the institute found it difficult to furnish the center with new machines and equipment. As the budget only allowed the purchase of five new machines per year compared to the pressing needs of doubling its treatment capacity, a PPP solution was sought.

The procurement process was successfully concluded in 2003 through a PPP lease arrangement between NKTI and Fresenius Medical Care AG. Foreseen as Asia's model in renal care, the new hemodialysis center now provides the highest level of hemodialysis service in the Philippines, as well as in Asia.

The center started servicing patients in August 2003, with the first five-year contract concluded and renewed once again in 2009. The new center alone is now serving more than 120 outpatients a day. There are also now 47 machines in operation at the new hemodialysis center. Aside from offering this improved service and top quality hemodialysis, NKTI has been relieved of its responsibility to maintain the new set of equipment. Most importantly, there has been no price increase to patients, with cost per treatment considered affordable and minimal. No hard impact evaluation study has been done to quantify how the project has enhanced access to services and information, especially for poor households. However, interviews with hospital administrators indicate the following: NKTI was able to acquire the latest available technology in dialysis treatment and expand its services to more patients at the same cost of treatment and at less risk to the government. And because of more machines and higher reliability of these machines, hemodialysis treatment was extended to more Filipinos.

24/7 Water Supply

NAGPUR, INDIA

Uninterrupted, 24-hour access to clean drinking water is the foundation for the long planned 24/7 Water Supply Project in South Nagpur, India. The project marks the first 'full city' PPP contract in India and aims to provide potable water round-the-clock to all citizens, including those living in slum areas, by replacing an old and leaking water network. The water quality will meet World Health Organization water quality standards and will be available under constant pressure.

The project was first proposed by the Nagpur Municipal Corporation in 2009 and was to be completed by 2012; however the project began construction in 2011 due to delays.

Vishvaraj Environment Pvt. Ltd. (subsidiary of Vishvaraj Infrastructure Limited) won the contract, which includes the operation of the Water Utility of Nagpur for 25 years. To operate the contract, Vishvaraj Environment has associated with a global partner, Veolia Water through its subsidiary Veolia Water India, to create a special purpose company named Orange City Water Limited (OCWL). Not only will OCWL provide

drinking water on an uninterrupted scale to 2.5 million people, but it will also include managing the drinking water cycle of production, treatment, transport, storage and distribution to customers' taps. Surface water is produced and treated in five plants for a total of 550 million liters per day and distributed through 2,100 kilometers of pipeline to 250,000 water connections.

The contract includes an initial five-year program of works (mainly network and house service connections rehabilitation, and upgrading) amounting to \$100 million, with 70 percent funded by the government of India through the Jawaharlal Nehru National Urban Renewal Mission city-modernization program and the State of Maharashtra, and 30 percent funded by Vishvaraj Environment.

Addressing a question raised by several judges about the willingness or ability of some citizens to pay for clean water, the local chamber of commerce stated, "The pilot experience has proven that the poor are willing to pay (a subsidized tariff) for such better access to water." As well as revolutionizing the water supply, the development will reduce overall water loss and the city's carbon footprint by spending less energy to pump water. The project was nominated by FICCI (Federation Of Indian Chambers of Commerce & Industry) on behalf of VIL.

Aurangabad Water Supply

AURANGABAD (MAHARASHTRA), INDIA

Access to clean water is still a major issue in many parts of Asia. The Aurangabad Water Supply project in the state of Maharashtra in India was recognized by the judges as not just a vital project that will provide drinking water for a population which exceeds one million people, but also one which sets a precedent and has a major developmental impact on the region.

With Aurangabad being one of Asia's fastest-growing cities, the project will have a direct impact on an expanding population. The development involves the laying of 1,200 kilometers of water pipes from the Jayakwadi dam and is being developed on a build-operate-own-and-transfer (BOOT) basis for a 20-year concession period.

Judge Chuan Chen said: "The project is intriguing and can be replicated elsewhere, which is a major factor in India or other parts of Asia. The project is a practical solution to a practical problem."

The partners in the project are SPML Infra, Essel Infraprojects, Vatech Wabag, and National Water and Sewerage Corporation, Uganda.

Gujarat Rooftop Solar

GUJARAT, INDIA

With over 300 days of sunshine a year, the state of Gujarat in western India is hoping to harness this plentiful resource by pushing forward with the Gujarat Rooftop Solar project and a carbon emissions reduction program. The state plans to install 500 megawatts (MW) of solar capacity by March 2014, and IFC is appointed to help execute this rooftop initiative and to advise on technical, legislative, analytical and marketing support. The pilot project will produce 5 MW of power entirely from solar photovoltaic panels installed on the city of Gandhinagar's rooftops (public buildings and private residences)—a clean and efficient way to address the growing need for power in a developing country that is growing rapidly.

Azure power and SunEdison each won one of the two 2.5 MW projects, with the 25-year concession agreements signed in April 2012. The pilot received financial support from the Netherlands and Finland. Besides attracting \$15 million in private investment, 10,000 people will benefit from increased access to clean power at affordable prices and 6,000 tons of carbon emissions are expected to be avoided per year. The government also stands to benefit from a net annual revenue stream of \$400,000 for 25 years. Overall the project is a standout as it demonstrates the technical, regulatory, and financial viability of rooftop solar panels, which will enable the expansion of solar power in Gandhinagar and elsewhere in India.

Due to the success of the PPP, IFC is already working on similar projects in five other cities in Gujarat and in other states in India.



Project Data

East Asia, Pacific
& South Asia

PUNJAB GRAIN SILOS

PUNJAB STATE, INDIA

Total initial investment	\$8 million
Government client	Punjab State Grains Procurement Corporation (PUNGRAIN)
Equity sponsors	LT Foods Limited
Lenders	DevCo (Private Infrastructure Development Group)
Advisers to authority	IFC (lead), SNC-Lavalin (technical), Trilegal (legal), Mott MacDonald (technical)

CLIFF COMMUNITY SANITATION

MAHARASHTRA AND TAMIL NADU, INDIA

Total initial investment	\$7.2 million
Government client	Various local governments in the states of Maharashtra and Tamil Nadu
Equity sponsors	Samudaya Nirman Sahayak
Lenders	Community Led Infrastructure Finance Facility (Homeless International)

BHUTAN EDUCATION CITY

THIMPHU, BHUTAN

Total initial investment	Bhutanese Ngultrum 20 billion (\$364 million) for Phase I and II
Government client	DHI Infra, a wholly owned subsidiary of Druk Holding and Investments (investment arm of the Royal Government of Bhutan)
Equity sponsors	Infrastructure Leasing & Financing Services Limited and Infinity Infotech Parks Limited
Lenders	National Société Générale Bank, Commercial International Bank, Arab African International Bank, and Ahli United Bank Egypt
Advisers to authority	Project Advisory Group, Empowered Group, Ernst & Young

NONG SAENG POWER PLANTS

NONG SAENG, THAILAND

Total initial investment	\$1.185 billion
Government client	Electricity Generating Authority of Thailand
Equity sponsors	Gulf JP NS Company, Limited in Thailand, a wholly owned subsidiary of Gulf JP Company Limited which is 90% owned by a local subsidiary of Electric Power Development Company, Limited (J-POWER) of Japan and 10% owned by Gulf Holding Company Limited, a local power development company
Lenders	Japan Bank for International Cooperation, Asian Development Bank, Mizuho Corporate Bank Limited, The Siam Commercial Bank Public Company Limited, and KASIKORNBANK Public Company Limited
Advisers to sponsors	Baker & McKenzie
Advisers to lenders	Allen & Overy

CENTRAL JAVA IPP

CENTRAL JAVA, INDONESIA

Total initial investment	\$4 billion
Government client	PT Perusahaan Listrik Negara
Equity sponsors	J-Power, Itochu Corporation and Adaro Power
Lenders	The \$270 million Bridge Facility closed in 2012 included Tokyo-Mitsubishi UFJ Limited, DBS Bank Limited, Mizuho Corporate Bank Limited, Oversea-Chinese Banking Corporation Limited, Sumitomo Trust & Banking Company Limited, Sumitomo Mitsui Banking Corporation; DevCo (Private Infrastructure Development Group) provided a technical assistance grant for IFC's advisory work
Advisers to authority	IFC (lead), K&M Engineering and Consulting (technical), Norton Rose (legal)

GORAI DUMPING GROUND CLOSURE

GORAI, INDIA

Total initial investment	\$9.31 million
Government client	Municipal Corporation of Greater Mumbai
Equity sponsors	United Phosphorus Limited and Van Der Weil
Lenders	Asian Development Bank's Asia Pacific Carbon Fund
Advisers to authority	Infrastructure Leasing & Financing Services Limited

NKTI HEMODIALYSIS PROJECT

QUEZON CITY, PHILIPPINES

Total initial investment	Php 54 million (\$1.33 million)
Government client	National Kidney and Transplant Institute
Equity sponsors	Fresenius Medical Care Philippines Inc.
Advisers to authority	Build-Operate Transfer Center (now renamed PPP Center of the Philippines)

24/7 WATER SUPPLY

NAGPUR, INDIA

Total initial investment	INR 578 crore (\$100 million)
Government client	Nagpur Environment Services Limited, a wholly owned subsidiary of Nagpur Municipal Corporation
Equity sponsors	Orange City Water Limited, a special purpose vehicle owned by Vishvaraj Environment Private Limited (Vishvaraj Infrastructure Limited) and Veolia Water India Private Limited
Lenders	Industrial Development Bank of India (IDBI Bank Limited), Central Bank of India, and India Infrastructure Finance Company Limited
Advisers to authority	Dinesh Rathi & Associates

AURANGABAD WATER SUPPLY

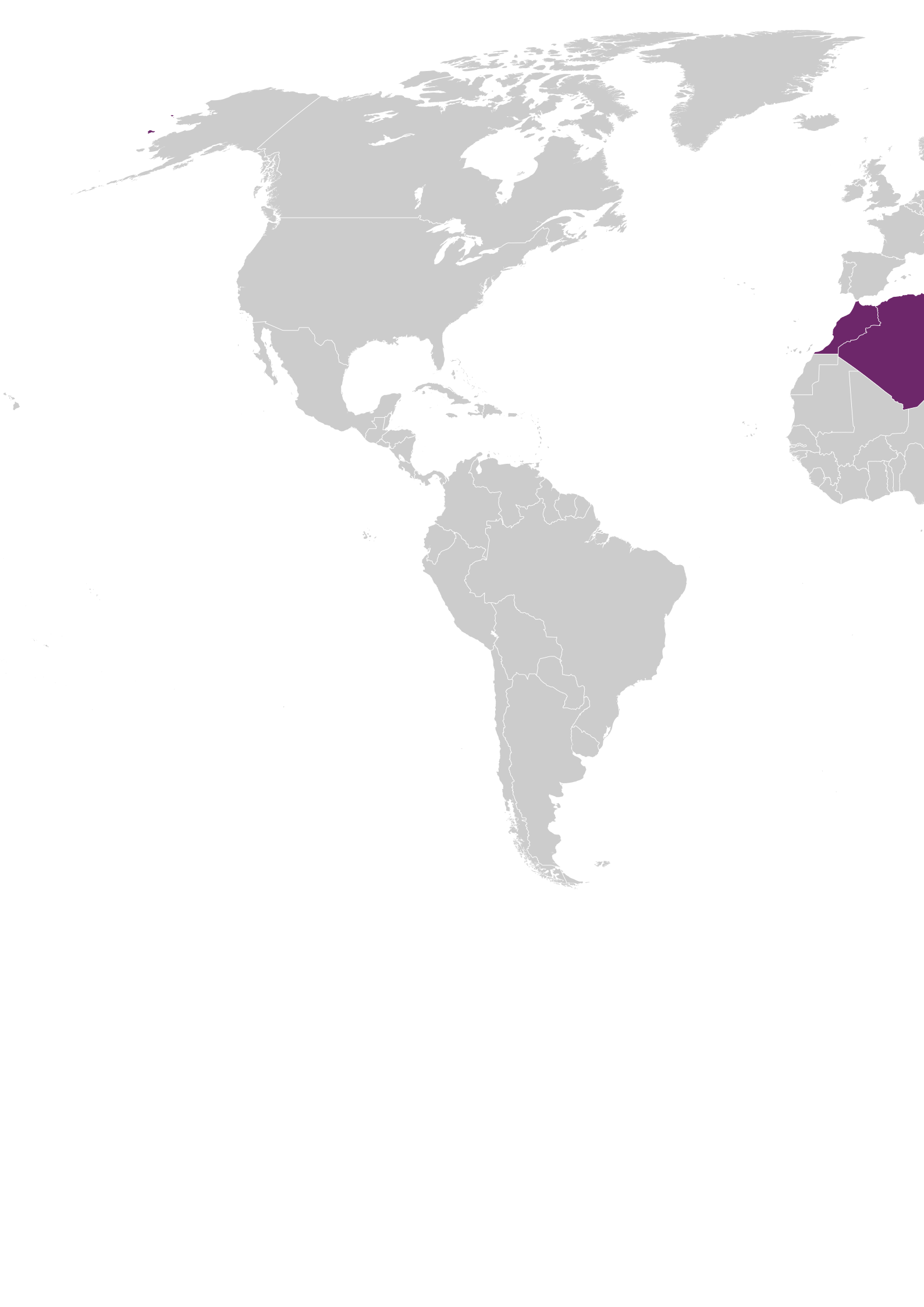
AURANGABAD (MAHARASHTRA), INDIA

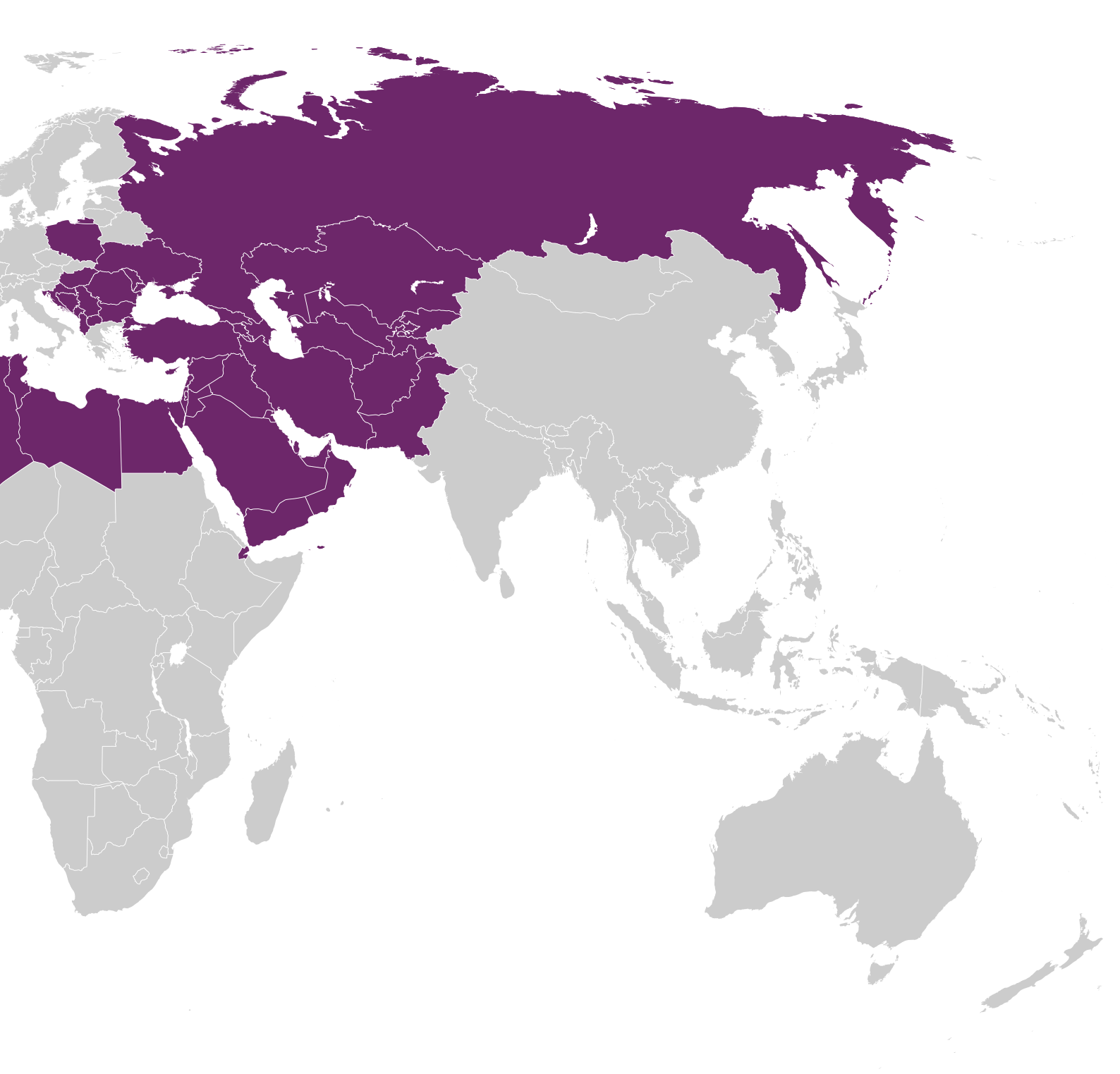
Total initial investment	\$200 million
Government client	Aurangabad Municipal Corporation
Equity sponsors	SPML Infra Limited, Essel Infraprojects Limited, Vatech Wabag Limited (India), and National Water and Sewerage Corporation (Uganda)

GUJARAT ROOFTOP SOLAR

GUJARAT, INDIA

Total initial investment	\$15 million
Government client	Gujarat Energy Research and Management Institute, promoted by the Gujarat State Petroleum Corporation Limited
Equity sponsors	Azure Power and SunEdison (for separate transactions)
Advisers to authority	IFC (lead), Deloitte Touche Tohmatsu India Private Limited (technical), CMS Cameron McKenna LLP (legal), Hemant Sahai & Associates (legal)





Europe, Central Asia, Middle East & North Africa

Regional Overview

Europe, Central Asia, Middle East & North Africa

by René Lavanchy

The past seven years have seen governments all over Eastern Europe, Central Asia and the Middle East express their support for PPPs. Advisers have been brought in, legislation has been passed and PPP centers of excellence have been set up. Why, then, have so few been able to get a credible pipeline of projects off the ground?

Panel judge Geoffrey Hamilton of UNECE observed: “Governments... don’t have the capacity to use PPPs in the volume that we feel can really make a difference... The challenge is not really the first project; the challenge is to turn the first project into a real pipeline. That really demands no short cuts; it demands PPP units and good legal regulation and transparency. And that demands getting governments to improve their capabilities and build their capabilities up. It has to be addressing this if we’re really going to release the logjam and get governments to embrace PPPs in a more systematic way.”

Judges identified a discrepancy between administrations’ promises to pursue a PPP program and effectiveness in delivering a pipeline. According to Infrastructure Journal data, countries such as the Czech Republic, Romania, Slovakia, Kazakhstan and Dubai have closed fewer than six PPPs between them, despite having political and legislative support for the model. Having a well-staffed PPP unit does not translate directly into getting projects off the ground.

Such places seem at first in stark contrast to Russia and Turkey, two countries picked out by judges for their strong economic base and enthusiastic political backing for PPPs. National and local governments in both countries have promised and, in some cases, launched PPP procurements with a high capital value. However, when it comes to successfully closed projects procured in line with international best practice, the differences vanish. Russia, whose federal concession law is often criticized for not offering enough comfort to investors, has only signed two such deals in recent years—the Pulkovo Airport concession (featured) and the Western High-Speed Diameter—while Turkey’s transport and health care PPPs are understood to be held up by issues around contractual rigor and risk allocation.

Thierry Déau of Meridiam and a member of the *Emerging Partnerships* judging panel commented: “What I would focus on is the contractual and administrative framework. I would urge governments to generally spend a lot of work on [that]. The big hurdle is still bankability of contracts.” Croatia, which has already closed several PPPs with international investors, has taken note and brought a new PPP law into force in July 2012. It reduces the approvals process for projects from 120 to 30 days.

Half the projects shortlisted in this section are based in the Middle East, which has seen an exotic range of procurements and approaches to financing infrastructure over the past decade. Judges were pleased by the procurement of water projects in the area, as well as by the success of project developers in marrying the project finance model born in the West to Islamic finance, in some cases closing transactions with conventional loans sitting alongside Islamic facilities—no easy task.

Wealth in these states is no indicator of propensity to carry out a PPP program; closed projects are just as likely in countries without large hydrocarbon revenues (Jordan, Egypt) as the richer oil states, arguably because lack of government cash encourages alternative financing techniques. Meanwhile Jordan, with negligible oil revenues, is recognized here for its airport concession and string of independent power plant projects, while Egypt’s New Cairo Wastewater project was also scored highly. In both cases, international financial institutions—IFC, the World Bank and Japan Bank for International Cooperation—proved indispensable in providing long-term finance and absorbing country risk.

Infrastructure practitioners in the Middle East affirm that Egyptian officials are committed to delivering a pipeline of PPPs, but the upheaval of the Arab Spring and its impact on financial markets has obviously affected their ability to do this—as well as stalling PPP procurements in new markets such as Syria and Yemen. Muneer Ferozie, IFC’s head for Advisory Services in PPPs in the Middle East and North Africa (MENA) region, says: “Before the Arab Spring, PPP was a solution to better infrastructure provision which most governments in the MENA region were either pursuing or considering... Whilst it is true that the Arab Spring impacted the PPP programs, it has also highlighted the need for creating more jobs and providing better infrastructure to the people—the reality is requirements are large and PPPs provide a neat solution to address this challenge.”

PPP procurements for several large Middle Eastern projects, such as Abu Dhabi’s \$2.7 billion Mafraq-Ghweifat Highway and Saudi Arabia’s \$7 billion Landbridge Railway, have been cancelled in recent years. Panel judge Cathy Harris of K&L Gates commented: “Many of these countries have gone for huge, often economic infrastructure projects and from time to time, certainly within the Middle East in my experience, some of these have just been pulled. Perhaps to try trialing some pathfinders which are more straightforward... may lead to greater confidence for developing markets.”

And there are positive signs in this direction, including from unexpected places. Moldova, Europe’s poorest country by some estimates, has been pursuing a PPP program with IFC help since 2010 and last year signed a concession for a \$7 million radiology and imaging center, one of several pilot projects too small to trouble some international investors but which could have a major impact in a country of 4.2 million.

“The project is a typical example of an equally important trend of increased south-south investment in Eastern Europe that we face daily,” said Georgi Petrov, IFC’s head of Advisory Services in PPPs in the Europe and Central Asia region. Petrov added that due to the economic crisis in Europe, the typical Western European investor has retreated and been replaced with either domestic or other emerging market investors.

Judges Profiles

THE JUDGES

Geoffrey Hamilton

Thomas Maier

Thierry Déau

Cathy Harris



Geoffrey Hamilton is Chief of the Cooperation and Partnerships Section of the Economic Cooperation and Integration Division in the United Nations Economic Commission for Europe (UNECE) in Geneva. The UNECE is an intergovernmental body of 56 member states with a focus on developing economic standards for pan-European integration and support for the transition economies. His current responsibility is promoting PPPs for infrastructure development where he leads a program on building the capacity of governments to undertake successful projects. Currently he is setting up an International Center of Excellence in PPP involving different countries around the world who will as part of the initiative be hosting specialist centers. These centers will be responsible for developing guides, maintaining information and training government officials on PPP best practices in sectors, such as health, roads, water, schools and sustainable energy.

His other interests include good governance, attracting foreign direct investment, the economic aspects to peace building and security, property rights for the poor and the protection of intellectual property rights for innovation. Before joining the UNECE he worked at the United Nations Conference on Trade and Development, the International Labour Organization, the Commonwealth Secretariat and the Institute for Research on Multinational Enterprises in Paris. He holds a Ph.D. and a Master's from the University of Glasgow, Scotland.



Thomas Maier is the Managing Director in charge of the infrastructure sector at the European Bank for Reconstruction and Development (EBRD).

Maier joined the EBRD as Senior Project Manager in August 1993 from NatWest Markets where he worked on acquisitions, management buy-outs and highly leveraged transactions in the United Kingdom and Western Europe. At EBRD, he worked as Senior Banker in the Country Team Romania/Moldova/Croatia/Ukraine and later as Director for the Municipal and Environmental Infrastructure Team.

Maier is a board member in various investee companies of EBRD.

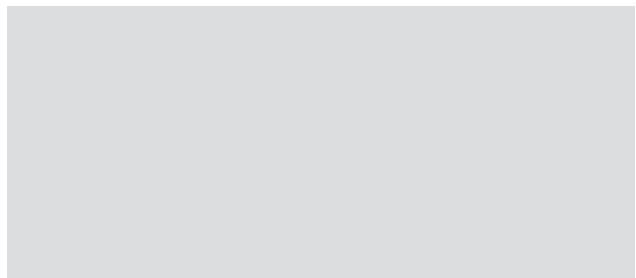


Thierry Déau is the founding partner and CEO, Meridiam Infrastructure. Déau joined Egis Projects, a leading international project developer and operator and subsidiary of the French Caisse des Dépôts in 1994, and was involved in managing and financing infrastructure projects worldwide before being appointed chief executive of Egis in 2001. He joined AECOM as a director in late 2004 to concentrate on developing and managing the Meridiam Project, which was established in 2005 to enable public authorities to procure and manage the infrastructure essential to the development of their local communities.



Cathy Harris is a partner in the London office of global law firm, K&L Gates LLP, where her practice focuses on infrastructure and energy projects. She has been involved from the inception of the PFI/PPP process in the United Kingdom and with the adoption of similar models in other European countries, the Middle East and India. Harris has advised on the development of numerous acute hospitals, ranging from the landmark University College London Hospital to the recently opened first PFI hospital in Northern Ireland. She is also experienced in the transport, defense, education, emergency services, social housing and technology sectors. Cathy is recognized by the independent legal directories including Chambers, Legal 500 and Best Lawyers and holds a Masters of Law from the University of Queensland, Australia.

GOLD
selection



Queen Alia International Airport

AMMAN, JORDAN

The marriage of public infrastructure and private finance was virtually unknown in Jordan when in late 2005 the government appointed IFC to advise on the rehabilitation and expansion of Queen Alia International Airport (QAIA), the country's largest airport and one of only two international gateways into the kingdom.

Yet despite being the first airport PPP in the country and despite the region's perceived risk, the project secured \$900 million of private investment, with IFC taking another role as the biggest lender and joined by six commercial banks.

QAIA's infrastructure dated back to its opening in 1983. Years of almost uninterrupted growth meant that by the mid-2000s, the airport was increasingly crowded and approaching capacity. In addition, Jordan was by now depending on tourism for around 10 percent of gross domestic product and foreign travelers were arriving at an increasing rate.

Olivier Prudhomme, head of corporate development at J&P-Avax, which has invested in the airport concession and is building the new facilities, recalls: "It was an unprecedented bid for our company. Many factors made the project challenging at the beginning. There was no track record of PPP projects in Jordan except for one wastewater project. There were no project finance or PPP models."

Having appointed White & Case as legal adviser and Naco as technical adviser, IFC structured the transaction in the first half of 2006 on a build-operate-transfer basis. Initially, the authority thought the airport could be financed on the successful bidder's corporate balance sheet. A competitive procurement along standard international lines followed, in which six prospective bidders were prequalified to bid. Before bidding, consortia negotiated with the government to allow a project financing, a structure they were much happier to work with.

In April 2007, Airport International Group (AIG) was chosen as the preferred bidder, having offered to pay over 50 percent of revenues to the government in fees over the life of the 25-year concession. With Ernst & Young in place as their financial adviser, the project sponsors turned their attention to securing financing.

In the run-up to the global financial crisis, bank liquidity was at an all-time high—but Jordan was an untested market and the first project of its kind usually carries a risk premium.

"Banks were attracted by PPP projects and were very aggressive. Most responses were 'we are interested, we have some appetite, but we're not going alone'... The condition was for a multilateral to be involved, to mitigate the political risk. That appeared to be a strong requirement for the banks," Prudhomme says. Without

“Many factors made the project challenging at the beginning. There was no track record of PPP projects in Jordan except for one wastewater project.”

the support of a multilateral, commercial lenders were offering tenors of up to ten years, insufficient for a project where the large investment would be recovered over most of the 25-year concession period.

QAIA is not only the Middle East's first full airport concession, but the first to use sharia-compliant finance. IFC lent \$120 million in mainly 17- and 18-year facilities, as well as underwriting a \$160 million commercial bank syndication, while the Islamic Development Bank (IsDB) lent another \$100 million. This required an innovative structure whereby only the IsDB had security over airport assets, and other banks' rights were secured through the inter-creditor agreement in order to give all lenders equal status. Although the revenue of the project was mainly in Jordanian dinars and the debt in U.S. dollars, IFC negotiated this foreign exchange risk by agreeing a clause with the government under which their concession fee would fall if the dinar was devalued by over 10 percent. The sponsors provided \$380 million equity and \$258 million is coming from airport cash flow.

The government is released from subsidizing the airport and is now earning concession fees.

Since AIG took over operations in November 2007, traffic has continued to rise from 3.86 million that year to 5.47 million passengers in 2011. The new terminal is almost complete and due to become operational at the beginning of 2013, bringing capacity to nine million initially. A second phase expansion will eventually raise capacity to 12 million.

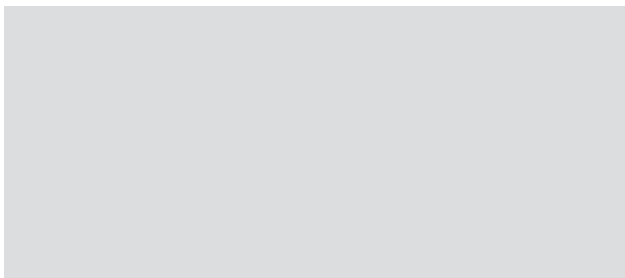
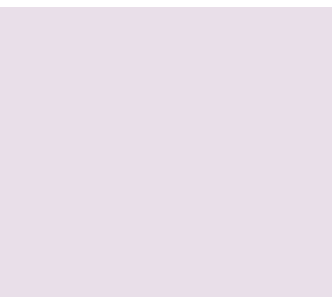
The new airport, expected to create 23,000 jobs, will allow Jordan's importance as a tourist and economic center to grow. The government is released from subsidizing the airport and is now earning concession fees, which reached \$71.7 million in 2011.

**For more information on this project and others in the region please see the project data at the end of this chapter.*





SILVER
selection



Pulkovo Airport

SAINT PETERSBURG, RUSSIA

The \$1.5 billion Pulkovo Airport concession in Russia broke new ground when it signed financing in April 2010. Not only was it the first major PPP in the country backed by international banks, it was the first that did not require state subsidy or guarantees, the first financed by commercial as well as development banks, and the first to be signed under the city of Saint Petersburg's PPP law. This is the best-regarded PPP law in Russia and the one that most closely resembles comparable laws in mature markets, because of features such as the protection afforded to lenders and ownership rights over assets.

The project, with equity backing from Russian bank VTB Capital, Frankfurt Airport operator Fraport, and Greece's Copelouzos Group, will see construction of a new international terminal, already well underway, as well as refurbishment of existing infrastructure, replacing a terminal opened in 1973 and allowing traffic to grow from around 10 million passengers now to 30 million by the end of the concession in 2040. It will remove a key transport bottleneck and promote the economic growth of Saint Petersburg and the surrounding area, according to IFC analysts.

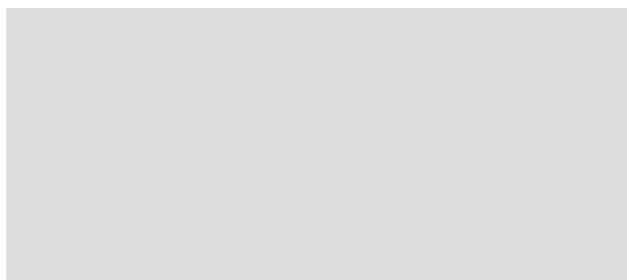
Using the airport's hard currency revenues, IFC and the European Bank for Reconstruction and Development were able to underwrite some \$260 million of euro-denominated loans from a syndicate of eight European banks after signing financing. This

remains a unique achievement in the Russian market, where state-controlled banks and development lenders predominate.

Judges praised the Pulkovo project for securing financing in the aftermath of the 2008 financial crisis, and for overcoming problems posed by federal laws. The project's lenders benefit from improved security to previous projects closed in Russia, while the public sector makes no financial contribution and receives a concession fee. As the first PPP in the country delivered to international standards of project structure and financing, it is likely to encourage both the public and private sectors to follow its example. Saint Petersburg has already signed another, even larger PPP project: the \$3.7 billion Western High-Speed Diameter urban highway.

Commenting on the project in 2011, Oleg Pankratov, head of infrastructure capital at VTB Capital, said: "In our view, the Pulkovo financing has become the yardstick against which infrastructure transactions in Russia and CIS [the Commonwealth of Independent States] will be measured in the years to come."

BRONZE
selection



New Cairo Wastewater

NEW CAIRO, EGYPT

The New Cairo Wastewater plant in Egypt is one of only two successfully closed PPPs out of over six projects launched by the previous government. However, several features of the project indicate that it could be replicated elsewhere, a key criterion of the *Emerging Partnerships* judging panel. The project addresses an important but relatively neglected demand in Middle Eastern countries for wastewater treatment among growing populations.

The New Cairo settlement now numbers some 550,000 residents and is expected to grow to three million by 2029, according to IFC data, with academic as well as domestic customers generating wastewater. Unfortunately, local sources and satellite images indicate that wastewater from the settlement is currently being dumped in the desert, losing valuable water resources.

A competitive procurement process was launched in 2008, attracting five bids. The winning bidder, a team of Egypt's Orascom Construction Industries and Spain's Aqualia, closed the project in February 2010 and are preparing to begin the 18-year operational period.

Despite the local banking market never having financed a PPP, four Egyptian banks agreed to lend about \$110 million in local currency—a key requirement since the government, having suffered the effects of heavy inflation on its power purchase contracts, refused to absorb foreign exchange risk. Another innovation was the tenor of the debt, a record for Egyptian project finance at 15 years. Khaled El

Degwy, concessions director at Orascom, comments: “It was not easy, given that this was the first. We had to provide some [corporate] guarantees to cover the construction period, which is not a guarantee that would be typically required in project finance.”

Attracting long-term lending from local commercial banks rather than international financial institutions is a remarkable achievement for a pilot project and should make New Cairo Wastewater both a replicable and an economically rewarding transaction for Egypt. Some of the contract documentation is being used to procure another wastewater PPP at Abu Rawash.

The resulting project will treat 250,000 cubic meters of wastewater a day, about 2.3 percent of national wastewater capacity in 2008. With a total upfront cost of around \$130 million at the time of closing, the project is one of the smaller PPPs in Egypt's original pilot program, reflecting judges' views that successful inaugural PPPs be not too ambitious in scale and should have a social as well as economic impact.

El Degwy believes that further PPPs are a political and social necessity in Egypt: “[Given] the public pressure on public services... the government needs to do a lot of infrastructure projects to address these public concerns. We will carry the burden of handling design issues, providing financing, and providing proper operation of facilities.”

R1 Expressway

SLOVAK REPUBLIC

Despite being the Slovak Republic's first proper PPP, the \$1.67 billion R1 Expressway that closed in August 2009 is an ambitious project. When fully complete, the new dual carriageway built by France's Vinci and Meridiam will be 51.6 kilometers long with 81 bridges, and is expected to improve health and safety as well as economic competitiveness. Local roads in the area have been some of the most dangerous in the Slovak Republic in recent years, and the expressway is reducing congestion in towns along the route, particularly the city of Banská Bystrica it bypasses. By paying the sponsors a unitary charge in return for road availability, safety and performance, the authority, the Slovak Republic's Ministry of Transport, Post and Telecommunications, hopes to raise standards in road management.

Judges praised the project for securing financing in the eye of a financial crisis: the winning bidders, a team of France's Vinci and Meridiam Infrastructure, were appointed preferred bidder in December 2008, shortly after the collapse of Lehman Brothers, at a time when banks' liquidity dried up and their negotiating techniques hardened overnight. Despite this, the sponsors were able to attract some \$1.45 billion of lending from 12 commercial banks plus the European Bank for Reconstruction and Development (EBRD) and Germany's KfW. The EBRD in particular agreed to lend about \$286 million in euro financing, a larger commitment than usual.

The awarding authority provided no public subsidy and declined to take on responsibility for debt repayment in the event of the concessionaire going bankrupt, thus avoiding unwanted public balance sheet consequences. The project nonetheless closed successfully in August 2009 in spite of competition for funding from other large road PPPs in Europe. The road opened in October 2011.

Medina Airport

MEDINA, SAUDI ARABIA

The \$1.2 billion expansion of Medina Airport in Saudi Arabia is the first full airport PPP in the Gulf Cooperation Council region, and fully funded by Islamic compliant finance. The project, designed in two phases, will see a consortium of Turkey's TAV, Saudi Oger and Al-Rajhi increase capacity from four to eight million passengers a year when the first phase is completed in 2015. They will continue to operate the airport until 2037 under the 25-year concession agreement.

Currently, Medina Airport is almost full and airlines' requests for landing slots are being denied. The PPP will deliver a new terminal, an extended and upgraded runway, a new lighting system for runways and new taxiways, along with a number of other airside and landside developments. As well as improving the travel experience for millions of pilgrims to the holy city every year, the project aims to obtain the region's first LEED silver certification through energy efficiency, recycling, low emissions and water use. Subsequent expansion phases will increase capacity to 18 million passengers by 2037. IFC was lead adviser to Saudi Arabia's General Authority of Civil Aviation (GACA) and saw the project through its entire life from structuring to financial close.

Medina Airport was the third successful PPP procured by GACA after two projects at Jeddah's King Abdulaziz International Airport (KAIA): the Hajj airport terminal, and the KAIA desalination project (also featured). This, and the fact that it was financed by Saudi banks with most of the debt in local currency, indicates that local money is readily available for public infrastructure as well as for more traditional energy projects, and that these transactions can be replicated.

Rosvodokanal

RUSSIA

Rosvodokanal is the largest privately owned water operator in Russia, serving six cities and one region with a total population of about 5.5 million through leasing contracts lasting up to 25 years. Water supply and wastewater networks across Russia have not been upgraded for decades, and are in need of both rehabilitation and extension, according to European Bank for Reconstruction and Development (EBRD) data, but there was a mismatch between the short-term finance available and the time needed to generate a return on investment.

In May 2008 and November 2011, the EBRD intervened to support this work with two 13-year, 1.5 billion ruble loans. The facilities will be used to fund upgrade works in all seven areas where Rosvodokanal operates—Barnaul, Kaluga, Krasnodar, Omsk, Orenburg, Tver and Tyumen—and to help acquire other water companies.

“With no private sector interest in funding infrastructure projects for longer than five years, the EBRD’s 13-year loans provide the long-term finance essential for such an ambitious program of capital expenditure projects to modernize the supply of drinking water and treatment of sewerage,” Rosvodokanal said in a 2011 statement.

The EBRD also used the negotiation of the first loan to tighten up the transparency and competitiveness of water services procurement in Russia. Under the terms agreed, Rosvodokanal was to amend all seven of its contracts to introduce public disclosure requirements, service targets and penalties for underperformance, and to place the contracts under the supervision of independent monitors. The operator has agreed to follow this contract model for future agreements, which it is actively pursuing.

Amman East Power Plant

AMMAN, JORDAN

Jordan's \$300 million Amman East Power Plant was the first independent power plant (IPP) in the Hashemite Kingdom when it was inaugurated in 2009; it has proved its replicability. Since the project reached financial close in 2007, a second IPP has also been signed, built and commissioned, with two more in development. These combined cycle natural gas turbine plants are seen by the Jordanian government as important in reducing its reliance on imported oil and achieving a more sustainable energy balance. Building on the success of this project, half of Jordan's power generation now comes from IPPs, according to IFC data.

The 370 megawatts plant generates over 11 percent of Jordan's 2012 generating capacity, and is helping maintain a safe margin between capacity and demand of at least 10 percent in a country where electricity demand has grown steeply in the first decade of the twenty-first century.

For lenders, Jordan presented significant macroeconomic and exchange rate risks which could impact on the government's ability to make power purchase payments. Nonetheless, the project sponsors, the United States' AES Corporation and Japan's Mitsui & Co, succeeded in attracting finance from the U.S.-based Overseas Private Investment Corporation, Japan Bank for International Cooperation (JBIC) and Japanese commercial bank SMBC. This was enabled by the World Bank's decision to provide two risk guarantees covering SMBC's loan and most of the project equity. As such, it is the first project financing in Jordan supported by JBIC.

KAIA Desalination

SAUDI ARABIA

The King Abdulaziz International Airport (KAIA) Desalination project is helping to address the increasing demand for water in Saudi Arabia. Closed in June 2007 and operational since 2009, it is providing 30,000 cubic meters of potable water a day for the busiest airport in the country. Since the city of Jeddah is unable to supply any water to the airport, this is crucial to ensuring the viability of a site that houses both airport, housing and Royal Saudi Air Force staff, and caters to over 22 million passengers a year.

As well as increasing water production at KAIA, the new plant replaces unreliable and inefficient heat-based machinery with modern reverse osmosis technology, increasing energy efficiency, reducing emissions and carbon footprint. IFC estimates that the project will save the General Authority of Civil Aviation (GACA) about \$12 million a year through various efficiencies. The plant's capacity will rise to 35,000 cubic meters in the eighth year of the 20-year concession, and is ready to be expanded when demand requires.

The sponsors are a consortium of Greece's SETE, Italy's WTD, the United States' Aquatech and Saudi Arabia's Haji Abdullah Alireza, with the project structured under a build-operate-transfer PPP arrangement. IFC was lead transaction adviser to the grantor, GACA.

Jeddah Water Contract

SAUDI ARABIA

As Saudi Arabia seeks to diversify its economy away from oil and sustain a rapidly growing population, a constant problem for the government is the lack of reliable access to water: even in the capital Riyadh, water supply cannot be guaranteed 24 hours a day.

To resolve this, the government created the National Water Company (NWC) in 2008 to oversee massive investment in infrastructure and supervise management contracts with the private sector, intended to improve continuity of service. That same year, it awarded a seven-year contract for Jeddah's water network to a joint venture of France's Suez Environnement and Saudi Arabia's Acwa Power.

The joint venture, known as Jeddah Water Services Company (JWS), has 21 key performance indicators to meet under the contract. Water coverage must be raised to 100 percent of the four million inhabitants, and wastewater coverage—about 40 percent in October 2012—must rise to 80 percent by 2015. Other targets include increasing network efficiency and raising the debt collection ratio. The variable component of the joint venture's monthly fee is paid or deducted according to how targets are met. NWC staff continues to operate the network, overseen by JWS managers, who are also responsible for overseeing an ambitious investment program that has spent \$300 million a year for the past four years.

JWS is currently helping the NWC design its business model and management is due to be handed back to the state in 2015. However, although its plans are unclear, the contract may pave the way for further private participation in the Saudi water network.

Sabiha Gökçen International Airport

ISTANBUL, TURKEY

While Sabiha Gökçen International Airport, serving the Asian side of Turkey's largest city Istanbul, was not the first airport in the country to be concessioned out, the project was one of the most ambitious. The consortium of Turkey's Limak, India's GMR and Malaysia Airports Holding that won the 20-year concession in 2007 had to increase capacity from 3.5 million to ten million passengers a year. Under the agreement signed in March 2008, they had 30 months for construction, but Turkish Prime Minister Recep Tayyip Erdoğan asked them to deliver it in only 18 months. This they did, signing project finance loans of €336 million in June that year and completing all works, including a 210,000 square meter terminal, by October 2008.

According to Limak, the expanded airport has transformed the surrounding area, stimulating the appearance of a new commercial district. The concessionaires have drawn up a masterplan that would see a technology business park also built nearby. Because the region is prone to earthquakes, the new terminal is seismically isolated, the largest such structure in the world.

Passenger figures have more than justified the project, rising to 13.7 million in 2011 and were on target to reach 15 million in 2012. The new terminal's eventual capacity is designed to be 25 million. It was designated the world's fastest growing airport in 2009 and 2010 by Airports Council International. The government is promised €1.93 billion in fees over the concession period, and since then has successfully launched similar projects to expand Izmir Adnan Menderes Airport and build the new Zafer and Çukurova airports.



Sabiha Gökçen International Airport

Project Data

Europe, Central Asia,
Middle East & North Africa

QUEEN ALIA INTERNATIONAL AIRPORT AMMAN, JORDAN

Total initial investment	\$900 million
Government client	Ministry of Transport
Equity sponsors	Invest AD (Abu Dhabi Investment Company), Noor Financial Investment Company, Edgo Group, Aéroports de Paris Management, J&P Avax and J&P (Overseas) Limited
Lenders	Islamic Development Bank, IFC, Crédit Agricole, Natixis, Europe Arab Bank, Crédit Industriel et Commercial, Alpha Bank, and Piraeus Bank
Advisers to authority	IFC (lead), White & Case (legal), Dajani & Associates (legal), and NACO (technical)
Advisers to sponsors	Ernst & Young (financial), Ashurst (legal) and Arup (technical)
Advisers to lenders	Norton Rose (legal)

PULKOVO AIRPORT SAINT PETERSBURG, RUSSIA

Total initial investment	\$1.5 billion
Government client	City of Saint Petersburg
Equity sponsors	VTB Capital, Fraport, and Horizon Air Investments (Copelouzos Group)
Lenders	Vnesheconombank, Eurasian Development Bank, Nordic Investment Bank, Black Sea Trade & Development Bank, IFC, European Bank for Reconstruction and Development, KfW, DZ Bank, Nordea, Espirito Santo Investment Bank, UniCredit, Standard Bank, Mediobanca and Raiffeisen
Advisers to authority	Citi (financial), Dewey & LeBoeuf (legal), Capital Legal Services (legal), Mott MacDonald (technical), Airport Strategy and Marketing (traffic) and World Bank (transaction advice)
Advisers to sponsors	VTB Capital (financial), Freshfields Bruckhaus Deringer (legal) and Halcrow (technical)
Advisers to lenders	Clifford Chance (legal), Scott Wilson now URS Scott Wilson (technical) and Willis (insurance)

NEW CAIRO WASTEWATER NEW CAIRO, EGYPT

Total initial investment	\$200 million
Government client	New Urban Communities Authority
Equity sponsors	Orascom Construction Industries and Aqualia Industrial (FCC Group)
Lenders	National Société Générale Bank, Commercial International Bank, Arab African International Bank, and Ahli United Bank
Advisers to authority	IFC (lead), Gide Loyrette Nouel (legal), Parsons Brinckerhoff (technical)
Advisers to sponsors	Baker & McKenzie (legal) and DLA Piper (legal)
Advisers to lenders	Zulficar & Partners (legal) and Environmental Civil Engineering Consulting Center (technical)

R1 EXPRESSWAY SLOVAK REPUBLIC

Total initial investment	\$1.67 billion
Government client	Ministry of Transport, Posts and Telecommunications of the Slovak Republic
Equity sponsors	Meridiam Infrastructure and Vinci
Lenders	BayernLB, Banco Bilbao Vizcaya Argentaria, Crédit Agricole, Dexia, HypoVereinsbank, KfW, Société Générale, BNP Paribas, Erste Bank, ING, Natixis, NIBC, and UniCredit
Advisers to authority	PwC (financial), CMS (legal) and Arup (technical)
Advisers to sponsors	BNP Paribas (financial), Linklaters (legal), and Willis (insurance)
Advisers to lenders	Ashurst (legal), Atkins (technical), and Aon (insurance)

MEDINA AIRPORT

MEDINA, SAUDI ARABIA

Total initial investment	\$1.2 billion
Government client	General Authority of Civil Aviation
Equity sponsors	TAV Airports, Saudi Oger Limited, and Al Rajhi Holding Group
Lenders	Sumitomo Mitsui Banking Corporation, SABB (formerly Saudi British Bank), National Commercial Bank, and Arab National Bank
Advisers to authority	IFC (lead) and White & Case (legal), Cowi/SH&E (technical)
Advisers to sponsors	Sumitomo Mitsui Banking Corporation (financial), Norton Rose (legal), Atkins (technical), Mott MacDonald (technical)
Advisers to lenders	Baker & McKenzie (legal)

ROSVODOKANAL

RUSSIA

Total initial investment	\$63 million (2008) and \$49 million (2011)
Government client	Various Russian city and regional water authorities
Equity sponsors	Rosvodokanal
Lenders	European Bank for Reconstruction and Development
Advisers to sponsors	CMS (legal)
Advisers to lenders	White & Case (legal) and Mott MacDonald (technical)

AMMAN EAST POWER PLANT

AMMAN, JORDAN

Total initial investment	\$300 million
Government client	Ministry of Energy and Mineral Resources
Equity sponsors	AES Corporation, Mitsui & Co Limited
Lenders	Overseas Private Investment Corporation, Japan Bank for International Cooperation and Sumitomo Mitsui Banking Corporation
Advisers to authority	K&M Engineering and Consulting (technical)
Advisers to sponsors	Chadbourne & Parke (legal)
Advisers to lenders	Freshfields Bruckhaus Deringer (legal) and Mott MacDonald (technical)

KING ABDULAZIZ INTERNATIONAL AIRPORT (KAIA) DESALINATION

SAUDI ARABIA

Total initial investment	\$40 million
Government client	General Authority of Civil Aviation
Equity sponsors	SETE Energy Saudia for Industrial Projects Limited, Water Treatment and Desalination (WTD), Aquatech and Haji Abdullah Alireza and Company
Lenders	SABB (formerly Saudi British Bank)
Advisers to authority	IFC (lead), Gide Loyrette Nouel (legal), and Nippon Koei (technical)
Advisers to sponsors	White & Case (legal)
Advisers to lenders	Baker & McKenzie (legal)

JEDDAH WATER CONTRACT

SAUDI ARABIA

Total initial investment	\$61 million (value of seven-year contract)
Government client	National Water Company
Equity sponsors	Suez Environnement and Miahona (ACWA Power Development)
Advisers to authority	CRA International (Charles River Associates), Ernst & Young (financial), Freshfields Bruckhaus Deringer (legal), Prima Law & Consultations Office (legal), and Hyder Consulting (technical)

SABIHA GÖKÇEN INTERNATIONAL AIRPORT

ISTANBUL, TURKEY

Total initial investment	\$696 million
Government client	Undersecretariat for Defense Industries
Equity sponsors	Limak Holding, GMR Infrastructure Limited, and Malaysia Airports Holdings Berhad
Lenders	ABN AMRO, Royal Bank of Scotland, and Yapi Kredi
Advisers to sponsors	ABN AMRO (financial) and Pinsent Masons (legal)
Advisers to lenders	Clifford Chance (legal)





Latin America & the Caribbean

Regional Overview

Latin America & the Caribbean

by René Lavanchy

Containing one of the world's biggest economies, Brazil, and several of its smallest, it is no surprise that Latin America and the Caribbean are home to every variety of PPP market: the mature, the energetic, the hopeful and the non-existent.

Even the wealthier countries in the region have sharp social inequalities which improved access to social and economic infrastructure could do much to address. Brazil, for example, is one of the fastest growing major economies in the world but suffers from shortages of health care provision in places, an underdeveloped penal system and the need to keep up with a rapidly growing population. Colombia's prosperity is also rising and the investment climate has improved immeasurably recently, but the country's interior remains poorly connected to major cities and 37.2 percent of the population live below the poverty line according to 2010 World Bank data. Mexico has leveraged billions of dollars of public money in support of infrastructure in the past five years, but the exploding population in Mexico City has left its water supply badly exposed.

Chile, the region's most mature market, has been successfully procuring PPPs since the 1990s and is not covered in this report. At the other extreme, countries such as Bolivia, Ecuador and Venezuela have yet to show an interest in PPP. Argentina has done several PPPs in the past, but also does not show much of an interest these days. A third group, including Brazil, Colombia, Mexico, and Peru, have all closed a respectable pipeline of projects in the last decade but are still growing and exploring new areas and techniques. Most of the remaining countries are making efforts to embrace the model, according to Richard Cabello, manager for IFC Advisory Services in PPPs in the region.

What are the key challenges? In countries still preparing to launch their first PPPs, lack of budgetary resources and lack of expertise tend to go hand-in-hand. Cabello notes: "When we

Judges Profiles

THE JUDGES

Henrique Pinto

Ana Corvalan

Geoffrey Cleaver

Chris McMonagle



Henrique Amarante da Costa Pinto has worked for BNDES, the Brazilian Development Bank, since 1982, where he performed, among other roles, the following positions: Manager for Mining and Metallurgy; Manager for Investment at Capital Market Division; and Superintendent and Chief of Operational Division at BNDESPAR. He is presently the Deputy Director for the Project Development Division at BNDES where his main responsibility is to structure concessions and PPPs. He's been a member of several investment committees for private equity and on the board of directors for many different companies. He is a mechanical engineer graduate of the Federal University of Rio de Janeiro (UFRJ), with a master's degree in administration from COPPEAD-UFRJ and in international securities investment and banking degree from the University of Reading—United Kingdom.



Ana Corvalan is an economist by background with over 26 years of experience in corporate and investment banking. She worked in Latin America for 11 years before moving to Amsterdam and soon afterwards to London, where she has been based since 1998. Ana started her career at Chase Manhattan Bank and has subsequently worked for ABN AMRO, Calyon, Banca Intesa, BBVA and most recently for Espirito Santo Investment Bank. She has worked in project and structured finance for over 15 years with a main focus on the infrastructure, oil and gas, power, and metals and mining sectors, covering Europe, Middle East, Africa, Central Asia, Latin America and Australia.

She is actively involved in promoting investment and project finance activities in Latin America, with special emphasis in the infrastructure, energy and waste/water sectors. She is regarded as an expert in the region and provides consultancy services to various public and private entities across Europe and Latin America. Corvalan is a director of Euro Latam Financial Consultants and a non-executive director of the International Project Finance Association, with headquarters in London.



Geoffrey Cleaver is the head of Banco Santander's Brazil private equity team since 2004, where he manages InfraBrasil, an infrastructure fund.

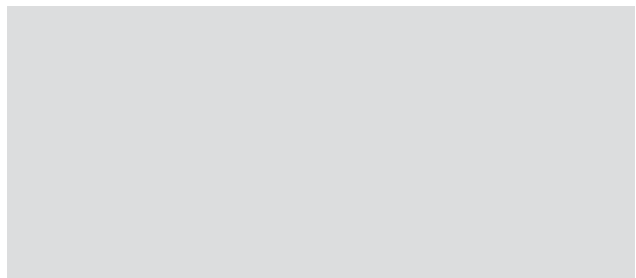
Prior to Banco Santander he worked for eight years at Latin America Enterprise Fund (LAEF), a private equity general partnership focused in Latin America. At LAEF he was co-responsible for the investment portfolio of the funds LAEF I and LAEF II in Brazil.

Prior to this, Cleaver worked for ten years in investment banking and private equity at JPMorgan. Cleaver has a bachelor's degree in business administration from FAAP—Fundação Armando Álvares Penteado. Cleaver is a board member of Renova and Haztec, and a member of the joint ABVCAP (Brazilian Private Equity Association)—ANBID (Investment Banking National Association) Regulatory Committee.



Chris McMonagle is Development Director for Mott MacDonald's Infrastructure Finance and Investments business. An experienced transaction advisor, management consultant and civil engineer, McMonagle has a considerable deal of experience, originating, leading and delivering across numerous sectors. Key expertise is in strategic, commercial and operational due diligence with a special interest in top down due diligence to identify and improve business fatal flaws.

GOLD
selection



São Paulo Metro Line 4

SÃO PAULO, BRAZIL

When the World Bank began to consider supporting the construction of São Paulo's fourth metro line in 2001, the city's metropolitan area was home to 16.8 million people and growing. An extensive public transport network was indispensable, but, as the World Bank noted in a report, even with 270 kilometers of rail network and three metro lines, the existing services were inadequate. High fares and lack of interconnectivity between metro and rail lines was driving up car use and congestion on the roads, and access to jobs was uneven across the area.

The state government wanted to introduce private capital and management to the public transport system, but with the country's PPP law not yet in force, civil works were procured conventionally instead. When the law passed in 2004, a concession project was prepared to finance and commission the new trains and systems, and operate the trains and the line according to service targets.

Although the scope of the project was limited, its aim—to close the first successful PPP in Brazil structured under the law of 2004—was challenging, especially as the metro operator needed to be (literally) perfectly aligned with the infrastructure, which was

still unfinished when the 30-year concession was awarded to the ViaQuatro consortium in 2006.

The winners promised not only to deliver the metro trains on time but to introduce new technology to the country: the first driverless trains in Brazil and automatic doors on platforms. Luís Valença, president of ViaQuatro, recalls: “It was not an obligation but an option. We have done that not because it's cheaper—in fact it costs a little more—but because it's modern. To have the best available technology in the first PPP project to give more to society in comfort, safety and quality of service.”

Using the latest technology meant ordering trains from abroad: the trains are built by South Korea's Hyundai Rotem and the train control system is supplied by Siemens. As such, the project was ineligible for a loan from Brazil's national development bank, BNDES. This presented the sponsors with a problem. “In Brazil we don't have commercial banks directly to finance this kind of project,” Valença says bluntly. In fact, commercial banks would eventually take part, but as part of a 12-year, \$240 million syndication by the Inter-American Development Bank (IDB). This allowed the concessionaire to benefit from the bank's

Traffic is now broadly in line with forecasts, carrying 650,000 people a day and rising.

long-term, low-cost financing and grace period. The IDB directly lent a further \$69 million to the PPP in a 15-year A loan. Financing was signed in October 2008.

Inauguration of the line was delayed by problems with the civil works, rather than with the PPP, and sections began to open in 2010 until in October 2011 the whole line was in service. Traffic is now broadly in line with forecasts, carrying 650,000 people a day and rising. According to an independent survey carried in 2011, 89 percent of Line 4 passengers expressed satisfaction with the service.

Line 4 connects up with three metro lines and three commuter rail lines, as well as bus services. Despite rising car ownership, the metro system's share of motorized trips in the region increased from 16 percent in 2001 to 19.3 percent in 2011.

The concessionaire is remunerated in three different ways: a charge per passenger carried on the line daily, fixed payments to cover operation and maintenance costs (subject to performance targets), and revenues from commercial development at the metro stations. If passenger traffic is within 10 percent of the 10-year forecast, they absorb the upside or downside; if above or below, then the public authority shares in the gains or losses. Ticket revenues are retained by the authority. The new line has been revenue positive for the state-owned metro company, improving its profitability.

After capacity building work by the World Bank, São Paulo is now preparing a PPP for line 6 that will include infrastructure works. Valença approves: "The main problem was the split of the authority between the granting authority and the concession. [The solution would be] transferring 100 percent the investment to the concessionaire... We believe it's the best solution. You can guarantee that the schedule will be met."

**For more information on this project and others in the region please see the project data at the end of this chapter.*





SILVER
selection



Atotonilco Wastewater Treatment Plant

MEXICO

The Atotonilco Wastewater Treatment Plant is the largest infrastructure project in Mexico yet and has been cited as the biggest wastewater treatment project anywhere in the world, with an impact to match.

The Valley of Mexico is the most populous metropolitan area in the Americas, with over 20 million inhabitants in 2010, yet only about 6 percent of wastewater generated is treated. According to national water authority Conagua, this has caused the spread of toxic organisms and pollution of aquifers and surface water bodies as the septic water is dumped and reused.

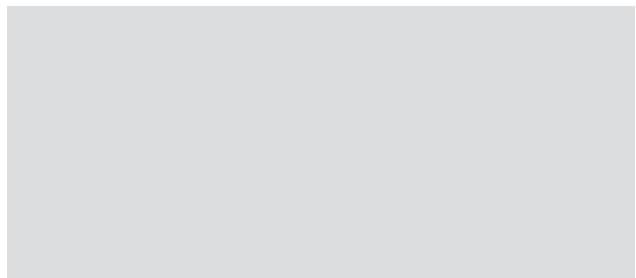
In 2009 Conagua launched a tender for a plant to treat 60 percent of the Valley of Mexico's wastewater. Federico Patiño, director of the state-owned national public works bank Banobras' investment bank, notes: "It's more complex [than previous PPPs] because of the size of the project. Also, there were only two proposals in the bidding process because it was more convenient for the companies to participate in association. Nonetheless, it was well-structured financially. This allowed the tender to take place successfully."

Despite its considerable cost, the 25-year concession project was closed without the support of a multilateral financial institution. From the outset Conagua could rely on Banobras to support the deal through its investment bank and through its national infrastructure fund, Fonadin. Normally Fonadin subsidizes up to 40 percent of the costs of PPPs; in this case, the threshold was raised to 49 percent on account

of the project size and the relatively low tariffs charged to water users. The majority of capital remained in the form of debt and equity—Banobras leading the debt financing and attracting commercial banks in syndication—so that most funding is still dependent on the sponsors successfully completing the project. With the subsidy fixed at 49 percent during the tender process, the winning bid was chosen on the basis of the lowest tariff requested. The concessionaire is repaid, however, from Conagua budgets.

Construction has been underway since 2011 on a 159-hectare site and the first phase is expected to become operational in May 2014. When it does, the plant will handle 23 cubic meters of wastewater per second, rising to 35 cubic meters during heavy rainfall. Mexico's overall water treatment rate is expected to rise from 36 percent to 60 percent, and 300,000 people living in areas irrigated by the wastewater will be protected from pollution. Other wastewater PPPs have since been closed in Mexico; three are currently in preparation or procurement.

BRONZE
selection



IIRSA Amazonas Norte Highway

PERU

This 955 kilometer highway crossing northern Peru passes through settlements housing 1.3 million people, among the country's poorest. Not only does it link the Pacific coast to the relatively isolated hinterland, it is also part of a multimodal transport corridor that extends across Brazil via the Amazon River. The road crosses the Andes and rainforest terrain, landslides were a constant threat and its unpaved sections easily reduced to mud. Traffic was heavily constrained and journey times unpredictable.

In the early 2000s, Proinversión, Peru's private investment promotion agency, structured a project to improve and operate the road as the country's first PPP, despite having had enabling legislation since the 1990s. Part of the problem was the country's sub-investment grade credit rating. To increase bankability, the government created the works annual payment recognition certificate, or CRPAO. These certificates form irrevocable, unconditional promises to pay and are issued on completion of construction milestones. Their monthly frequency represents a regular cash flow and provides comfort to investors.

Ronny Loor, general manager of the IIRSA Norte concessionaire, says: "People in the financial market understood it quickly and liked it. It was the first time it was [used] in the market." The government also obtained a \$60 million guarantee from the Inter-American Development Bank, which partially covers CRPAO payments in the event of government default.

Under the deal, the concessionaire would have to build, rehabilitate or renew about 750 kilometers of road in collapse or disrepair, installing bridges, drainage and emergency communications. Financing was closed in August 2006: the CRPAOs were securitized to issue a \$213 million bond acquired and then issued offshore by Morgan Stanley.

Works were challenging, demanding stabilization of landslide-prone mountainsides and the fitting of concrete walls. After weather-related delays, construction was completed in 2010. The highway is now passable all year round. Whereas previously it took over 36 hours to cross in perfect conditions, "today it takes 15 [hours] from the coast to the jungle," Loor says. One-week waits to clear the road are a thing of the past. The interior has been opened up providing greater access to health care and education; goods can be transported reliably at last, promoting business in the Pacific port of Paita and trade between Peru and Brazil.

The concessionaire is paid for operation and maintenance by the government, which retains tolls. The project's model was quickly replicated: in 2007, the much bigger IIRSA Sur highway concession reached financial close with the same payment mechanism.

Porto Maravilha

RIO DE JANEIRO, BRAZIL

Many major coastal cities have had to deal with derelict post-industrial docklands, and Rio de Janeiro in Brazil is no different. The alarmingly high (90 percent) office building occupation rate in the late 2000s presented an opportunity to develop the city's former docks. The result was Porto Maravilha, a special economic zone covering five million square meters. To deliver the necessary infrastructure for this area, a 15-year concession was structured under the PPP law and signed in 2010 with the Novo Porto consortium.

Seventy kilometers of streets will be renewed, and the concessionaire will install 84 kilometers of drainage channels, 26 kilometers of gas pipelines, 75 kilometers of optical fibre lines and 500 kilometers of electric cable. The old Perimetral overpass that crosses the area will be demolished in 2013, beautifying the area and reducing pollution; but not before nearly 4 kilometers of expressway tunnels and viaducts are built to carry the traffic. After five years of construction, the consortium will provide services and maintain infrastructure for 10 more years.

The cost of this investment, 4.2 billion reais for construction, is being met with the city's sale of additional construction potential certificates (CEPACs) that the city government, via its investment vehicle, sold for 3.5 billion reais to the state-controlled bank Caixa Econômica Federal which is now selling them on to developers. CEPACs allow the developer of a building in the area to build additional floors to the maximum allowed by regulations. The proceeds will reimburse the concessionaire and fund restoration of heritage buildings.

Toluca and Tlalnepantla Hospitals

MEXICO

IFC took a scalpel to the public authority's plans for health care PPPs when it was hired by the social security institute of Mexico State in Mexico to structure transactions for the Toluca and Tlalnepantla hospitals. The two urban centers in this central state are both home to major industrial zones. The growth of businesses and the population had outstripped health care capacity, and some of the hospitals were out of date.

ISSEMyM (El Instituto de Seguridad Social del Estado de México y Municipios) originally proposed a new oncology center and tertiary care hospital; but on evaluating their needs, IFC recommended that the existing oncology center could be retained and no tertiary hospital was needed. Instead, it proposed two new secondary care hospitals providing a full range of non-specialized hospital services.

After competitive bidding in 2009 to 2010, the Toluca contract was awarded to Prodemex and Tlalnepantla to Marhnos, both Mexican firms. The financing for Tlalnepantla was signed in August 2011, and brought in not only conventional long-term project finance debt but also securities known as development capital certificates, equity from institutional investors such as Afore Banamex and New York Life Insurance. It is the first time such investors have backed a Mexican PPP at the construction stage.

Together, the hospitals are expected to serve 6,000 inpatients and 20,000 outpatients a year. The performance-based hospital contracts introduced a new level of risk sharing in Mexican PPP by making the sponsors responsible not only for construction and maintenance, but also equipment installation, consumables and certain clinical services, to ensure that the facilities remain fully functioning over their 25-year agreements. This is expected to reduce hospital costs by one-third.

Peru Health Care Portfolio Bond Financing

LIMA AND CALLAO, PERU

An innovative deal in 2012 saw three different health care projects in Peru, developed by three different consortia, financed through one bond issue. Bank of America Merrill Lynch (BAML) approached the consortia, offering to finance construction of the projects through a bond issue. The projects will result in construction of two new hospitals in Lima and Callao provinces and a new central distribution center for health care supplies, as well as refurbishment of existing distribution facilities.

They are the first social infrastructure projects to make use of a government-backed security known as investment remuneration according to works progress certificates (RPICAO). This sees the government or its agencies pay money into a master trust to fund payment obligations to contractors, which in turn can be used to raise construction finance. Social security authority EsSalud agreed to channel a portion of its income from mandatory payroll deductions into the trust, enough to ensure a minimum level of debt service. The three concessionaires then sold the payment rights to BAML, who in turn bought them with a \$230 million zero-coupon bond issued through an offshore vehicle. The RPICAOs are issued over a 10-year period, longer than actual construction, spreading out the cost and budgetary impact for the government while offering a guaranteed return to investors. Other payments covering operation and maintenance were similarly securitized.

Gianluca Bacciochi of DLA Piper, who advised BAML, comments: “One of the most intriguing aspects of the deal is bringing in multiple operators, which took a tremendous amount of cooperation. They needed to get enough similarity across the projects to describe it to the bondholders.”

The completed hospitals are expected to treat about 500,000 in- and outpatients a year. With payment by performance, including criteria for complaint numbers and complaints resolved, the hospitals are expected to raise satisfaction with the health insurance system.

Panama Pacifico SEZ

PANAMA

At first glance, the reconversion of the former U.S. Air Force base on the west side of the Panama Canal on the Pacific coast may simply resemble a rather large real estate project, but the Panama Pacifico Special Economic Zone (SEZ) required IFC to deploy its PPP expertise to structure a project that transferred enough risks and obligations to the concessionaire to deliver a sustainable mixed development.

The base had reverted to the Panamanian government in 1999. The project faced several challenges. The 2,500 hectare site dwarfed any plot the government had previously developed. It had no connectivity to the country's main ports on the Atlantic and Pacific coasts, and only an old saturated bridge ensured access to the property from Panama City, the country's capital. The project aimed to bring additional investment and create more jobs in the country. It could not displace activity from other areas, including the Colón Free Trade Zone on the Atlantic side.

With IFC help, in 2004 the government passed a law establishing the Panama Pacifico special economic zone and the regime applying to it. The law also created the agency in charge of regulating and monitoring development in the zone, and to which land ownership was later transferred. The 40-year concession was tendered in January 2007 and awarded to London & Regional Properties. The concessionaire can buy/rent plots of land at a fixed price from the agency with a sharing mechanism with government on any capital gains made on the land, and is obliged to spend at least \$408 million over the first eight years, and \$700 million in total. Already 118 businesses are registered on the site—Dell alone employs 2,500 people there—and the airfield is put to commercial use, both supporting an aircraft maintenance center for Singapore Technologies, as an alternative airport to Tocumen, and also receiving charters and unscheduled flights.

Hospital do Subúrbio

SALVADOR, BRAZIL

As Brazil's first health care PPP, the Hospital do Subúrbio in Salvador, capital of Bahia State, is well-placed to make an impact. According to the United Nations Development Programme, the district where it is based ranks much lower than the state and national average on the Human Development Index.

Though not initially planned as a PPP, in 2009 with construction underway the state government hired IFC to structure a project to supply equipment and carry out all services and maintenance. Brazil had engaged private operators to run hospitals since the 1990s on short contracts, but with little investment and mixed results. Because construction was excluded, less time was needed to recoup investment and the concession was set at 10 years.

In February 2010 a consortium of Brazil's Promedica and France's Dalkia won an auction for the concession at the São Paulo stock exchange, requesting maximum annual payments of 103.5 million reais. Seventy percent of payments would be volume based, corresponding to bands of patient numbers, and the rest linked to quality indicators. The deal closed in just three months from when the contract was awarded until the project reached financial close.

The results demonstrate not only quality of service, but the potential to improve a project after award. Because patient numbers were much higher than expected (380,000 instead of the forecasted 175,000), the concessionaire added beds and negotiated a higher payment from the authority. The building is constrained in its capacity, and IFC believes the project points the way to more full PPPs including design and construction, several of which are underway elsewhere in Brazil.

Ciudad Victoria Hospital

VICTORIA, MEXICO

When the High Specialism Regional Hospital reached financial close in February 2008, it set new standards for PPP project structure in Mexico. The second project in the government's first-generation PPP hospital program, it called for the concessionaire to take on clinical risk by supplying medical equipment and maintaining it for five years, the "main point of contention" according to the lead sponsor, Mexican contractor Marhnos.

This was unprecedented in the country and came soon after a scandal over faulty equipment at France's privately run Toulouse-Rangueil University Hospital. Eventually one of the sponsors, France's Dalkia, agreed to provide a corporate guarantee if liabilities exceeded insurance cover. Impressively, the legal tenor of the finance provided by Dexia is just two years short of the 25-year concession. Payment of the concessionaire is on an availability basis, with payments increased for the five-year equipment maintenance period.

Inaugurated ahead of schedule in March 2009, the 100-bed hospital serves about 980,000 residents—580,000 in Tamaulipas State and 400,000 in neighboring Veracruz and Hidalgo—referred from primary care centers and general hospitals, by providing the most specialized health care including neurosurgery, transplants, maxillofacial surgery and haemato-oncology. As a result, according to Mexican president Felipe Calderón, 30 million patients in Tamaulipas who have previously needed to travel to other states will have specialized health care in their region for the first time. Meanwhile, the federal government has pressed on with other hospital PPPs, and has continued to successfully procure and close projects.

Ribeirão das Neves Prison Complex

MINAS GERAIS, BRAZIL

Rarely do PPP projects get the chance to drive a major improvement in a country's human rights record. Brazil is seeking to reduce the number of people provisionally detained in police stations where, according to reports by human rights nongovernmental organizations, prisoners have previously been subject to abuse. In 2003, the government of Minas Gerais State declared its ambition to be the best state in Brazil in which to live and invest. One obstacle was the deficit of prison places. Procurement of a new prison complex at Ribeirão das Neves began in 2008, and a preferred bidder was picked the following year. Despite the authority losing its advisory team owing to the rigidity of Brazilian procurement regulations, the PPP unit managed to fully financially close the deal by August 2010.

The prison, now ready for operation, will house 3,040 inmates in semi-open and closed systems, significantly reducing the state's 8,000-place deficit. Uniquely for Minas Gerais, every prisoner is guaranteed education, work and recreational facilities; yet despite higher service levels, the complex is estimated to cost 10 percent less than conventional facilities. The concessionaire is responsible for all operation and maintenance, including security, and is paid according to performance.

This is Minas Gerais' first PPP funded without user charging. To overcome investor caution about the risk associated with payments from the state, a guarantee structure was set up using a flow of state revenues that would cover all capital expenditure, without creating any extra debt obligation for the authority. The stage is set for future availability-based projects and prison PPPs.



Penitenciária Regime Semi-Aberto



Ribeirão das Neves Prison Complex

Project Data

Latin America & the Caribbean

SÃO PAULO METRO LINE 4

SÃO PAULO, BRAZIL

Total initial investment	\$450 million
Government client	Companhia do Metropolitano de São Paulo
Equity sponsors	Companhia de Concessões Rodoviárias, Montgomery Participações, Mitsui & Co Limited, Benito Roggio Transporte, and RATP Dev
Lenders	Inter-American Development Bank, Espirito Santo Investment Bank, Banco Bilbao Vizcaya Argentaria, KfW, Santander, and Sumitomo Mitsui Banking Corporation
Advisers to authority	Unibanco (financial) and Demarest & Almeida (legal)
Advisers to sponsors	ABN AMRO (financial), Mayer Brown (legal), and Machado Meyer Sendacz Opice (legal)
Advisers to lenders	Fulbright & Jaworski (legal), Felsberg e Associados (legal), Arup (technical), Sinergia Estudos e Projetos (traffic), Willis (insurance), and DFREIRE (environment)

ATOTONILCO WASTEWATER TREATMENT PLANT

MEXICO

Total initial investment	\$820 million
Government client	Comisión Nacional del Agua (Conagua)
Equity sponsors	Atlatec (Mitsui & Co Limited), Promotora del Desarrollo de América Latina (Ideal), Controladora de Operaciones de Infraestructura (ICA), ACCIONA Agua, Desarrollo y Construcciones Urbanas, and Green Gas Pioneer Crossing Energy
Lenders	Banco Nacional de Obras y Servicios Públicos (Banobras), Santander, Banorte, El Banco Nacional de México (Banamex), and Scotiabank
Advisers to authority	Galaz Yamazaki Ruiz Urquiza (Deloitte), Thompson & Knight (legal), Instituto de Ingenieria UNAM (technical), and CH2M Hill (technical)
Advisers to lenders	White & Case (legal)

IIRSA AMAZONAS NORTE HIGHWAY

PERU

Total initial investment	\$213 million
Government client	Ministry of Transportation and Communications (Peru)
Equity sponsors	Odebrecht, Andrade Gutierrez (until June 2008), and Graña y Montero
Lenders	Morgan Stanley (bond arranger)
Advisers to authority	Chemonics (funded by USAID)
Advisers to sponsors	Astris Finance (financial), Clifford Chance (legal), and Rosselló Abogados (legal)
Advisers to lenders	Davis Polk & Wardwell (legal)

PORTO MARAVILHA

RIO DE JANEIRO, BRAZIL

Total initial investment	\$2.44 billion
Government client	Companhia de Desenvolvimento Urbano da Região do Porto do Rio de Janeiro (CDURP)
Equity sponsors	Grupo OAS, Odebrecht, and Carioca Christiani-Nielsen Engenharia
Lenders	Caixa Econômica Federal and Banco do Brasil
Advisers to authority	Bocater Camargo Costa Silva (legal) and Amaral D'avila (technical)
Advisers to sponsors	Machado Meyer Sendacz Opice (legal)
Advisers to lenders	Bocater Camargo Costa Silva (legal, joint mandate with the authority)

TOLUCA AND TLALNEPANTLA HOSPITALS

MEXICO

Total initial investment	\$48 million (Toluca) and \$57 million (Tlalnepantla)
Government client	Instituto de Seguridad Social del Estado de México y Municipios (ISSEMYM)
Equity sponsors	Prodemex (Toluca) and Marhnos (Tlalnepantla)
Lenders	Banco del Bajío (Tlalnepantla)
Advisers to authority	IFC (lead), Jáuregui y Navarrete (legal), Currie & Brown Mexico (technical)
Advisers to sponsors	Banco del Bajío (financial), Woodhouse Lorente Ludlow (legal) for Tlalnepantla

PERU HEALTH CARE PORTFOLIO BOND FINANCING

LIMA AND CALLAO, PERU

Total initial investment	\$115 million
Government client	El Seguro Social de Salud (EsSalud)
Equity sponsors	Funcional Card and Unihealth Logistica (distribution center); IBT Group, BM3 Obras y Servicios, Ibérica de Mantenimiento, Ribera Salud, Eresa Grupo Médico, and MENSOR (Villa Maria Salud and Callao Salud hospitals)
Lenders	Bank of America Merrill Lynch (bond arranger), Citibank (verification agent), and FiduPerú (Peruvian trustee)
Advisers to sponsors	Rodrigo, Elías & Medrano for distribution center; Milbank, Tweed, Hadley & McCloy, Estudio Echecopar, and Carrizales & Vidal for the hospitals (all legal)
Advisers to lenders	DLA Piper and Rubio Leguía Normand (both legal)

PANAMA PACIFICO SEZ

PANAMA

Total initial investment	\$408 million over the first eight years
Government client	Government of Panama
Equity sponsors	London & Regional Properties
Lenders	Morgan Stanley (bond arranger)
Advisers to authority	IFC (lead), White & Case (legal), Icaza Gonzalez-Ruiz & Aleman (legal), LeighFisher (airport consultant), and Infrastructure Management Group (land use)
Advisers to sponsors	Aleman, Cordero, Galindo & Lee (legal) and Atkins (technical)

HOSPITAL DO SUBÚRBIO

SALVADOR, BRAZIL

Total initial investment	\$32 million
Government client	State of Bahia, Salvador
Equity sponsors	Promedica and Dalkia
Lenders	Banco do Nordeste do Brasil
Advisers to authority	IFC (lead) in partnership with Banco Nacional de Desenvolvimento Economico e Social (BNDES), and the Inter-American Development Bank (IDB)

CIUDAD VICTORIA HOSPITAL

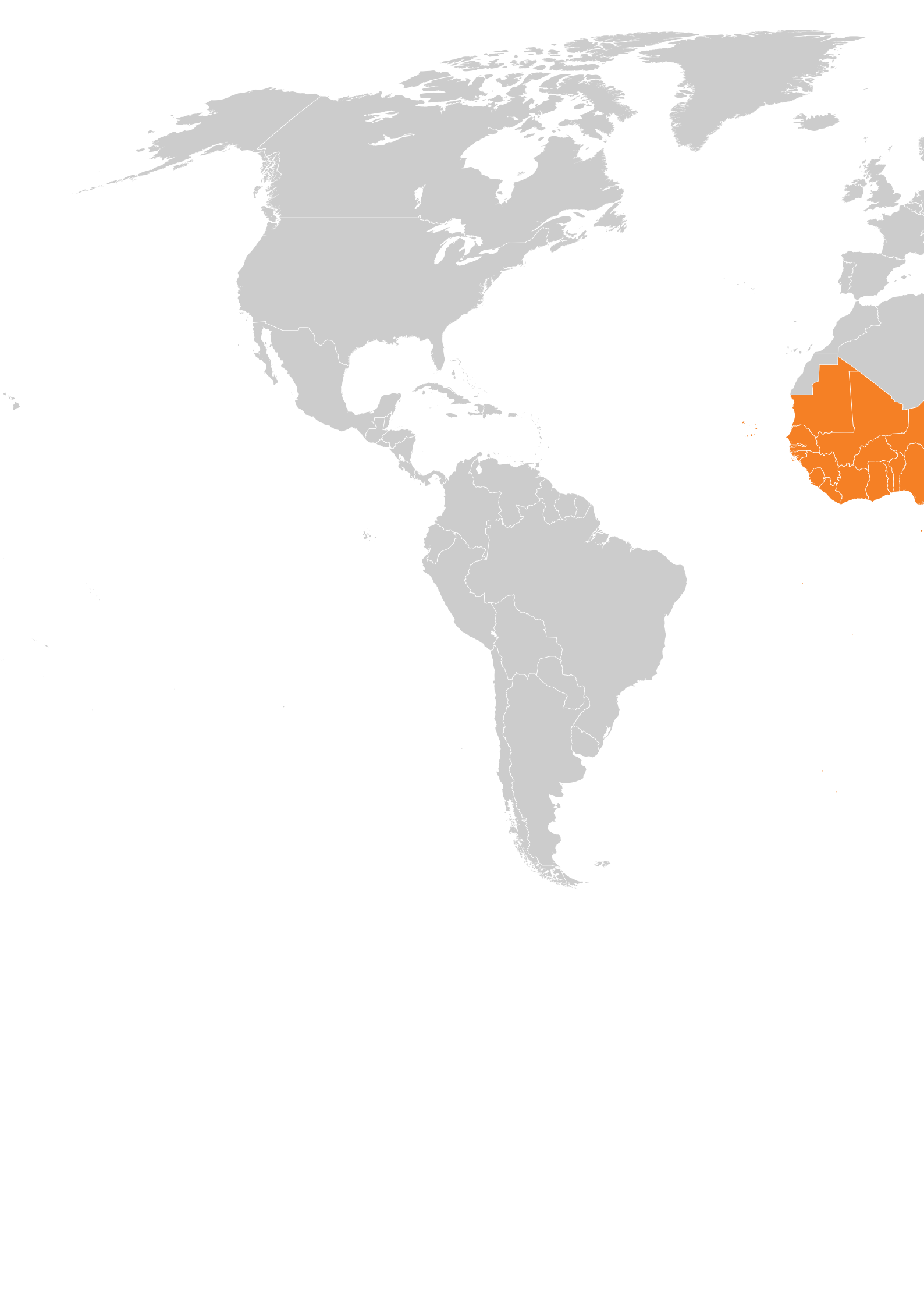
VICTORIA, MEXICO

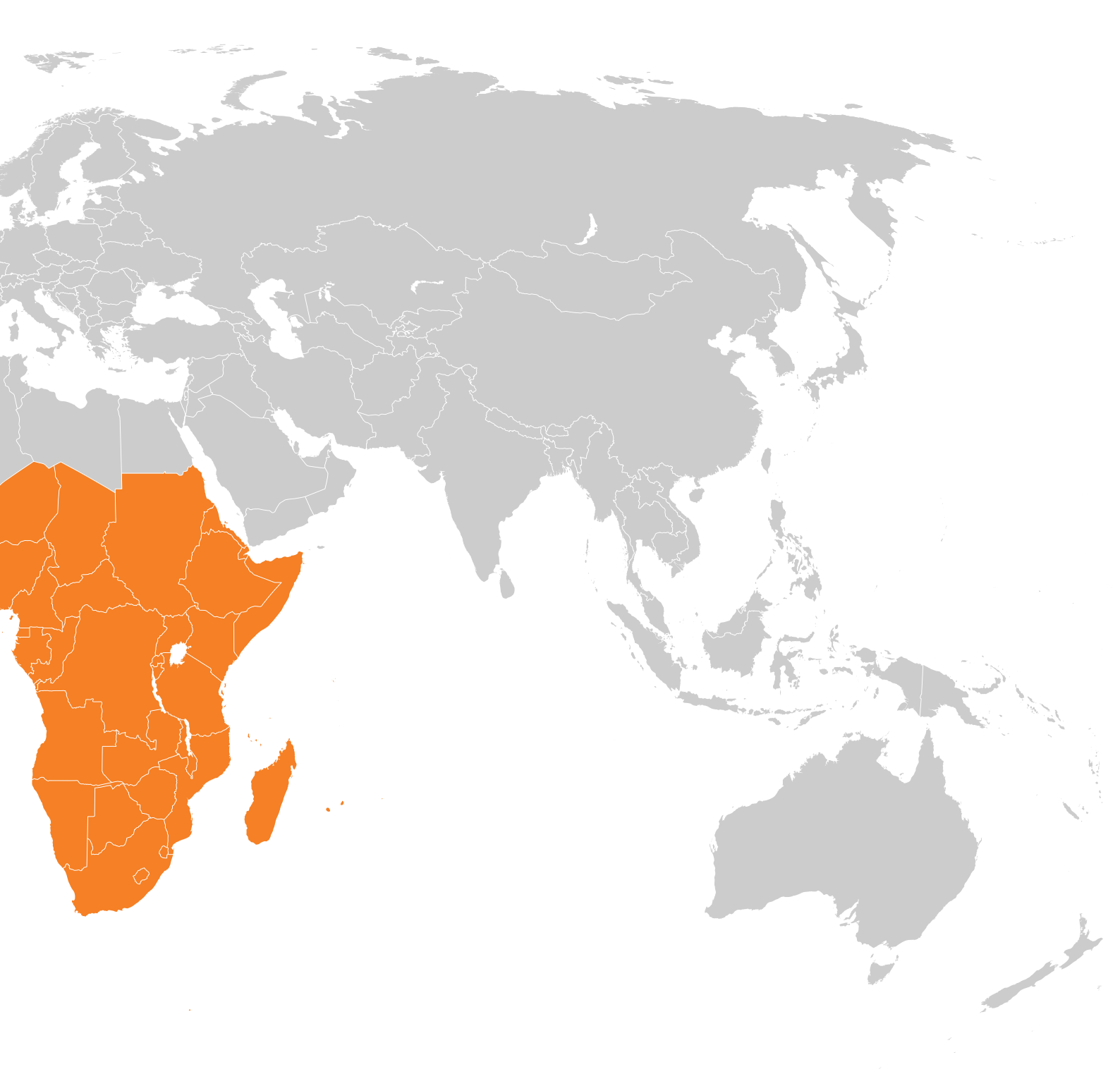
Total initial investment	\$75 million
Government client	Secretaría de Salud (México)
Equity sponsors	Marhnos, Dalkia, and IGSA Power
Lenders	Dexia
Advisers to authority	Mancera (financial), Jáuregui y Navarrete (legal), and Forma y Concepto (technical)
Advisers to sponsors	Dexia (financial) and Barrera Siqueros y Torres Landa (legal)
Advisers to lenders	Chadbourne & Parke (legal)

RIBEIRÃO DAS NEVES PRISON COMPLEX

MINAS GERAIS, BRAZIL

Total initial investment	\$130 million
Government client	Minas Gerais State
Equity sponsors	Concessões e Construções de Infra-Estrutura (CCI), Augusto Velloso, Empresa Tejofran de Saneamento e Servicos, and N.F Motta Construções e Comércio e o Instituto Nacional de Administração Prisional (INAP)
Lenders	Banco Nacional de Desenvolvimento Economico e Social (BNDES) and Itaú Unibanco
Advisers to authority	PwC (financial), Azevedo Sette (legal), and Manesco Ramires Perez Azevedo Marques Sociedade de Advogados (legal)
Advisers to sponsors	Itaú BBA (financial), Albino Advogados Associados (legal), and AGR Projetos e Construções (project management)
Advisers to lenders	QG Engenharia (technical)





Sub-Saharan Africa

Regional Overview

Sub-Saharan Africa

by James Kenny

More than any of the other regions featured in *Emerging Partnerships*, Africa faces some of the most difficult challenges when it comes to infrastructure development due to rugged geography, political instability and the limited financial resources available. Despite it being one of the world's fastest growing economic hubs, the lack of physical infrastructure hampers the wider continent's development and the gulf in private investment between certain countries can also be disproportionately large.

In spite of this, and from the projects featured here, there is groundbreaking and innovative work taking place in Sub-Saharan Africa in the PPP sector. The \$142 million KivuWatt Project has gained the world's attention and is set to transform power in Rwanda, while smaller projects such as the Lesotho National Referral Hospital and the \$30 million Chiansi Irrigation project in Zambia are set to make an equally big impact on a human scale. With such admirable and eye-catching projects in place, why does the region still lag behind other parts of the world in terms of PPP volume?

Emmanuel Nyirinkindi, manager for IFC Advisory Services in PPPs in the Sub-Saharan Africa region says while there is quite a lot of funding available for projects and investors can expect strong returns, the disparity between countries can be an issue. "PPPs such as power stations, ports, toll roads and hospitals represent a significant investment opportunity and present both strong public sector benefits and private sector returns. Africa is at the start of an infrastructure boom; however the current insufficiency of actual physical infrastructure poses a hindrance as well as an opportunity to governments, their citizens, and the business community. The disparity in implementing projects between countries like Kenya and other more fragile and less experienced countries that haven't undertaken their first PPP can be daunting."

In order to launch a successful PPP, countries need the political will to make decisions quickly and transparently. Transparency in particular is a crucial ingredient—something not always available with some governments.

Judges Profiles

THE JUDGES

Nick Rouse

Ed Farquharson

Simon Jackson

Steven Gamble

Gavin Noeth



Nick Rouse became Managing Director of Frontier Markets Fund Managers, the fund manager of the Emerging Africa Infrastructure Fund (EAIF) and GuarantCo, in May 2005, having worked for Barclays Bank for 33 years. Both funds are owned by four European governments: the Netherlands, Switzerland, Sweden and the United Kingdom. His involvement with EAIF dates from the fund's inception and he was a member of its Credit Committee and a non-executive director between 2002 and 2005. He was also a non-executive director of GuarantCo from 2004 to 2005. Rouse had worked in Africa with Barclays for the seven years preceding his appointment, initially running Barclays Corporate Business in East Africa and more recently as head of Credit Risk for Africa and the Middle East.



Ed Farquharson is Executive Director of the Project Management Unit of the Private Infrastructure Development Group (PIDG). Farquharson joined the PIDG in November 2011 from Infrastructure UK in Her Majesty's Treasury, where he advised overseas governments on the establishment of their PPP programs. Prior to HM Treasury, Farquharson headed the international team at Partnerships UK, the United Kingdom's PPP/PFI implementing agency. Farquharson previously worked for CDC Capital Partners where he led the transport infrastructure team developing investments in road, rail, airport and port projects in emerging markets. Prior to this, Farquharson lived for six years in Zimbabwe and Mozambique where he was responsible for establishing and managing CDC investments.

From 1983 to 1991, Farquharson was on Morgan Grenfell's international banking team, developing limited recourse project financings. Farquharson has an MBA from Manchester Business School and is an alumnus of London Business School and INSEAD. He also received a degree in philosophy, politics and economics from Oxford University.



Simon Jackson has over 30 years of commercial banking experience, mostly in the loan syndication market. During the 2.5 years up to July 2012, he established the syndication function for the African Development Bank (ADB) in Tunis, including an A/B loan co-financing program with commercial investors, and enhancing the ADB's role in the growing market for syndication between development finance institutions. He was previously Head of Syndication for Sumitomo Mitsui Banking Corporation in London, and has also worked for the European Bank for Reconstruction and Development, Credit Suisse, Chase Manhattan Bank, N.A., Morgan Grenfell & Co. and Grindlay Brandts. He is a graduate in engineering science from Corpus Christi College, Cambridge.

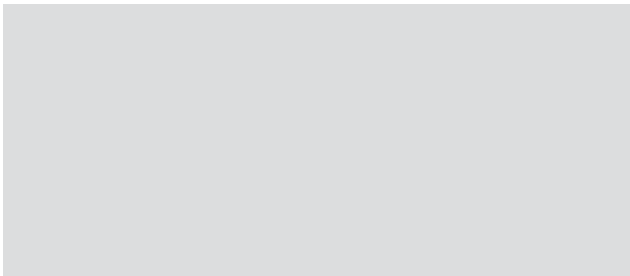


Steven Gamble is the Chairman of the African Loan Market Association (ALMA) and a director of Norton Rose. He is based in Johannesburg, South Africa, and has a wealth of experience in advising international and domestic banks and companies in relation to structured finance, project finance, asset finance, acquisition finance, banking and general commercial transactions, with a particular focus on cross-border and emerging markets work. Before joining Norton Rose's Johannesburg office in 2007, he spent time in their London, Singapore and Hong Kong offices before heading up the company's English law banking and finance practice in Thailand in 2005.

Gamble is admitted to the law societies of England & Wales, Hong Kong and Scotland and is recognized as managing a leading finance practice by *IFLR 1000's Guide to the World's Leading Financial Law Firms*. He is also ranked as a leader in the field of corporate/commercial work in Africa by Chambers & Partners.

Steven Gamble was assisted by Gavin Noeth. Noeth is a banking & finance lawyer based in Sandton, South Africa. He specializes in project finance and PPPs.

GOLD
selection



KivuWatt
LAKE KIVU, RWANDA

Situated in Rwanda on Lake Kivu, the world's eighteenth deepest lake, the KivuWatt Project ticks all the boxes when it comes to a 'game changer' for its technological and financial innovation and the sheer impact it will have on the country's development and socioeconomic prospects.

The project involves the construction of an integrated methane gas extraction and production facility and an associated 25-megawatt power plant. Once completed, the project will raise and process methane gas trapped deep in the waters of Lake Kivu for use as fuel to generate critically needed electricity for the people of Rwanda, while simultaneously removing harmful gases safely. The lake from which the gas will be harvested is naturally hazardous, as methane from the lake bed bubbles to the surface and has caused a number of spontaneous explosions.

ContourGlobal will develop, construct and operate the platform-based gas extraction system that will be moored 13 kilometers off the Rwandan coast and extract methane gas from a depth of 350 meters. The gas will be processed and transported by pipeline to ContourGlobal's power plant being developed in Kibuye, Rwanda. By tapping an indigenous fuel source, the project will significantly lower the cost of electricity necessary to drive Rwanda's fast growing economy.

In the project's first phase, processed methane will power three gas engine generator sets to produce roughly 25 megawatts of electricity for the local grid. Phase two is expected to add another 75 megawatts of capacity, employing nine additional generator sets to expand KivuWatt to 100 megawatts of power.

William Barry, senior vice president of new projects at ContourGlobal and also project director on KivuWatt, states that not only is it the technological, financial and political innovations of the project that make it unique, but also the sheer number of people and organizations working together that makes it impressive.

"In addition to the active involvement of Contour offices in New York, Paris and Rwanda, the project has engaged contractors, subcontractors and equipment suppliers from a dozen different countries representing a total contract value of \$90 million. This is in addition to our lenders, their advisors, and MIGA [Multilateral Investment Guarantee Agency]. The coordination and commitment of our partners has been critical to the success of this project. As challenging as it's been, everyone involved has been pulling together and understand how important this project is for the people of Rwanda and the region. Nothing of this scale and complexity has been done before and we are grateful for their support."

“As challenging as it's been, everyone involved has been pulling together and understand how important this project is for the people of Rwanda and the region.”

ContourGlobal signed the power purchase agreement and concession agreement with the government of Rwanda and the state electricity utility, the Energy, Water and Sanitation Authority (EWSA), in March 2009. EWSA agreed to purchase power from the project on a take-or-pay basis for the 25-year concession period, backed by a full sovereign guarantee of the offtake and the termination payments. The tariff is denominated in U.S. dollars but payable in Rwandan francs due to the lack of foreign exchange reserves.

The debt funding of \$91.5 million was arranged by the Emerging Africa Infrastructure Fund and FMO (the Netherlands Development Finance Company), which respectively provided \$25 million and \$31.5 million. The remaining funding was provided by the African Development Bank (\$25 million) and BIO, the Belgian Development Bank (\$10 million). Debt tenor is 15 years with a combination of fixed and floating interest rates. Supported by a large upfront equity contribution from ContourGlobal and buy-down of part of the debt, lenders were prepared to accept uncertainties regarding the potential capacity achievable owing to the novel nature of the technology being employed and the gas source.

Another issue for the project was the potential environmental and social impact. As well as the requirements imposed by the government of Rwanda, each lender and MIGA had its own list of environmental and social requirements that needed to be met. Of particular concern was the impact on the ecology and stability of the lake and the risk that, given the novel nature of the technology being deployed, the gas extraction operations could potentially upset the balance of the lake. As a result, numerous baseline surveys have been contracted by KivuWatt and the project's lake effects will be actively monitored during operations to ensure there is no detrimental impact.

Speaking about the financing of the project and also about the question over its technology, *Emerging Partnerships* judge Simon Jackson, said: "Robust completion guarantees are essential to a financing of this nature. The wonderfully innovative technology makes the outcome of the project, both financial and developmental, close to binary—either it works, in which case the numbers are impressive, or it does not, in which case there would be little realizable value. In the absence of completion guarantees, it would be very difficult to build a credit case for debt funding."

**For more information on this project and others in the region please see the project data at the end of this chapter.*





SILVER
selection



Chiansi Irrigation Project

KAFUE DISTRICT, ZAMBIA

Although a smaller project in terms of scale and finance compared to others listed, the \$30 million Chiansi Irrigation Infrastructure Project in Zambia represents a major innovation in the financing of irrigation infrastructure in Africa and demonstrates that public and private finance sources can be combined to make a unique agribusiness partnership. Phase 1 of the project has been operating successfully since 2009 and an expanded phase 2 is on track for a 2013 launch.

Situated in the Kafue district of Zambia, the core objective of the project is to establish an equitable partnership between smallholder and commercial farmers in the project area, creating a centrally managed irrigated farming enterprise which will generate sustainable incomes for smallholder households. In addition, the project will leverage the bulk water canal and pumping infrastructure constructed to provide irrigated market garden plots for use by smallholder farmers, enabling them to farm year-round for the first time.

According to Richard Avery and Paul Cartwright from eleQtra (InfraCo) one of the key themes for the success of the project has been the hands-on work with the local communities and autonomy provided for participating smallholder farmers. Commenting on this structure, Cartwright said: "Through the first phase, by working closely with the local communities and people on the ground, we have developed a fantastic road map for the next phase and how to refine the model as we expand to full scale."

Phase 2 will entail the construction of major bulk water irrigation infrastructure which will ultimately serve up to 3,800 hectares of land following future expansion phases. Phase 2 will also include additional infield infrastructure and market garden plots, further enhancing the incomes of an estimated 600 local smallholder households.

Phase 1 was financed through an innovative flexible repayment income note structure by a group of development finance institutions (DFIs) and foundations including InfraCo Limited, FMO (the Netherlands Development Finance Company), the Emerging Africa Infrastructure Fund, and the Lundin Foundation. Phase 2, which includes expansion to serve a further 137 hectares of smallholder land as well as 1,290 hectares of commercial land, will see grant finance sourced by the government of Zambia from the Dutch Facility for Infrastructure Development (ORIO) combined with private sector equity and debt finance sourced from DFIs and foundations. An experienced commercial farm operator will manage both the bulk water system and the farming operations providing extension services to participating smallholders.

BRONZE
selection



Port of Cotonou
COTONOU, BENIN

The Port of Cotonou in Benin impressed the *Emerging Partnerships* judges due to its financing structure and its possible long-term impact. The project consisted of the building of a new container operator and was part of a major port sector reform plan. In the past, a number of attempts to revitalize the port had been attempted however none had been successful.

In 2009 Groupement Bolloré, composed of Bolloré of France and the Société de Manutention du Terminal à Conteneurs de Cotonou, won the bid for a 25-year concession to build and operate the South Wharf Container Terminal. The project is of vital importance as it has the potential to be of huge economic benefit not just to Benin, but also to the wider region as a potential trade gateway to landlocked West African countries.

The judges were particularly impressed with the project's financing structure. The winning proposal included an entry fee of \$33 million, ongoing fees of \$29 per twenty-foot equivalent unit (TEU), and guaranteed annual traffic levels. The proposal also included a commitment to pay \$200 million in concession fees during the first eight years of operation and invest \$256 million in operating equipment and civil works over the life of the concession. The concession specified a completion date for wharf construction (21 months after the signing of the

concession agreement) and outlined a termination procedure: if the construction is not completed 34 months after the signing, the concessionaire can terminate the agreement and be reimbursed for the entry fee paid at the signing. The agreement also spelled out the concessionaire's responsibility to pay the Port Authority a fixed fee when the wharf is delivered. The project is set to begin operation in early 2013, and is expected to yield \$200 million to \$300 million in fiscal impact and create more than 450 jobs.

Lekki Toll Road

NIGERIA

The 49.36 kilometer Lekki Toll Road is the first ever PPP toll road concession in Nigeria and West Africa. The road serves the Lekki Peninsula of Lagos State, the fastest growing development corridor in the region. The 30-year concession impacts a population of over 3 million people living, working and doing business in and around the corridor.

When it closed in 2008, the project attracted multi-sourced, multi-currency project finance from top international market participants and achieved the longest ever tenored project finance loan in Nigeria—15 years with a foreign exchange swap hedge and a certain portion as fixed interest rate.

Overall the road has provided critical access to new developments in the area such as the Lekki Free Zone, future Lekki International Airport, Lekki Hydrocarbon Park, and Lekki Deep Seaport, all of which will become significant catalysts of economic development and higher real estate values in the area.

Travel time has been reduced from two hours on the average to less than 45 minutes. New green belt and vegetation along the road has also improved the environment. Additional benefits of the project to the population of Lagos State include a number of services such as added security, street lighting, breakdown assistance, an ambulance service, and a customer call center.

Addax Makeni Bioenergy

SIERRA LEONE

The Addax Makeni Bioenergy Project in Sierra Leone involves the construction of an ethanol plant with the capacity of 85,000 cubic meters per year and a bagasse-fired power plant with an output of 100,500 megawatt hours per year. The project was held in high regard by the judges as it represented a number of firsts for the country. This will be the first sugarcane ethanol project of its kind in Africa, and as such represents a major step forward in Sierra Leone's efforts to become a hub for renewable energy alternatives and a model for sustainable investment in Africa.

It was also the first independent power project with the first power purchase agreement (PPA) the country entered into. The project anticipated that the PPA would need to be transferred under the upcoming restructuring of the electricity sector in Sierra Leone. It was also the first-ever project financing for the country outside the mining sector, the first water extraction license ever to be agreed, and the country's largest ever inward investment in the agricultural sector.

The project is an impressive PPP in Sierra Leone and can be expected to have a strong development impact, contributing not just to the reduction of greenhouse gas emissions but also to food security and socioeconomic development. The project also expects to create 2,000 jobs in 2013. Its success will directly affect the extent to which the sponsors make further investments in other bioenergy projects in the region.

Cape Verde Wind Power PPP

CAPE VERDE

The 25.5 megawatt Cape Verde Wind Power PPP, also known as the Cabeolica wind farm, was conceived in 2009 and involved the development of four onshore wind farms on the four main islands in the Cape Verde archipelago (Santiago, São Vicente, Sal, and Boa Vista). The €65 million project is the first independent power project in Cape Verde and the first large-scale wind power project in Sub-Saharan Africa, providing an important demonstration of the commercial viability of renewable energy PPPs across the continent. The project provides 20 percent to 25 percent of Cape Verde's energy demands from a renewable supply, providing 95 percent of the estimated 500,000 population with reliable and cleaner energy at 20 percent lower cost than previously, including new connections to the national grid for 50,000 households.

The project reached financial close in 2010. It was financed by a combination of debt supplied by the European Investment Bank and the African Development Bank, and equity from principal shareholder the African Finance Cooperation (a private equity firm in West Africa), Finnfund and the lead project developer, InfraCo Africa.

The project has established a model for large-scale renewable power projects with private investment, which can be replicated elsewhere in Sub-Saharan Africa. Furthermore, the project helps reduce greenhouse gas emissions on the archipelago by 92,000 tonnes of carbon dioxide equivalent per year, as well as establishing wind as a reliable energy source on the islands and creating local employment. The project has now been fully built and is producing power in all four sites at projected output levels.

Centrale Thermique de Lomé

LOMÉ, TOGO

Fuel flexibility is imperative for reliable electricity generation, particularly in Togo which has one of the smallest electricity supply centers. In October 2007, ContourGlobal Togo S.A. signed a 25-year concession agreement with the government of Togo for the rehabilitation, expansion and operation of the 100 megawatt Lomé thermal power plant, called Centrale Thermique de Lomé (CTL).

The project's financing was arranged and funded by the Overseas Private Investment Corporation (OPIC), a U.S. government agency, via a \$147 million loan. OPIC also underwrote the political risk insurance for the project. The financing structure had a debt/equity ratio of 75/25. The total cost of the project was \$196 million including transmission line rehabilitation and soil decontamination investment.

Technological innovation is displayed by six Wärtsilä 50-DF generators, which are tri-fuel burning engines that are capable of switching between natural gas, heavy fuel oil and diesel. The plant will ultimately use natural gas supplied by the West Africa Gas Pipeline, constructed to deliver natural gas to Benin, Ghana and Togo from Nigeria. Until the natural gas supply is available, the plant is currently burning heavy fuel oil, in compliance with the World Bank's environmental standards. The choice of the tri-fuel burning engines is helpful for Togo because heavy fuel oil is substantially cheaper than the diesel and jet fuel previously used for all thermal generation of electricity in the country.

The reliable power generated by ContourGlobal Togo will accelerate economic development in Togo and significantly increase access to distributed electricity for the population, local businesses and industry. The full social and economic impact will be reached when natural gas becomes available to fully fuel the plant. The plant was designed by Wärtsilä and is fully standardized so it can be repeated elsewhere in the country or in the sub-region. A similar project is ongoing in the neighboring country of Benin.

Lesotho: National Referral Hospital

MASERU, LESOTHO

In October 2011, the IFC-advised Lesotho Hospital PPP replaced the country's main public hospital, Queen Elizabeth II Hospital, with the new 425-bed Queen Mamohato Memorial Hospital, supported by a network of refurbished urban clinics that were opened in May 2010. The new, advanced referral hospital at Bots'abelo, the site of the government's medical campus in the capital of Maseru, provides a wide range of tertiary-level clinical services, highly-trained staff, and specialized medical equipment. It also serves as the nation's primary clinical training facility for health professionals. The project is managed by the Tsepong Consortium led by Netcare, a leading South African healthcare provider.

Judges were impressed with the new referral hospital's ambitious and achieved plans to replace Queen Elizabeth II Hospital with a new facility and network of refurbished urban clinics that provide vastly improved services and also address the previous facility's shortages of hot water, heat, medical supplies, pharmaceuticals, trained staff, and reliable equipment.

Edward Farquharson, an *Emerging Partnerships* judge, said: “It’s a fascinating project as it’s the first full-service health PPP in Africa, excluding South Africa. What’s interesting about this project is it includes clinical services, which is a really difficult process to take on and manage.”

The project not only transforms health services in Lesotho but also provides a strong example of PPP in action. The facilities employ over 700 people, and directly serve the greater Maseru region’s population of over 500,000, with Queen Mamohato Memorial Hospital also standing in as the national referral hospital for Lesotho’s total population of just under 2 million people.

Gautrain Rapid Rail Link

SOUTH AFRICA

Although regarded as a slightly older project by the judges, they concurred that the Gautrain Rapid Rail Link in South Africa was extremely impressive and had made a major impact on the lives of both citizens and tourists in South Africa. In June 2012 the project was completed with the final section of track being finished ahead of the World Cup, enabling a safe, cost-effective and environmentally-friendly transport solution. It supports economic growth for the region and has facilitated Black Economic Empowerment, a program launched by the South African government to redress inequalities of Apartheid, through skills transfer between international law firm Pinsent Masons and local law firm Ledwaba Mazwai.

The all-new system was a game-changing concept in public transport in a country where under-funding and political indifference had reduced the existing transport networks to a level where they were unsafe and decrepit.

Financing was complicated by the necessary financial involvement of Gauteng Province as the grantor, providing generous subsidies during construction and into the operating period to ensure the economic viability of the project. The local banks that underwrote the project were financing the first rail PPP in Africa, which at the same time has the largest debt funding requirement of a South African PPP to date.

The 80 kilometer route includes a 15 kilometer section under the center and northern suburbs of Johannesburg—a major civil engineering undertaking. The tunnel had to be constructed using different methods, including the use of a custom-built 160-meter tunnel boring machine imported from Germany, in order to cope with the changing ground conditions.

Henri Konan Bédié Bridge

CÔTE D'IVOIRE

The 1.9 kilometer Henri Konan Bédié Bridge is significant as the first PPP project in Africa to use a minimum revenue guarantee. It is also the first part of a new program of privately-funded infrastructure developments implemented by the government of Côte d'Ivoire.

The project involves the design, build, maintain, finance and operation of a 6.4 kilometer highway, including a 1.9 kilometer bridge close to the Port of Abidjan, the largest port in West Africa. It is expected the bridge will help address significant congestion and pollution in Abidjan. The existing bridges and infrastructure are under severe strain and unable to manage the city's growing traffic. The Henri Konan Bédié Bridge will provide important demonstration effects for future initiatives in the transport sector, and approximately 840 direct jobs will be created during the construction phase.

A senior debt tranche of €127 million has been agreed, €58 million of which is supplied by the African Development Bank with the remaining €69 million supplied by the West African Development Bank, ECOWAS Bank for Investment and Development, Africa Finance Corporation, Dutch Investment Bank and the Moroccan Bank of External Trade. Bouygues Travaux Publics and Pan African Infrastructure Development Fund have contributed a total of €28 million in equity and a further €44.5 million in subordinated loans to the deal. The Côte d'Ivoire government has supplied the remaining €76.2 million. The Multilateral Investment Guarantee Agency, the political risk insurance arm of the World Bank Group, provided \$145 million in insurance covering equity investments and subordinated loans on the deal.



Lesotho: National Referral Hospital

Project Data

Sub-Saharan Africa

KIVU WATT

LAKE KIVU, RWANDA

Total initial investment	\$142.25 million
Government client	Energy, Water and Sanitation Authority (EWSA)
Equity sponsors	ContourGlobal
Lenders	Netherlands Development Finance Company (FMO), Emerging Africa Infrastructure Fund, African Development Bank, and Belgian Investment Company for Developing Countries (BIO)
Advisers to authority	Mott MacDonald (technical)
Advisers to sponsors	Iv-AGA (technical), Exponent (gas extraction modeling), Norton Rose (legal), Trust Law Chambers (legal), and Marsh (insurance)
Advisers to lenders	Royal Haskoning (technical), Netherlands Organisation for Applied Scientific Research (TNO – gas extraction modeling), Clifford Chance (legal), K-Advocates (legal), Independent Consultation Services of Ebasco (INDECS – insurance), and Mazars (model audit)

CHIANSI IRRIGATION PROJECT

KAFUE DISTRICT, ZAMBIA

Total initial investment	\$30 million
Government client	Ministry of Agriculture and Cooperatives, Ministry of Finance and National Planning, Ministry of Lands, and Department of Water Affairs
Equity sponsors	Chanyanya Smallholder's Cooperative Society and eleQtra (InfraCo) Limited
Lenders	The Facility for Infrastructure Development (ORIO)

PORT OF COTONOU

COTONOU, BENIN

Total initial investment	\$256 million
Government client	Cotonou Port Authority
Equity sponsors	Bolloré and the Société de Manutention du Terminal à Conteneurs de Cotonou
Lenders	DevCo (Private Infrastructure Development Group) and Millennium Challenge Corporation
Advisers to authority	IFC (lead), Gide Loyrette Nouel (legal), Consortium Grand Port Maritime du Havre/Catram Consultants/Amyot Juridique et Fiscal (technical)

LEKKI TOLL ROAD

NIGERIA

Total initial investment	50 billion Naira (\$313 million)
Government client	Lagos State Government
Equity sponsors	Asset & Resource Management Company Limited (ARM), Larue Projects Limited, and African Infrastructure Investment Managers (AIIM)
Lenders	African Development Bank, Standard Bank, Stanbic IBTC Bank, United Bank for Africa, First Bank of Nigeria, Zenith Bank, Diamond Bank, and Fidelity Bank
Advisers to authority	Ministry of Justice - Lagos State Government (legal), Steer Davies Gleave (traffic), and Operis (model audit)
Advisers to sponsors	Allen & Overy Standard Bank (financial), Rand Merchant Bank (financial), Trinity International (legal), Aluko & Oyeboode (legal), High-Point Rendel (technical), and GOBA Consulting Engineers (traffic)
Advisers to lenders	United Bank for Africa (financial), FBN Capital (financial), Orrick Herrington & Sutcliffe (legal), G Elias & Co (legal), GOBA Consulting Engineers (traffic), and Operis (model audit)

ADDAX MAKENI BIOENERGY

SIERRA LEONE

Total initial investment	€267 million (\$347 million)
Government client	Government of Sierra Leone
Equity sponsors	Addax & Oryx Group, Netherlands Development Finance Company (FMO), and Swedfund International
Lenders	African Development Bank, Emerging Africa Infrastructure Fund, Infrastructure Crisis Facility Debt Pool (IFC), Netherlands Development Finance Company (FMO), Belgian Investment Company for Developing Countries (BIO), German Investment and Development Corporation (DEG), and Industrial Development Corporation of South Africa (IDC)
Advisers to authority	Herbert Smith (legal) and Tony Blair Africa Governance Initiative
Advisers to sponsors	BNP Paribas (financial), Eversheds (legal), SNR Denton (legal), Froriep Renggli (legal), Homburger (legal), Basma and Macaulay (legal), Coastal and Environmental Services (technical), De Smet Agro Engineers and Contractors (technical), and Agricane (agriculture)
Advisers to lenders	Norton Rose (legal), CLAS Legal Solicitors (legal), SGS Engineering UK Ltd (technical), Independent Consultation Services of Ebasco (INDECS – insurance), PKF (model audit), and Schaffer (agriculture)

CAPE VERDE WIND POWER PPP

CAPE VERDE

Total initial investment	€65 million (\$86 million)
Government client	Government of Cape Verde and Electra (Empresa de Electricidade e Água)
Equity sponsors	African Finance Corporation, Finnfund, and InfraCo Limited (eleQtra)
Lenders	European Investment Bank and African Development Bank
Advisers to sponsors	Clifford Chance (legal), Gabinete de Advocacia, Consultoria e Procuradoria Jurídica (legal), Sinclair Knight Merz (technical) and Willis (insurance)
Advisers to lenders	Linklaters (legal), Eva Caldeira Marques Advocacia e Consultoria (legal), Altermia (technical), CME Energy (technical), MegaJoule (technical), and Willis (insurance)

CENTRALE THERMIQUE DE LOMÉ

LOMÉ, TOGO

Total initial investment	\$196 million
Government client	Government of Togo
Equity sponsors	ContourGlobal and IFC
Lenders	Overseas Private Investment Corporation
Advisers to sponsors	Shearman & Sterling (legal), Gide Loyrette Nouel (legal)
Advisers to lenders	Allen & Overy (legal)

LESOTHO: NATIONAL REFERRAL HOSPITAL

MASERU, LESOTHO

Total initial investment	\$100 million
Government client	Government of Lesotho
Equity sponsors	Netcare SA Healthcare Group, Excel Health, Afri'nnai, Women Investment Company, and D10 Investments
Lenders	Development Bank of Southern Africa (DBSA)
Advisers to authority	IFC (lead), Phatshoane Henney Attorneys (legal)

GAUTRAIN RAPID RAIL LINK

SOUTH AFRICA

Total initial investment	\$513 million
Government client	Gauteng Provincial Government
Equity sponsors	Bombardier, Bouygues Travaux Publics, Murray & Roberts and Strategic Partners Group
Lenders	Standard Bank, Rand Merchant Bank, and Société Générale
Advisers to authority	Kagiso Tiso Holdings (financial), Pinsent Masons (legal), and Ledwaba Mazwai (legal)
Advisers to sponsors	Société Générale (financial), Webber Wentzel (legal), and Steer Davies Gleave (legal)
Advisers to lenders	Freshfields (legal), Bowman Gilfillan (legal), and Capita Symonds (technical)

HENRI KONAN BEDIÉ BRIDGE

CÔTE D'IVOIRE

Total initial investment	€232 million (\$285 million)
Government client	Gouvernement de Côte d'Ivoire
Equity sponsors	Bouygues Travaux Publics, Total Côte d'Ivoire, Pan African Infrastructure Development Fund (PAIDF), and National Bank of Investment (BNI)
Lenders	African Development Bank, African Finance Corporation, ECOWAS Bank for Investment and Development, West African Development Bank, Netherlands Development Finance Company (FMO), Banque Marocaine du Commerce Extérieur (BMCE), and Multilateral Investment Guarantee Agency (MIGA)
Advisers to lenders	White & Case (legal), Egis International (technical), MVA Consultancy (traffic), and Marsh & McLennan (insurance)

Credits

Front cover (left to right): Apa Nova, Luc Benevollo for Vinci, Jonathan Ernst/World Bank, Alejandro Perez/IFC

Page 16 (all): IFC

Pages 18-19: IFC

Page 20 (all): Homeless International

Page 22: Druk Holding and Investments

Page 29: IFC

Page 40 (top left): J&P - Avax

Page 40 (top right): J&P - Avax

Page 40 (bottom): Foster + Partners

Pages 42-43: J&P - Avax

Page 44: VTB Capital

Page 46 (all): Orascom Construction Industries

Page 53: Limak

Page 64 (all): ViaQuatro

Pages 66-67: ViaQuatro

Page 68: Banobras

Page 70: ODEBRECHT PERÚ OPERACIONES Y SERVICIOS

Page 76: The Minas Gerais PPP Unit

Page 88 (all): Orli Arav

Pages 90-91: U.S. Airforce/Sgt Samuel Bendet

Page 92: EleQtra and InfraCo Africa

Page 94: Vredeseilanden

Page 101: IFC

Contacts

INTERNATIONAL FINANCE CORPORATION

IFC is the only multilateral organization that offers direct advisory services on designing and implementing public-private partnership (PPP) transactions to national and municipal governments. Since 1989, IFC has worked on over 330 PPP transactions in 99 countries, helping governments achieve long-term economic growth and better living standards by harnessing the potential of the private sector to increase access, enhance quality, and improve efficiency in public services such as water, power, health and education.

IFC Advisory Services in PPPs
2121 Pennsylvania Ave. NW
Washington, D.C., 20433 USA

www.ifc.org/ppp
www.facebook.com/ifcinfrastructure
www.twitter.com/IFC_Advisory

INFRASTRUCTURE JOURNAL

Whether you are looking for a global view or are more focused on specific regions or sectors, IJ gives you access to a team of experts and the largest database in the industry. By tracking projects throughout the lifecycle, IJ provides detailed information on financial structure, policy, pricing and key players influencing transactions and trends.

We help hundreds of clients to make more informed decisions and grow their businesses. Our services enable you to manage risk, identify leads, raise your market profile, secure investment and ultimately win more deals.

IJ's clients include equity providers, funds, institutional investors, lenders, multilaterals and ECAs, governments and advisers. We work with 80% of the top project finance lenders, 90% of the top law firms, and 85% of the top financial advisers.

Infrastructure Journal
TRG 4C Group Limited
2nd Floor, AirW1 Building
20 Air Street
London, U.K. W1B 5AN

www.ijonline.com
www.twitter.com/ijonline
+44 (0) 20 7715 6441

PPIAF

PPIAF is a multi-donor trust fund that provides technical assistance to governments in emerging markets to develop enabling environments that facilitate private investment in infrastructure. In particular, it helps governments prepare and review policy, legal and regulatory frameworks; design and develop institutions to support private participation and financing in infrastructure; and build capacity and awareness to enhance governments' technical know-how. PPIAF also supports governments by providing technical assistance for specific infrastructure projects.

The World Bank
1818 H Street, NW
Washington, DC 20433 USA

www.ppiaf.org



Emerging Partnerships is the result of collating information and submissions from the public, conducting judging panels with worldwide industry experts and research and interviews conducted by both Infrastructure Journal and IFC.

In partnership with



2013

