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ECONOMIC COMMISSION FOR EUROPE

COMMITTEE ON ECONOMIC COOPERATION AND INTEGRATION

Team of Specialists on Public-Private Partnership

Eighth session
Geneva, 20-21 October 2016
Item 3 of the provisional agenda

Case studies on People-first PPPs

Conference room paper submitted by the Secretariat

Summary

Since the International PPP Forum in March 2016, the UNECE has gathered a number of cases studies from different sources – public sector, NGOs, academia and the private sector. This paper collects the 14 case studies from all over the world covering a wide variety of sectors from water to energy, and roads to agriculture that will be presented at the eighth session of the UNECE Team of Specialists on PPPs on 20 October 2016. The case studies have one thing in common: they all aspire to achieve the SDGs.

The case studies are being circulated by the secretariat as received by their proponents. They have not yet been properly assessed against the SDGs, and one of the key outcomes of the session is expected to be the evaluation of these case studies against a number of SDG-related criteria.

Table of Contents

Case 1: Armenia, Water Sector, Public Private Partnerships in the Water Sector	4
Case 2: Belarus, Road Sector, The Reconstruction of the Road M-10	14
Case 3: Brazil, Waste Management Sector, PPP for Urban Solid Waste Management in Minas Gerais	19
Case 4: China, Energy Sector, Waste to Energy Projects in China	26
Case 5: China, Urban Rail Sector, PPP Project of Fuzhou Metro Line 2.....	31
Case 6: Haiti, Water Sector, Public Private Partnerships in the Water Sector.....	40
Case 7: India, Energy Sector, Power Transmission Project	49
Case 8: Madagascar, Airport Sector, Public Private Partnerships in the Airport Sector	53
Case 9: Mongolia, Education Sector, Public Private Partnerships in the Education Sector	58
Case 10: The Philippines, Health Sector, Hemodialysis Project: A Model for PPP in Health	65
Case 11: The Philippines, Regional Development, Public Private Partnerships in the Regional Development	73
Case 12: Portugal, Urban Development, Public Private Partnerships in Urban Development	78
Case 13: Madagascar, Port of Ehoala : New Deep Sea Multipurpose Port and Economic Trade Zone in Madagascar	92
Case 14: Ivory Coast, Liberia, Serra Leone and Guinea, WAPP Interconnection Line – CLSG.....	95

Case 1

Armenia

Water Sector

Public Private Partnerships in the Water Sector in Armenia

Case study presented by: Gagik Khachatryan

Public Private Partnership in the Water Sector of Armenia

15 years of PPP experience

Gagik Khachatryan
Advisor of Prime Minister of Armenia
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Content

- **Background and rationale for the reforms**
- **The main objectives of the reforms**
- **Main Directions of the reforms**
- **PPPs in Water Supply Companies of Armenia**
- **Second Generation of the reforms**
- **Lessons Learned**
- **Impact of the Armenian Reforms in the framework of the SDGs**



Background and Rationale for PPPs in Armenia

- **The water sector of Armenia faced serious problems following the collapse of the Former Soviet Union.**
- **Insufficient funding, poor management led to the deterioration of network and increased losses.**
- **Water supply duration was insufficient and the quality of water supply was at hazardous level.**
- **The financial situation of the water utilities was precarious.**



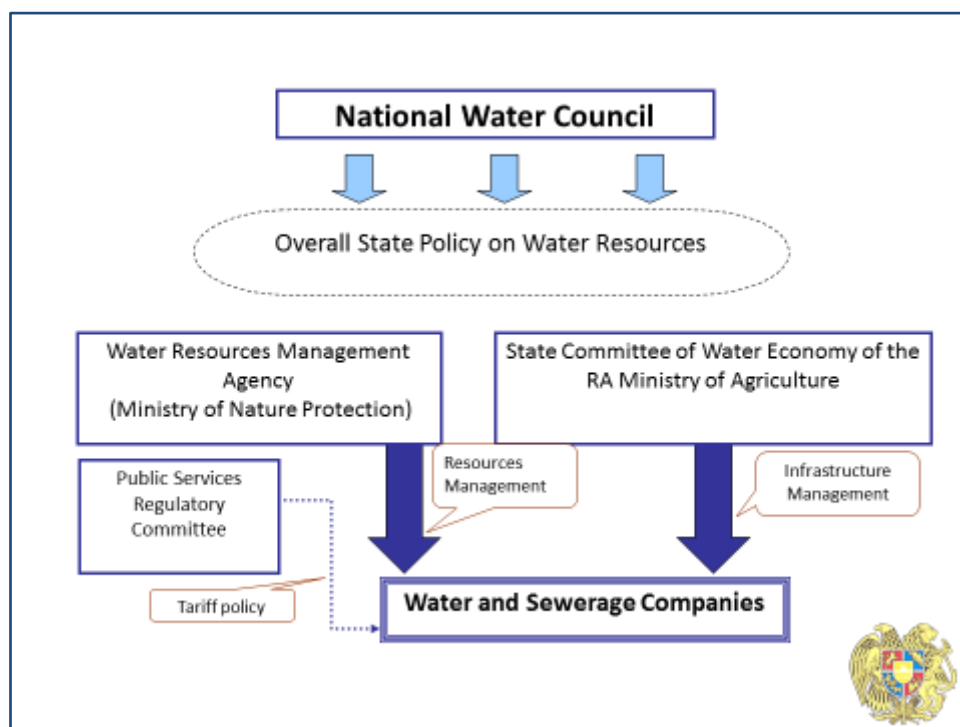
The main objectives of the reforms

- **Improving WSS sector governance and regulation**
- **Clarification and separation of Governmental bodies' functions**
- **Ensuring proper financial flows in the sector**
- **Identification of centralized and decentralized forms of management in the sector**
- **Strengthening the sustainability of WSS companies**

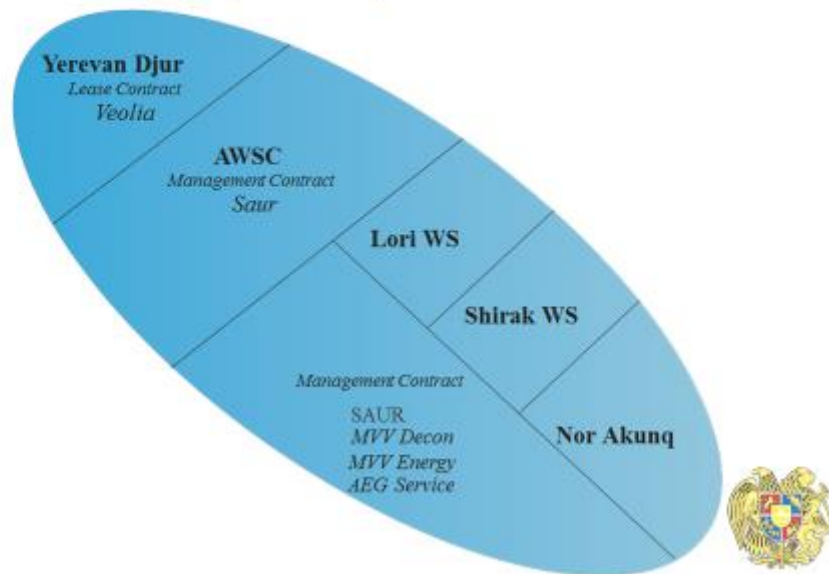


Main Directions of the Reforms

Legal Reforms
Institutional Reforms
Investment Priorities
Tariff Policy
Water Metering



Water Supply Companies of Armenia



Yerevan Djur CJSC

Form of management: **Lease contract**

Operator: **Véolia, France**

Term of leasing: **2006-2016**

Service area: **Yerevan city and nearby 32 rural settlements**

Population under the service area: **1 123 thousand people**



Comparative Data of Yerevan Water Utility

Main Performance Indicators	One year before Private Sector Involvement, /2000/	At the end of the Management Contract with A-Utility, /2005/	Lease Contract with Véolia Water, /2015/
Water Supply Duration (hours)	4-6	18.4	23.5
Water Quality (%)	96.5	97.2	100
Energy Consumption (Million Kw/H)	240.3	124.2	24.5
Collection Efficiency (%)	21	86	98



Armenian Water and Sewerage CJSC

Form of management:	Management Contract
Operator:	Saur, France
Term of contract:	2004-2016
Service area:	37 urban and 271 rural settlements
Population under the service area:	612 thousand people



Progress of Key Performance Indicators of Armenian Water and Sewerage Company

Main Performance Indicators	2004 Base Year	2015
Water Supply Duration (hours)	4-6	18.7
Water Quality (%)	94	98.7
Energy Consumption (Million Kw/H)	64.4	32.5
Collection Efficiency (%)	48	91.0



Shirak, Lori and Nor Akunq Water Sewerage Companies

- *Form of management:* **Management Contract**
- *Operator:* **Consortium consisting of SAUR, MVV decon GmbH, MVV Energie AG and AEG Service LLC**
- *Term of Contract* **2004-2016**
- *Service area:* **5 urban and 61 rural settlements**
- *Population under the service area:* **375 000 people**

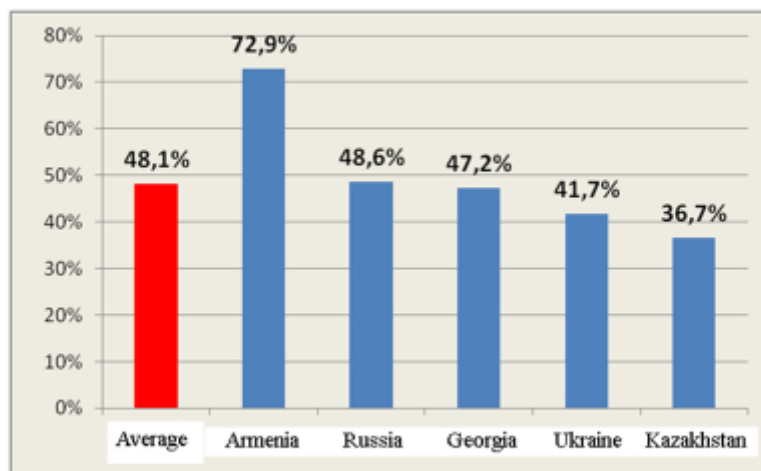


Progress of Key Performance Indicators 3 utilities

Performance Indicators of 3 RC	Company	2009 Base Year	2015
Water Supply Duration (hours)	Lori WS	6.5	22
	Shirak WS	7.7	22
	Nor Akunq	21.1	24
Water Quality (Number of incompliant tests)	Lori WS	211	0
	Shirak WS	71	0
	Nor Akunq	0	0
Water Losses (%)	Lori WS	70.3	68
	Shirak WS	82.3	79
	Nor Akunq	74.4	67.4
Collection Ratio (%)	Lori WS	77	99
	Shirak WS	76	98
	Nor Akunq	100	98



Compliance with the OECD PPP Principles



The results of the review of «Regional Meeting on Private Sector Participation in Water Supply and Sanitation Systems in EUCCA countries», Moscow, January 28-29, 2010 (EUWI, OECD)



The most important features of the Second Generation of the Reforms

- ✓ Initiating necessary arrangements and actions related with main strategic directions and policy issues
- ✓ Applying for a lease contract of 15 years
- ✓ Transferring the duties of 5 water utilities to a single operator
- ✓ Applying unified tariff for 15 years (2016-2030)



Lessons Learned

- **PPPs should be part of a broader sector reform process rather than an isolated undertaking**
- **Implementation of PPP contracts requires strong political consensus and continuous support from the Government**
- **The public sector should obtain serious capacity**
- **The different kinds of PPP models need to be adapted to case-specific contexts**



Impact of the Armenian Reforms in the framework of the SDGs (1)

Water duration in the country is currently 19-23 hours

Universal and equitable access to water has been provided

Responsible consumption by all

Against the water consumption norm of 400 lcd before, currently it has become 100-120 lcd

Water complies with quality standards

Access to safe water has been provided

Solved health issues

Coming from improper water quality before

Created relatively resilient infrastructures

Encourages the private sector to implement advanced forms of PPPs



Impact of the Armenian Reforms in the framework of the SDGs (2)

Positive impact has been made in decreasing poverty level

Access to affordable water has been provided, currently average tariff is \$0,35 against affordable 4% level \$0,85

Mechanisms of partnerships and the role of respective national authorities have been set

In the framework for managing water sector under 1st and 2nd generation of reforms the role of respective national authorities was set

Process for implementation of IWRM has started

It has introduced major institutional and policy reforms for ensuring good management and development of water resources for further implementation of IWRM



Case 2

Belarus

Road Sector

Reconstruction of the M10 road

Case study presented by: Alexander Zaborovsky

Name of project: The reconstruction of the road M-10: the border of the Russian Federation (Selishche) - Gomel - Kobrin, km 109.9 - km 184.5

Name of the speaker and email contact: Alexander Zaborovsky – First Deputy Minister of Economy of the Republic of Belarus

Public Organization, managing the public interest: Ministry of Transport of the Republic of Belarus

Private Organization, developing the project: PricewaterhouseCoopers

Capital Providers, financing the project: None, as feasibility study has only been started.

Why is this project a Case Study for PPPs: Project aims at maximizing the value for money as a result of realization of this project as a PPP. In maximizing the competitive tension special attention will have to be paid to the fact that this is a first pilot PPP project in Belarus of this nature and that locally (on both contracting authority and lenders, contractors and investors side) there is no real experience with this kind of procurement

Why is this project a Case Study for PPPs based on SDGs:

Transport infrastructure development has been funded from the State's budget and carried out only by the public sector. However, due to the high demand for infrastructure development, the positive impact of infrastructure on sustainable long-term economic growth and the budget constraints to implement the necessary projects, the role of private investors has become very important. This very project will improve traffic access, reduce travel time and thus improve the quality of life and the environment, as well as road safety leading to the realization of SDGs № 8, 9 and 13.

UNDP Belarus

- The M-10 road is an international transport corridor of the Republic of Belarus ("Belarus") between the EU and the Russian Federation and beyond, Kazakhstan and China. The total length of the M-10 road is 543km running along the southern border of Belarus. This corridor shortens the transport route between the EU and China and bypasses the busy Minsk and Moscow transport hubs.
- With the aim to efficiently develop and improve the technical state of the network of public roads to meet the needs of the economy and population of the republic in the motor connections, especially in the southern region of the republic of Belarus, the decision was made to reconstruct
- The purpose of the Project is to reconstruct and upgrade to category I-b the 85.25 km long section of the M-10 road from km 109.9 (close to Retchitsa) to km 195.15 (East of the city of Kalinkovitchy). The reconstruction should double the traffic capacity, increase axle load to meet the EU standard of 11.5 tonnes per axle and reduce travel times. Construction is expected to take place during 2017-2020.

UNDP Belarus

Strategy:

- The Project is expected to be structured on the basis of an availability payment scheme: the concessionaire will design, build, operate and maintain the motorway section and in return, receive an availability fee from the Belarus authorities for the duration of the contract period in accordance with pre-determined performance standards.
- The eventual toll revenues are expected to be collected by a third party and remitted to the Belarus authorities: the concessionaire is not expected to bear any traffic/revenue risk.
- The legal form of the Project Agreement under applicable law of Belarus is to be determined during the due diligence process for the Project, and may take the form of a public private partnership agreement, concession agreement, lease or investment agreement or analogous agreement.

UNDP Belarus

Project KPI's:

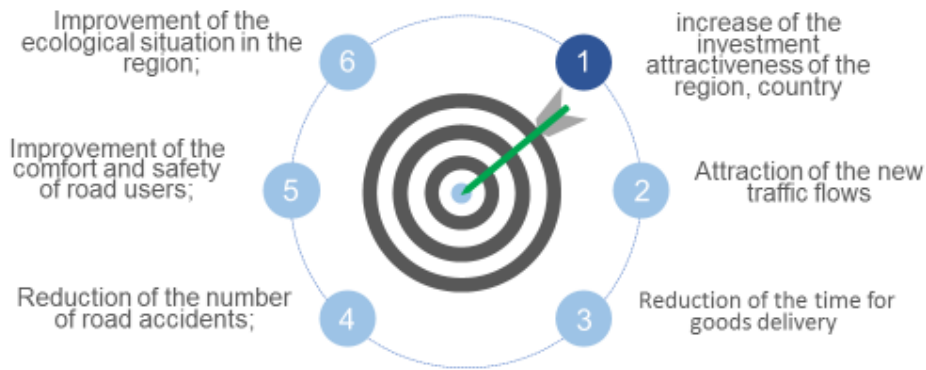
Approximation of a Capital expenditures (CAPEX) – 256 mln. USD

	Existing technical parameters of the road:	Required technical parameters of the road indicators of the road:
категория дороги	II	I
число полос движения	2	4
интенсивность движения, автомобилей в сутки	3 800 – 5 100	6 900 – 9 200
нагрузка на одиночную наиболее нагруженную ось двухосного автомобиля, т		11,5
скоростной режим движения для легковых автомобилей		120 км/ч
грузовых автомобилей		100 км/ч

UNDP Belarus

Impact on People & Planet:

Potential effects from project realization include:



UNDP Belarus

SDGs	Sustainable Development Goals	no impact	some impact	high impact	describe impact
1	end poverty				
2	end hunger				
3	well being - healthy lives				
4	quality education		✓		Drastically improves road safety on the selected rout.
5	gender equality		✓		
6	water and sanitation for all		✓		
7	affordable and sustainable energy		✓		
8	economic growth & decent jobs for all		✓		
9	resilient infrastructure, sustainable industrialization, foster innovation		✓	✓	High amount of construction works, Significant operational component
10	reduce inequalities within and among countries		✓	✓	Use of cutting edge technology, which can drive the innovation sector fast-track
11	cities inclusive, safe, resilient and sustainable		✓	✓	Ensuring location of infrastructure more spacious and green for better the regional cities.
12	responsible consumption by all		✓		
13	combat climate change		✓		
14	protect the ocean		✓		
15	take care of the earth		✓		
16	peaceful and inclusive societies, justice for all, accountable institutions at all levels		✓		
17	mechanisms and partnerships to reach the goals		✓		Use of PPPs as a primary model for project realization

UNDP Belarus

Escalating the (Case Study) project:

- 1) The project can be replicated within the country's transport sector;
- 2) Road PPPs are widespread across many countries of the world and could be used for the effective creation of new logistics opportunities;
- 3) Extrapolation of project to other sectors is limited;
- 4) Political will and dedication of project implementation team are among key success factors for escalation of project;

UNDP Belarus

People First is also about "those" that made it happen:

The main drivers for project realization are:

- 1) The main public organizations involved in the project realization are –Ministry of Transport of the Republic of Belarus, PPP Unit of the Ministry of Economy of the Republic of Belarus, Interministerial Infrastructure Board (IIB) of the Republic of Belarus
- 2) The main private organizations involved in project preparation –consulting company PricewaterhouseCoopers
- 3) The management team of the project is under formation
- 4) Sustainable development goals underline all the activities of UNDP in Belarus, to enable the Republic of Belarus to achieve more and help the world to successfully reach the new era.

UNDP Belarus

Case 3

Brazil

Waste Management Sector

PPP for Urban Solid Waste Management in Minas Gerais

Case study presented by: Flavio Faria Antunes

NAME OF PROJECT: PPP for Urban Solid Waste Management in Minas Gerais

NAME OF THE SPEAKER AND EMAIL CONTACT: Flávio Faria –
flavio.faria@ppp.mg.gov.br

PUBLIC ORGANIZATION, MANAGING THE PUBLIC INTEREST: PPP Central Unit of Minas Gerais

PRIVATE ORGANIZATION, DEVELOPING THE PROJECT: CMTR (Metropolitan Waste Treatment Consortium) - Vital Engenharia Ambiental; Revita Engenharia e Construtora Barbosa Mello.

WHY IS THIS PROJECT A CASE STUDY FOR PPPS: This is the first PPP for Urban Solid Waste Management in Minas Gerais. After the success of the solution developed for the management of urban solid waste from municipalities of the metropolitan region of Belo Horizonte, the PPP Central Unit of Minas Gerais signed terms of cooperation with municipalities of Minas Gerais, isolated or consortium members, who wanted to develop similar solutions to meet their own local needs.



PPP Central Unit of Minas Gerais

PREMISES OF THE PPP PROJECT

- Regionalization of final disposal provides returns to scale which in turn enables cost reduction of final disposal.
- Great difficulty of municipalities in addressing the issue of solid waste without the support of the State and the Union
- The engagement of private sector's technologies and financial resources can help in the solution.



PPP Central Unit of Minas Gerais

CONTEXT

- Why is this happening? Besides all the good political intentions treating residues in an environmentally acceptable mode is expensive: demands high investments in infrastructure turning the treatment economically unsuitable for a small volume of waste, as it happens in some of the small cities in the RMBH. These obstacles lead to a breach of agreements with the organs of control what can result in penalties for the municipalities.
- In order to change this scenario the State government of Minas Gerais created the Metropolitan Management Program for Solid Residues aiming to transform RMBH in the first metropolitan region of Brazil to manage 100% of its domestic waste in a safe and sustainable way with energy exploitation. To reach this objective, besides the State firmness of purpose it is also indispensable to overcome financial, managerial, technological, environmental and logistics obstacles.

PPP Central Unit of Minas Gerais

CONTEXT

- The PPP for Urban Solid Waste Management in Minas Gerais Project was structured by the Minas Gerais PPP Central Unit and Extraordinary Secretariat of Metropolitan Region of Belo Horizonte. A public call for contributions was made in 2010 so that those interested could contribute to the structuring of the project.
- In 2012, Bain & Company was hired to prepare the data and information that supported the elaboration of the project, especially with regard to the design of the Business Plan and the economic and financial feasibility model.

PPP Central Unit of Minas Gerais

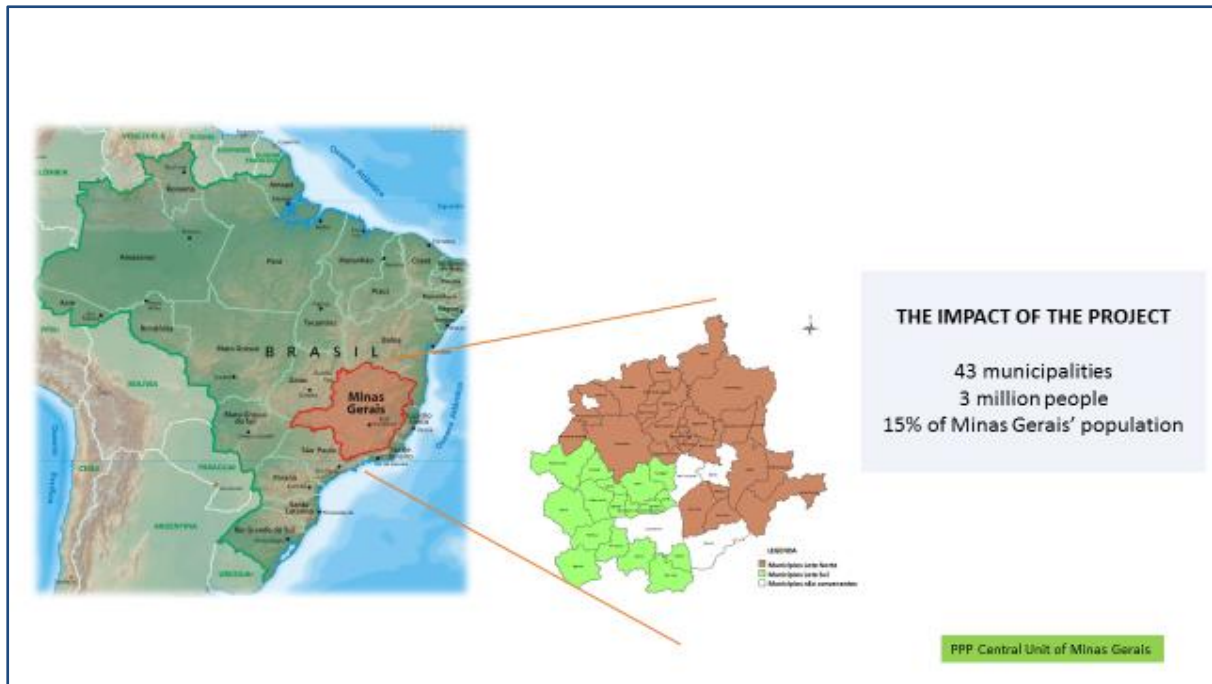
- **CHALLENGE:** 542 of 853 municipalities in the state of Minas Gerais have improper waste disposal practices* (FEAM, 2015).
- **LIMITATIONS:** High implementation and operation costs for the needed structures; lack of human and financial resources in the municipalities; lack of planning and integrated actions with neighboring municipalities.
- **CONSEQUENCES:** A large number of municipalities without adequate waste disposal; small percentage of waste recycling and reuse; difficult to solve environmental liabilities.

* Open air disposal ("dumpsites") and irregular waste burning are considered improper waste disposal practices.

PPP Central Unit of Minas Gerais

- Object of the contract: transshipment, treatment and disposal of Urban Solid Waste in municipalities in Belo Horizonte Metropolitan Area.
 - **TRANSHIPMENT:** temporary storage station (up to 72 hours) of waste from the municipalities.
 - **TREATMENT:** reduction of weight, volume, hazard or polluting potential of Municipal Solid Waste
 - **FINAL DISPOSAL:** environmentally sound disposal of USW, according to technical criteria approved in the licensing process by the competent agency
- Contract signing date: July 3, 2014
- Duration time: 30 years
- Private Investment : US\$ 104.652.442,90
- Public compensation (State): US\$ 723,13 (on average; per ton.)
- Public compensation (Municipalities): US\$ 5,50 (minimum; per ton.)

PPP Central Unit of Minas Gerais





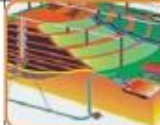
SDGs	Sustainable Development Goals	No impact	Some Impact	High Impact	Describe Impact
1	End Poverty		✓		Generation of income and employment offer as a result of the promotion of recycling activities
2	End Hunger	-			
3	Well Being – Healthy Lives			✓	15% of Minas Gerais population is now benefiting from the access to proper disposal of urban solid waste.
4	Quality Education			✓	Encouraging environmental education in local communities
5	Gender Equality	-			
6	Water and Sanitation for All			✓	The proper disposal of solid waste is an important pillar of the sanitation policy, providing welfare and increasing public health.
7	Affordable and Sustainable Energy			✓	Encouraging the generation of heat and electricity from municipal solid waste by offering financial incentives
8	Economic Growth & Decent Jobs for All		✓		Generating employment and income from development to recycling activities.
9	Resilient Infrastructures, Sustainable Industrialization, Foster Innovation		✓		Encouraging the search for innovative solutions for municipal solid waste management, adopting the Question as a criterion for selecting the most advantageous tender in the bidding.
10	Reduce Inequalities Within and Among Countries		✓		Expanding access to basic sanitation policy to the population of the 43 municipalities that comprise the project.
11	Cities Inclusive, Safe, Resilient and Sustainable			✓	Extinction of management practice of and inadequate waste disposal, providing welfare and increase public health.
12	Responsible Consumption by All			✓	Encouraging productive recycling chain, from the screening activities and savinging waste to the marketing of recycled products.
13	Combat Climate Change			✓	
14	Protect the Ocean			✓	With the extinction of management and inadequate waste disposal practice, it provides combat the negative environmental impacts of this practice, particularly contamination of water, rivers, air, soil and groundwater with leachate.
15	Take Care of the Earth			✓	
16	Peaceful and Inclusive Societies, Justice for All, Accountable Institutions at All Levels			✓	Valorization of the work of local collectors associations.
17	Mechanisms and Partnerships to Reach the Goals			✓	Public-Private Partnership innovative character, by integrating the State Government, 43 Municipal Governments and the private sector agent in the development of inter-municipal solution to meet the needs of the local population.

OPPORTUNITIES TO ESCALATE THE PROJECT

- Alternative waste treatment technologies will be more expensive and demand more work than today's open dump sites. However, the benefits for the population and the environment are incalculable, in addition to resulting in compliance with current Brazilian environmental law. In order for the Metropolitan Region of Belo Horizonte (RMBH) and its surrounding area to achieve a new level in terms of urban solid waste treatment, it is crucial that the Government of Minas Gerais, Municipalities and the private sector collaborate with each other.
- RMBH and Metropolitan Collar local administrations have a huge opportunity to improve their waste management services. Now is the time to invest in a major project - in a joint effort with a modern approach and contemporary thinking - to provide the population with proper treatment for urban solid waste. The proposal of the Government of Minas Gerais is to contribute to the development of its largest metropolitan region, always with a focus on its citizens and the environment.

PPP Central Unit of Minas Gerais

PERFORMANCE INDICATORS FRAME (QID)

INDICATOR	CONCEPT	MEANING	
IPET	Index Processing Stations Transshipment (ET)	Calculated by the ratio between the amount of solid waste transfer stations in the spent the night for over 72 hours on the ability of solid waste in ETs.	
IRRA	Index Waste Reduction Grounded	Calculated as the amount of solid waste on landfill requirements, including remaining waste treatment process adopted independently of the technology used, relative to the amount of solid waste destined effectively.	
IDDF	Index of Availability of Final Destination	Calculated for quatidade solid waste destined for the quantity of solid waste delivered.	

PPP Central Unit of Minas Gerais

HOW TO ESCALATE THE EXPERIENCE

On account of the high cost, municipalities, especially small ones, won't achieve this purpose without a consolidation of interests and actions. Associating the municipalities of the metropolitan region of Belo Horizonte and the Metropolitan Belt to promote, in an integrated way, the transshipment, treatment and final disposal of urban solid residues, this project will generate returns of scale making possible the implementation of adequate infrastructure allowing a reduction of costs in the whole process. Therefore, the main barrier that use to hold back the cities to solve this serious environmental, economic and social problem will be eliminated. The first step consists on building consortiums among the political administration of all the cities that compose the Metropolitan Area and Metropolitan Belt with the State Government to set the responsibilities and objectives of each actor. Together and with the technical and financial support of the State Government of Minas Gerais, the municipalities of RMBH can finally dispose adequately and efficiently the waste generated by tis population.

PPP Central Unit of Minas Gerais

THE MAIN DRIVERS

- The State Government of Minas Gerais and the private sector act together throughout a Public Private Partnership counting on agencies and incentives proposed by the State.
- The partner company will be responsible for the investments, transshipment stations, treatment and final disposal of the residues.
- The private sector is financially stimulated to use new waste treatment technologies with the possibility of obtaining an extra income through the energy exploitation of the treated material, reducing the volume of buried waste and bringing more benefits to the local economy and to the environment.

PPP Central Unit of Minas Gerais

Case 4
China
Energy Sector

Waste to Energy Projects in China

Case study presented by: Pei Peng

China Everbright International – Waste-to-energy Projects in China

Mr. Wang Tianyi : wangty@ebchinaintl.com
 Ms. Peng Pei : pengp@ebwater.com

How we implemented a PPP environmental project in China in 2006



Shandong Ji'nan waste water treatment project



China PPP Projects (2013-2016) *



How we implemented a PPP environmental project in China in 2014



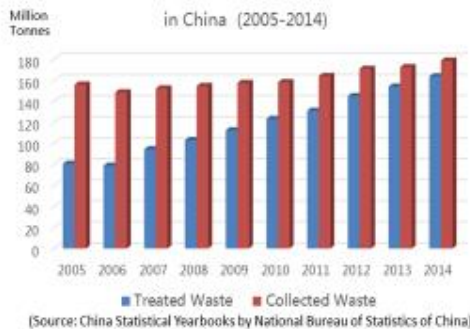
Zhejiang Ningbo waste-to-energy ("WTE") Project



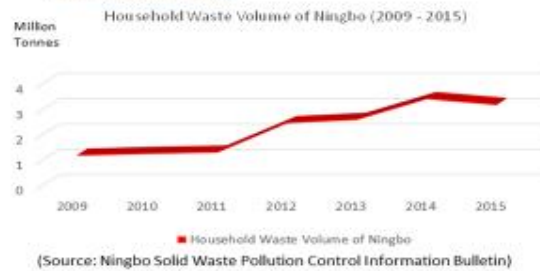
About Ningbo City:

- Located in Zhejiang Province, bounded by the East China Sea
- 5.866 million population
- RMB801.15 billion GDP in 2015
- One of the world's busiest port with an annual cargo throughput > 500 million tonnes

Household Waste Collection and Treatment in China (2005-2014)



Urban Area of Ningbo City





About Ningbo waste-to-energy project ("Ningbo Project")

- Investment: RMB750 m (\$115.4m)
- Designed capacity: 1,500 tons/day
- Operated capacity: 1,800 tons/day

Main contracts signed for Ningbo Project

- Investment and Cooperation Framework Agreement
- Joint Venture Agreement
- Concession Agreement
- Waste Treatment Services Agreement
- Loan Agreement

To Benefit of the Public	To Benefit of the Private
Gov. holds equity interest in Project Co. to be entitled to share profit on a pro-rated basis	Everbright International retains controlling interest in Project Co. and thus controls operations and management
Project Co. assumes operating cost & Everbright International responsible for financing of project	Gov. guarantees a minimum volume of household waste (i.e. minimum revenue guaranteed)
Project Co. is required to comply with prescribed emission and discharge standard; otherwise, there will be penalty	Gov. coordinates the produced electricity being merged into the state grid (i.e. additional revenue stream)
Project Co. pays fees to Gov.'s sub for disposal of fly ash (i.e. steady revenue for Gov.'s sub)	Adjustment of processing fees under certain circumstances is specified in agreements

← Risk Allocation



Ningbo Project:

- Serves 1.1 million population in Beilun District, Ningbo City
- Processes 1,800 tons household waste daily
- Flue gas emissions fully comply with or are better than standards in European Union Industrial Emission Directive (2010/75/EU)
- Generates 180 million kWh green electricity annually
- Saves 90,000 tons standard coal annually



Voluntary Disclosure of Emission Data & Environmental Info

- ✓ Real-time emission data linked to Gov.'s online system
- ✓ Emission data displayed outside plant
- ✓ Environmental info disclosed on company website



Emission data display board outside WTE Plant

Replicability of Similar Projects



Annual household waste processing capacity: 16.68 mil. tons



Environmental management information disclosure on company website



Environmental contribution as at 30 June 2016:

- ✓ Processed 32.39 mil. tons household waste, 0.39 mil. tons hazardous waste and 1.97 mil. tons agricultural waste
- ✓ Generated 11.6 billion kWh green electricity
- ✓ Electricity generated can fulfill annual electricity consumption of 9.665 million households
- ✓ Saved 4.64 million tons standard coal
- ✓ Reduced CO₂ emission by 13.0 million tons
- ✓ Prevented 1.51 billion trees from being cut down



Employees' team building activities



Regular visit of the underprivileged



Everbright International True Love School in Dangshan County

Impact on 17 SDGs

High Impact:

- ✓ Well being – healthy lives
- ✓ Water and sanitation for all
- ✓ Affordable and sustainable energy
- ✓ Economic growth & decent jobs for all
- ✓ Resilient infrastructure, sustainable industrialization, foster innovation
- ✓ Combat climate change
- ✓ Take care of the earth
- ✓ Cities inclusive, safe, resilient and sustainable

Some Impact:

- ✓ Quality education
- ✓ Gender equality
- ✓ Reduce inequalities within and among countries
- ✓ Mechanisms and partnership to reach the goals
- ✓ Protect the ocean



Popular Science Education Base



Material and psychological support to sanitation workers



Earth Hour Hong Kong 2015



Site visit of plant by foreign visitors

13th Five Year Plan

- Innovation
- Coordination
- Green Development
- Opening up
- Sharing

- ✓ **People's Well-Being:** to lift 50 million population out of poverty
- ✓ **Growth:** to double GDP & per capita income by 2020 from 2010 level
- ✓ **Energy Revolution & Environment Protection**
- ✓ **Belt and Road Initiative**

13th Five Year Plan for National Urban Household Waste Treatment Facilities Construction (Consultation Draft)

"To vigorously promote PPPs, concessions, and third-party involvement in managing environmental pollutions....."

"Leveraging on scientific and technological innovations, to continuously improve the level of household waste reduction, recycling and harmless treatment....."



Case 5

China

Urban Rail Sector

PPP Project of Fuzhou Metro Line 2

Case study presented by: Shijian Liu

PPP Project of Fuzhou Metro Line 2

- JunHe LLP
- liushj@junhe.com

- **Public Organization**, Fuzhou Transport & Communications Committee
- **Private Organization**, a consortium composed of 14th Research Institute of China Electronic Technology Group Corporation, Nanjing Rail Transit Systems Co., Ltd., Nanjing Nriet Industrial Co., Ltd., China CREC Railway Electrification Bureau Group, and Nanjing Metro Operation Company (the "Consortium").
- **Capital Providers, Financing the Project**: Fuzhou Urban Metro Co. Ltd. (as public sector equity investor), the above mentioned private organization, and commercial bank(s).

Why is this project a Case Study for PPPs

- New financial model (calculating government subsidy based on cash flow)
 - to ensure the normal operation of the project without prejudice the risk allocation and performance evaluation
 - to satisfy the agreed minimum IRR of the private equity investor(s) without prejudice the risk allocation and performance evaluation
- Introducing private sector investment and skills
 - Private equity investor (consortium leader) being experienced metro operator
 - Private equity investor being responsible for project financing

Context(1/2)

- "Quality of Life Improvement" & "Infra Gap"

- Fuzhou is the capital of Fujian Province, China
- Heavy traffic in downtown area calling for development of urban area and infrastructure facilities connecting rural and urban
 - Large percentage of population living and working in downtown area
 - Number of vehicles grow fast adding traffic (motor vehicles increase by 15%, electrical motor by 30%)
 - Insufficient parking lot, secondary trunk road and branch road
 - Low public transportation availability (18% population travel by public transportation)

Context (2/2)

Infrastructure Solution and PPP solution



Route and stations of Fuzhou Line 2

● Infrastructure Solution

Line 2 is the main east-west line of Fuzhou, connecting downtown area, main urban area and rural area, passing commercial & financial area, residential area and university area.

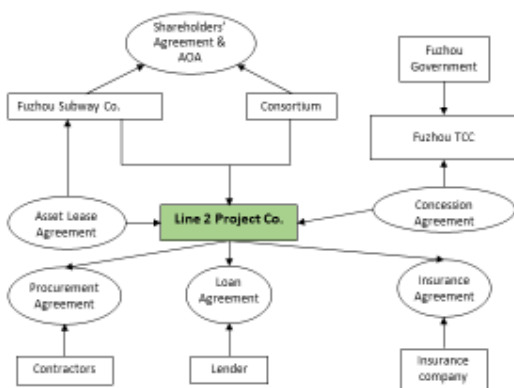
● PPP solution

State policy-restraint on local government and encouragement (further, requirement) on application of PPP model in public infrastructure and services

Strategy (1/4)

- Fuzhou City Rapid Rail Transportation Development Plan (2009-2016) was adopted by NDRC in 2009. Feasibility study report of Line 2 approved by NDRC in 2012. Preliminary design of Line 2 approved by Fuzhou NDRC in March 2014. Construction of Line 2 commenced at the end of 2014 (test run scheduled to be carried out in July 2019)
- Fuzhou city government decided in July 2015 to have the electromechanical system of Line 2 (the procurement and installation of the electromechanical system of Line 2 and the operation of Line 2) carried out in the manner of PPP.
- Line 2 PPP project passed both the VFM and Financial capacity demonstration (FCD) valuation in February 2016
- Following the public bidding for private equity investor, the Consortium was determined as the will-be successful bid winner. Public announcement was made in October 2016

Strategy (2/4)



● Closure-contracts to be signed or novated

- Concession Agreement
- Shareholders' Agreement
- Articles of Association (AOA)
- Asset Lease Agreement
- Loan Agreement (to be novated)

Strategy (3/4)

-Development

Design, construction (limited), integration, installation, testing, maintenance and ultimate performance of the project up to the required output specifications are all the Project Company's responsibility

- **Quality**
 - Project Company filing quality management system
 - Authority examining and inspecting works or activities
- **Schedule**
 - penalty for delay in meeting critical dates (up to termination)
- **Budget**
 - lump sum investment amount subject to clearly-defined change mechanism
 - valuation upon acceptance

Strategy (4/4)

- Exploitation

- Bidder qualification
- Clear Output specifications subject to amendment per the contract
 - Line 2 Service Requirements is attached to the Concession Agreement
- Annual operation plan to be filed with and checked (revised as appropriate) by Authority
- Authority's access of materials and information related to the operation (without impeding Project Company's operation)
- Submission of operation record report (normal record, monthly, annual and other report required by Authority)
- Inspection by Authority (rectification if required)
- Public satisfaction survey

Project KPI's (1/2)

- Project Scale
- 30.167km, 22 stations, 5 transfer stations
- Line 2 is divided into Part A (civil and wind hydropower) and Part B (electromechanical system). Total investment of Party A is RMB15.58 billion (invested and to be invested by government), total investment budget of Part B is RMB 4.9 billion.
- Bid-winning price: the IRR required by the winner is the lower limit provided by the government.
- VFM: net present cost of Public Sector Comparator (PSC) is RMB 16.26 billion, net present cost of PPP is RMB 16.22 billion.
- Forecast of Passenger flow: 292 thousands person-times per day (early period till 2021), 522 in the near future (till 2028) and 775 (till 2048)
- Resources of Revenue: ticket revenue, non-ticket revenue and government subsidy
- Opex: staff salary, energy consumption, maintenance

Project KPI's (2/2)

- Finance Structure
 - 30% of the bid-winning price as capex;
 - Equity: 60% equity by Consortium as social investor; 40% equity by Fuzhou Metro Co.as public equity investor;
 - Debt: rest to be borrowed (novated as arranged) from bank (concession rights, right to receive fares and non-ticket revenues, and assets formed after the completion of the construction may be used for guarantees)
- Main milestones
 - Contract becomes effective: last quarter of 2016; Readiness of Tunnels: December, 2017; Test run: March 31, 2019; trial operation: July 1, 2019.

Impact on People & Planet

- Improve People's Life and benefit the development (urban and rural)
Line 2 will be the main east-west line of Fuzhou, connecting downtown area, main urban area and rural area, passing commercial & financial area, residential area and university area.
- "Shorten" the distance between the university area, residential areas (Jinshan and Gushan) and downtown.
- Strong support to the future development of the east and rural west area (village for the time being)
- Strengthening the prosperity downtown area
- Improving the tourism industry (passing major scenic spots)

SDGs	Sustainable Development Goals	no impact	some impact	high impact	describe impact
1	end poverty		*		Promotion to the social and economic benefits
2	end hunger	*			
3	well being-healthy lives		*		Safe, clean and reliable transportation
4	quality education		*		Safety operation certificate required
5	gender equality		*		More jobs available for woman
6	water and sanitation for all		*		Less impact on water resources
7	affordable and sustainable energy		*		Clean and lower power consumption
8	economic growth & decent jobs for all			*	More jobs created directly and indirectly
9	resilient infrastructure, sustainable industrialization, foster innovation		*		Promoting the development of the whole city
10	reduce inequalities within and among countries		*		Convenient personal travel with low cost
11	cities inclusive, safe, resilient and sustainable			*	Save more space for city development
12	responsible consumption by all		*		
13	combat climate change			*	Clean and efficient traffic mode
14	protect the ocean	*			
15	take care of the earth		*		Less pollutant
16	peaceful and inclusive societies, justice for all, accountable institutions at all levels			*	292000 person times per day at the initial stage
17	mechanisms and partnerships to reach the goals			*	Reasonable financial model and risk allocation between the Authority and Project Company.

Escalating the Project

- Can we replicate the project within the country?
 - -the cash-flow financial model is a good try and a better choice for PPP projects
- Can we replicate the project globally?
 - -the notion of the financial model of the Project could be applied in PPP projects in other countries
- Can we extrapolate the experience to other sectors?
 - -the financial model
 - -the risk allocation between the Authority and Project Company

Escalating the Project

- Describe the main key success factors for escalation?
 - Win the relevant authorities' understanding and support
 - Training and education
 - Professional consultant, financial and legal
- Describe what should be avoided in future projects?
 - taxation policy: double taxation should be avoided

• **People First is also about “those” that made it happen:**

1) The main public organizations

- Fuzhou Finance Bureau, Transportation Commission, and Fuzhou Metro Company.

2) The main private organizations

- The Consortium, and the project company to be set up.

3) The management teams

- Fuzhou Transportation Commission is the implementing entity authorized by the local government.
- Fuzhou Metro Company organized the preliminary work.

4) Your organization growth strategy

- We provided efficient and reliable legal services to CIECC, the project consultant of the local government.

5) How the SDGs are part of this strategy

- CIECC’s core value is to serve the country and make contributions to the society.

Case 6
Haiti
Water Sector
PPP in the Water Sector

Case study presented by: Rose-Lourdes Elysee

Experience in Public-Private Partnership

Société des Eaux de Saint Marc
SESAM
Water Utility Service

Presentation

- I. Context
- II. Object of the Public Service Delegation (PSD)
- III. Advantages of this PPP
- IV. Comparing performance before and after the PSD
- V. Inconveniences
- VI. Renegotiated elements to overcome the inconveniences
- VII. conclusion

I- Context

- Procurement Process launched by the Ministry of Public Works in November 2008 for the delegation of the distribution service of potable water in the city of Saint-Marc, located in the Western part of Haiti (approx. 90 miles North of Port-au-Prince)
- Bid won by LYSA, a French company, international operator, specialized in sanitation and in water distribution
- As required by Haitian law and the contract, LYSA established a local branch, « Societe des Eaux de Saint-Marc (SESAM) (Water Company of Saint-Marc) to operate the distribution system
- SESAM begins operations on October 1st, 2009
- Duration of the contract : 15 years
- Former operator was a local representation of the National Company for Distribution of Potable Water (SNEP) – a state owned organization

II- Object of the Public Service Delegation (PSD)

- Increase access to fresh potable water by the population
- Achieve international standards for quality of service (continued service / 24H, system performance) and for quality of water (compliance rate)
- Transfer knowledge and skills pertaining to water management to local personnel
- Make the system profitable through awareness for user payment
- Bring equilibrium to the system through fair tariffs
- Operate the system with performance based management

III- Advantages of this PPP

The advantages mentioned stem from fruitful negotiations on the following aspects:

- 1- Technical
- 2- Commercial
- 3- Social engineering
- 4- Administration

1- The Technical aspect

- Daily monitoring of the chlorination and the level of free chlorine (quality of water)
- Weekly monitoring of the micro biological quality of the water distributed
- Transferring of the network on satellite image and GPS localization of structures and connections
- Daily recording, on computer database, and follow-up on complaints and repairs to reduce repair delays
- Operating of open telephone lines 24/7 to receive complaints with response even on non-working days (week-end or holidays)
- Installing a testing mechanism for the counters to verify preciseness
- Repairing and recycling of malfunctioning counters
- Controlling and monitoring of volumes produced and distributed (water not billed)
- Monitoring and maintaining production and distribution infrastructure
- Following up in the justice system for acts of vandalism and sabotage

2- The commercial aspect

- Implementing a customer service to meet customers
- Billing for the volume noted on home counters
- Using a software for billing and management of subscribers (debts, payment schedules, formal notices, etc...)
- Determining precise itinerary and schedule for noting use of water and distribution of bills
- Monthly editing of customer lists by amounts owed for reminders, formal notices, litigation...
- Sending reminders and notices by SMS, telephone calls as well as house calls
- Collecting payments through house calls
- Collecting debts through the justice system (notices, summons, ...)
- Sub-contracting commercial tasks to neighborhood associations (distribution of bills, collection...)
- Identifying and following-up on fraudulent customers
- Reporting of frauds by a Justice of the Peace and following-up with court procedures

3- The social engineering

- Identifying and meeting with neighborhood committees to communicate messages and information
- Meeting local authorities and notables, establishing a Water Committee
- Informing customers through SMS
- Using the media and the Internet (Facebook...) to inform and communicate with the population
- Participating in a visible manner in important events (carnival, seasonal feasts, ...)

4- The administrative aspect

- Daily following-up of company accounts and monitoring of performance indicators
- Using a normalized accounting system with periodic consulting of an expert accountant and yearly audit by an external auditor
- Implementing a road map for employees for monthly evaluation of their performance
- Meeting monthly with staff on SESAM dashboard to analyze the evolution of the company
- Organizing quarterly orientation councils to analyze performance, profitability, problems encountered, et monitor improvement measures. The council comprises : representatives from SESAM, DINEPA, City Council of Saint-Marc, IDB. The Ministry of Public Works and the PPP Unit of MEF participate as observers

IV- Comparing performance before and after the PSD

Description	Before the PSD	From 2009 to 2014	From 2015
Counting method	None	meter	meter
Billing method	Flat-rate	Volume	Volume
Staff	10	46	26
Commercial service	Absent	Yes	Yes
Technical Service	Yes	Yes	Yes
Communication and social engineering service	None	Yes	Yes

IV- Comparing performance before and after the PSD

Description	Before the PSD	From 2009 to 2014	From 2015
Accounting Service	None	Yes	Yes
Average of revenue per Month	75 000 HTG	1.4 million HTG	1.2 million HTG
Continuity of the service	4h/day	14h/day	7h/day
H24 rate (% control of water supply)	3,5%	33%	20%
Number of customers	1951	6587	7144
Active customers	1167	4631	4797
Suspended customers	784	1956	2347

IV- Comparing performance before and after the PSD

Description	Before the PSD	From 2009 to 2014	From 2015
Tariff	220 HTG unlimited	62,5 HTG/ cubic meter	62,5 HTG/ cubic meter
Water quality	Bad	Very good	Very good
Compliance Rate	0%	95%	92%
Distribution coverage	30%	50%	65%
Recovery rate	3.5%	67%	60%
Customer management	Manual	Computerized Software SIGA	Computerized Software SIGA

V- Inconvenience (1)

- 1- Unfinished social engineering and objectives not completely reached:
 - The population is not used to control its consumption (meter)
 - The service becomes more expensive than before
 - Acts of sabotage on the network, a lot of fraud in the meters
 - Not enough support from the authorities to force people to respect the public infrastructures

V- Inconvenience(2)

- 2 The promises of LYSA were not all held; it was chosen because it had in his action plan the capacity to address the types of problems above-mentioned
- 3- The DINEPA has not kept all of its promises (loan availability for the operator, expansion of the network, capture new sources)
- 4- The technical assistance of LYSA costs too much to SESAME
- 5- The operator compensation does not depend on its performance

VI- Renegotiated elements to overcome the inconveniences

- Regular and periodic financial and technical report
- Lower the tariffs
- Transparency in the bill
- Renegotiation of the operator's contract (LYSA and SESAME)
- Reducing the number of employees
- Disappearance of the permanent technical assistance

VII- Conclusion

- Very good experience, considering the increase of the population served and the best quality service
- A better guidance on both global and local level will enable partners to better understand their responsibilities
- Together, the public and private sectors can develop a better product / service that will benefit both

A quark monitoring must be done in order to anticipate and suppress all deviations on contract clauses.

Case 7
India
Energy Sector
Power Transmission Project

Case study presented by: Mrutyunjay Behera

**Power Transmission Project for 400 KV in the
Indian State of Haryana
on
Design, Build, Finance, Operation and Transfer (DBFOT) basis**

by
Mrutyunjay Behera,
Director, Ministry of Finance, Government of India

Why the Project?

● The region covered is largely dominated by rural villages deprived of basic needs of life-suffering from inadequate and erratic supply of power.

Government has committed to ensuring access to water, energy and transport to all habitation in the country including rural areas. Availability of quality infrastructure is essential for sustainable, broad based and inclusive growth.

● Availability of quality infrastructure within shortest possible time could be made through PPPs. There has been an increasing realization and consequent engagement of the private sector in provisioning of infrastructure (in India).

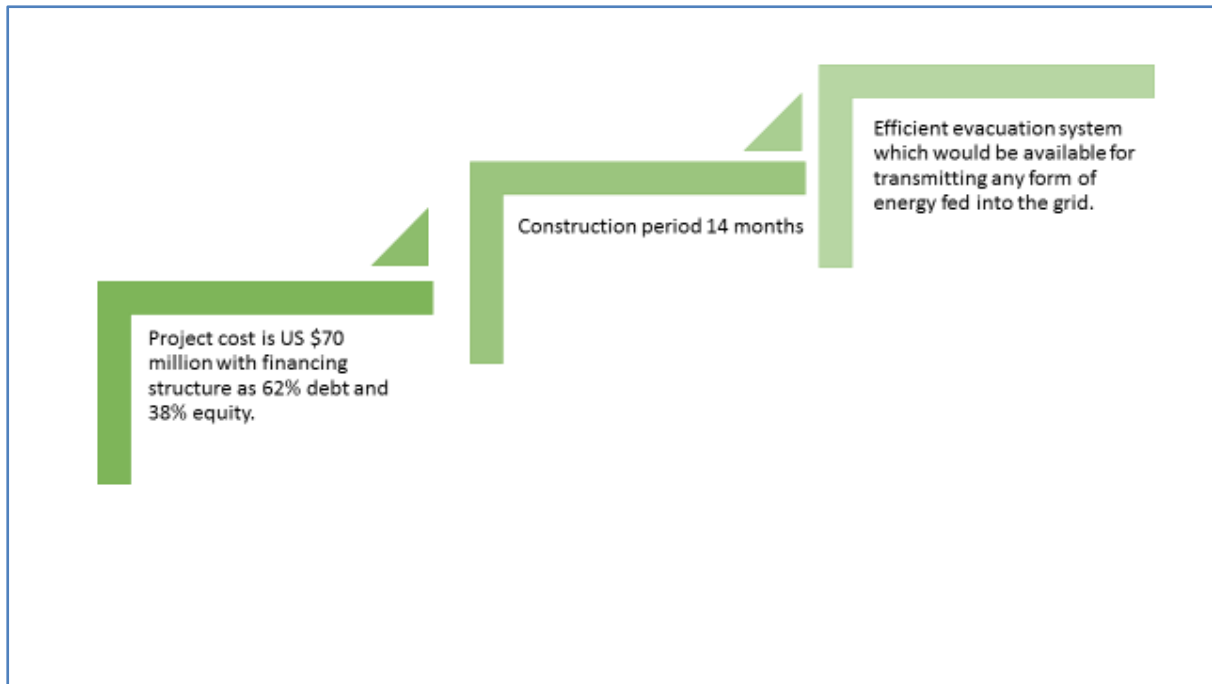
Implementation Strategy

- Infrastructure projects, often have high social but an unacceptable low commercial rate of return, characterized by substantial investments, long gestation periods which make it essential that government supports infrastructure project financially to make it viable.
- Grid connectivity for evacuating generated energy is essential. Since initially the transmission system in the PPP is not viable Government of India in consultation with State Government formulated a policy which would subsidize the capital cost of the project to make the project commercially viable.

Project Conception

Monitorable high level service is essential.

The execution of the instant project in a timely manner is critical since it provides the downstream linkages.



OUTCOMES:

- * **Project completed as per schedule**

- **Poverty alleviation:** By provision of regular and adequate supply of electricity, the project has ensured multi-dimensional benefits to the poor such as irrigation, quality of life for a economically deprived section of the society.

Improving access to services

- India is implementing e-governance programme with the objective to ensure public services at the click of the button. The underlying requirement of its successful implementation is provision of 24*7 electricity

Mitigating the effects of climate change and cutting CO2 emissions

- Poor households generally use wood as fuel for cooking and kerosene for lighting their houses. Electricity has helped them in switching over to cleaner energy and in turn, helped in cutting down CO2 emissions.

Replicability, training of employees, women empowerment, engagement of all stakeholders, etc:

- Indirect empowerment of women which has reduced their drudgery of collecting firewood. This model of PPP has been successful and it is replicable across the country.

Case 8

Madagascar

Airport Sector

Public Private Partnerships in the Airport Sector

Case study presented by: Christian Andriantiana Assomany

Name of project: Ivato & Nosy-Be Airports Concession Convention

Name of the speaker and email contact: ASSOMANY Andriantiana Christian/ cgp.mepate@gmail.com

Public Organization, managing the public interest: Ministry attached to the Presidency, in charge of Presidency Project, Territory Planning and Equipment through the PPP Unit which coordinates the project

Private Organization, developing the project: ADP Management – Bouygues Batiment International – Colas Madagascar – Meridiam Africa

Capital Providers, financing the project: IFC and other landers – Private equities from ADP Management – Bouygues Batiment International – Colas Madagascar – Meridiam Africa

Why is this project a Case Study for PPPs: Project contract signed from 9 July, 2015 during the legal framework setting up as the PPP law ratified in Dec, 2015. The structuration of this contract financing through major landers represents a challenge for the government and the private partners.

Why is this project a Case Study for PPPs based on SDGs: Improving national economic attractive through the new international airports. The success of the project financing gives positive impact on FDI projects structuration. Madagascar island interconnectivity must go through airplane transportation. Before, the number of passengers were limited through an international airport built in 1960, (1,1 million). Today it will be improved with a new international terminal in addition with the current national airport dedicated for domestic flights (5 millions expectations). The extension project has been studied in 2007 and realized in 2015 at Hery Rajaonarimampianina presidency 4th Republic. Madagascar connectivity improved in Indian Ocean and the region. The project managed and coordinated by the Ministry in charge of Presidency Project, territory planning and Equipment through the PPP Unit.

Context:

- 1) **Describe the communities and the environment before the project started :** The city of Ivato International airport was a small village far from 15 kms to the center of Antananarivo. This non-urban population lives far from the public services provided in the capital, in a high class residential zone.
- 2) **The context that lead you to wish to improve quality of life for those communities :** From 15 years, Ivato city attraction increases within major infrastructures investments in textile, hotels and business centers investments, and local industries coming around the primary road axle. The new international airport will boost the capital city extension from the north and for the abroad FDI business networking.
- 3) **How did you relate “quality of life improvement” with “infra gap” :** Through the primary direct road connection to the city (15 kms), where most of the biggest investments in infrastructure are built, the new airport will be a new major infra that generates a new dynamic city extension.
- 4) **A short description of the infra solution imagined :** The new international airport is built close to the current old airport, dedicated to domestic flights. Two new primary express roads built from east and west sides will connect the Ivato city to the capital center, added to the current main direct road. Through these 2 new ring loop roads, the urban structure extension will sustain this zone development.
- 5) **What made you think about a PPP solution :** The State Initial Finance Law covers 100% of the state running expenses, and as the management and operation of international airport activities is not the State direct prerogative, then the PPP solution is the right unique solution strategy.

Strategy:

- 1) **How was the concept designed, which parties approved the project start up :** Concept designed by the state owned company in charge of national airports management/operation, approved by government ministries in charge of transportation and presidency project, territory planning and infrastructures.
- 2) **What were the main topics studied on the feasibility phase and what made you decide for PPP solution :** Project integration in the global national development strategy combining air transport opening, urban capital city extension and FDI attraction of Madagascar through PPP project financing.
- 3) **“Closure” involves all contracts needed to start the development phase, mention the most important contracts signed / to be signed, namely the financial closure and steps to first disbursement :** Concession investment program zone secured. National air transportation policy confirmed by new partnerships contracts with UAE, Asia and Europe. Air Madagascar Co. structuring contract confirmed.
- 4) **Development concerns the phase of transforming or creating a new asset; describe how you managed to combine respect for quality, delay and budget :** Through a rigorous timeline negotiated schedule for all state entities, private consortium concerned by the contract, and IFC project financing process.
- 5) **Exploitation is about providing a public service and improving the quality of life; describe how do you manage operation & maintenance, revenue stream and guaranty quality of public service :** Choosing the most competitive and experimented entities in charge of financing, construction, and operation through a competitive bid tender process.

Project KPI's:

- 1) **Where is located, the area covered by the project, how was the access to the “land”, and what were the main permits obtained / needed to develop the project :** Current airport zone, 15 kms from Antananarivo, connected by a 2 new ring roads loop built, 400 Ha land expropriation proceed, through a USD250 millions investment program zone secured.
- 2) **Describe the main lines of the budget:** Capex of EUR150 millions, Opex and Revenue Stream planned on 28 years will be defined after project financing closure planned in 2016, December, based on a value-for-money profit sharing model between the state and the private partner from a 17% rate of return.
- 3) **Describe the finance structure:** 30% equity shared by 4 partners consortium, 70% mezzanine through 65% by IFC, debt and guarantees used to back airport revenue fees, construction taxes engaged around EUR 54 millions.
- 4) **Describe the main milestones of the project namely :** pre development 2007 to 2013 Master plan design through technical public and private expertise's studies, development PPP bid tender and contract advisory hiring 2013 to 2014 and exploitation from 2017 to 2045 for the BOT.
- 5) **How did you communicate the project with the community to obtain their support :** Newspaper, TV interviews, participating rounds facing population for infra development fees and land expropriation.

Impact on People & Planet:

- 1) **Does the community perceive the quality of life improved?** Difficulties to convince communities for a such important investment program only financed for airport infrastructures, roads before realization.
- 2) **How do you measure it today ? Is it about arriving faster to destination? Having utilities available on a 24 hours basis? Spending less on utilities? Having better facilities and services on education, health, justice, security? Did it have an impact on other public services not directly linked to the project developed?** Impact city extension structuring the increase of urban population. New facilities created around the new terminal airport. 24 months of construction planned to deliver the new airport. Utilities creation added-value from the project impact. Better education, health, security and justice sustain for the local authorities concerned.
- 3) **How do you measure the eco foot print of the project?** This project will sustain some micro eco foot print program for 2 000 average populated villages communities around the airport city.
- 4) **Please describe impact, using the 5 Ps : People** through infra structuring the population life. **Planet** through a durable development infrastructures program investment. **Prosperity** through the social and economy for the future of the island boosted through the international airport project. Developing **partnerships** through public and private FDI and local economy. **Peace** generated through a responsible durable policy of infra and city development.
- 5) **Please use the attached board to describe the impact considering the 17 SDGs**

SDGs Sustainable Development Goals	no impact	some impact	high impact	describe impact
1 end poverty		X		local economy boosted
2 end hunger		X		revenue per capita increase
3 well being - healthy lives		X		infra created utilities improvement
4 quality education			X	city extension education impact closer communities
5 gender equality	X			
6 water and sanitation for all			X	improved through the city and the project development
7 affordable and sustainable energy	X			
8 economic growth and decent jobs for all			X	city extension for new investments : textile, utilities, etc
9 resilient infrastructure, sustainable industrialization, foster innovation			X	airport + ring roads city structuration for a better development
10 reduce inequalities within and among countries			X	island interconnectivity improvement
11 cities inclusive, safe, resilient and sustainable			X	reinforcement of Antananarivo structuration and inclusivity
12 responsible consumption by all	X			
13 combat climat change	X			
14 protect the ocean	X			
15 take care of the earth	X			
16 peaceful and inclusive societies, justice for all, accountable institutions at al levels		X		major financing infra for inclusivity/peaceful
17 mechanisms and partnerships to reach the goals			X	IFC mezzanine/ private equity financing process

Escalating the (Case Study) project:

In this slide please describe how to escalate the experience:

- 1) **Can we replicate the project within the country?** YES, interconnectivity in the large territory improved by investing in new airport extension and road rings to develop regional cities
- 2) **Can we replicate the project globally?** YES, major airport and primary road rings to extend cities
- 3) **Can we extrapolate the experience to other sectors?** YES, port & agri-business, highway & techno-pole, renewable energy & new cities, agriculture program & new connection infrastructures as roads
- 4) **Describe the main key success factors for escalation?** Financing project structuration, FDI securization, global socio-economic impact from a major infra program of investment
- 5) **Describe what should be avoided in future projects?** Lack of global vision for a socio-economic impact, lack of largest communication on positive future impact

People First is also about “those” that made it happen:

- 1) **The main public organizations:** PPP Unit of the Ministry attached to the Presidency in charge of Presidency Project, Territory Planning and Equipment / Ministry of Transportation and Meteorology and responsible concerned entities ADEMA (Airport of Madagascar), ACM (Madagascar Civil Aviation).
- 2) **The main private organizations:** ADP Management, Bouygues Batiment International, Colas Madagascar, Meridiam Africa, IFC.
- 3) **The management teams:** PPP Unit, technical teams in charge of airport construction & management contracts, and multi-competencies teams in project financing, contract writing, and engineering
- 4) **Your organization growth strategy:** PPP Unit setting through expertise hiring and government agent training to sustain national PPP policy and development.
- 5) **How the SDGs are part of this strategy:** Through a combined airport and roads infra to prepare the new capital extension by the north from airport city, and through a territory planning structuration.

Case 9

Mongolia

Education Sector

Kindergartens Retrofitting

Case study presented by: Bekhbat Sodnom

Schools and kindergartens retrofitting

Name of the speaker and email contact: Bekhbat Sodnom, bekhbat@gmail.com

Public Organization, managing the public interest: Ulaanbaatar city

Private Organization, developing the project: Ulaanbaatar Development corporation JSC (UBDC)

Capital Providers, financing the project: Private sector/ City budget

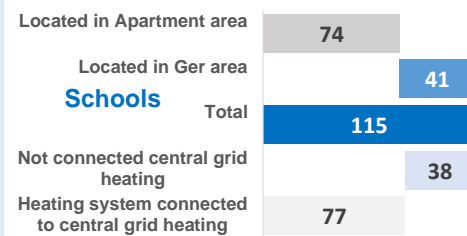
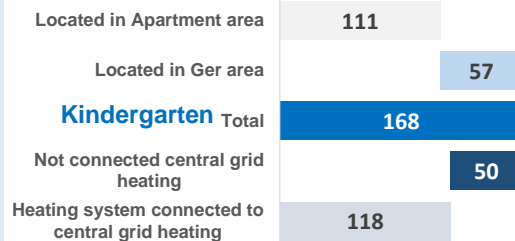
Why is this project a Case Study for PPPs based on SDGs:

Context	→	from “AS IS” to “TO BE” or “how it was” to “how it is”
Strategy	→	how did we get there
Project KPI’s improved	→	how was the asset and public service created or improved
Impact	→	why “People & Planet” improved
Escalate	→	replicating within and among countries and sectors
“We the people”	→	the main drivers of the project

PROJECT RATIONALE

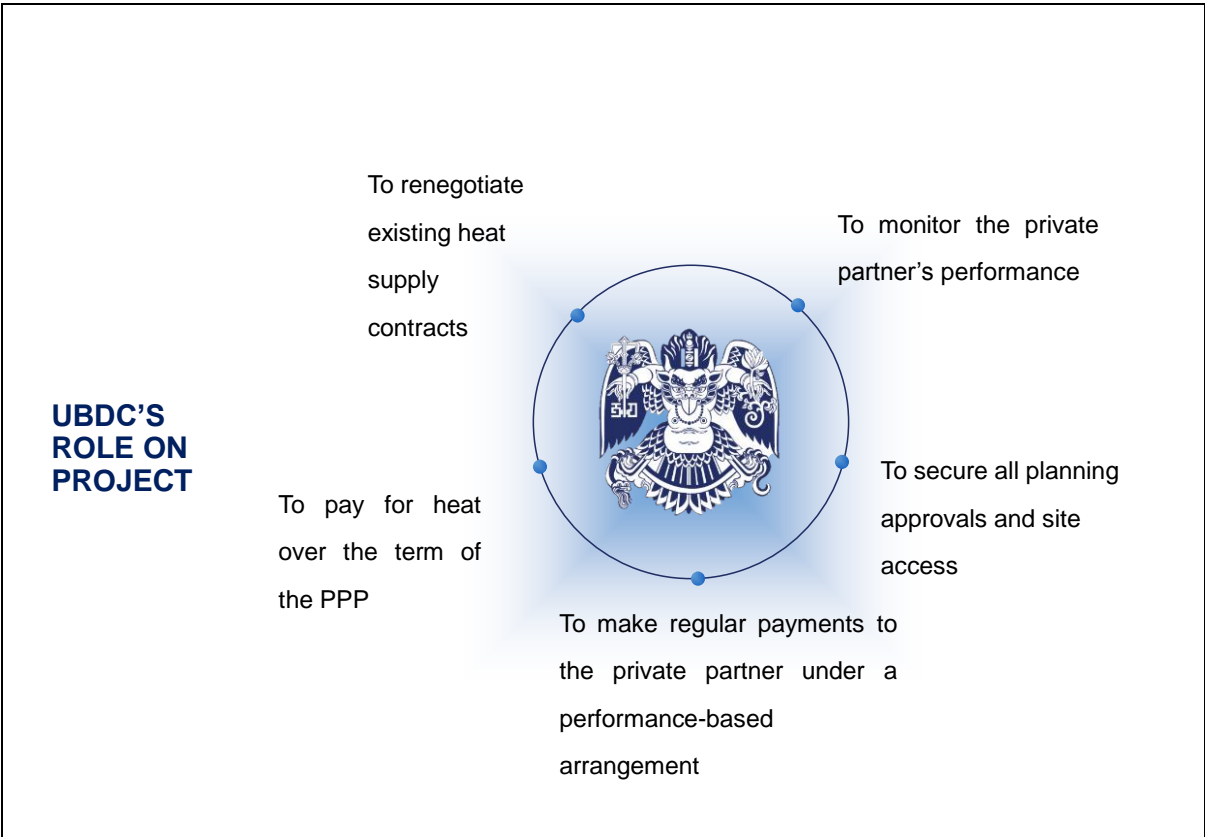
IN ULAANBAATAR THERE ARE 203 SCHOOLS, 115 OF THEM BEING STATE-OWNED AND 431 KINDERGARTENS, 181 OF THEM BEING STATE-OWNED.

MOST OF THE EXISTING 115 SCHOOL AND 168 KINDERGARTEN BUILDINGS FACE EXCESSIVE HEAT LOSS,



IN WINTER THE TEMPERATURE REACHES **AS LOW AS 10-17°C.**

THIS CLEARLY DEMONSTRATES THE URGENT NEED FOR COMPREHENSIVE THERMO-TECHNICAL RENOVATION.



ADB & UBDC PILOT

PROJECT LOCATION

PROJECT LOCATION



The public schools and kindergartens in UB are spending 75-77.6% of the budget for utilities on heating energy supply

1. SHD kindergarten no 91 (connected central heating)
2. SHD school no 107 (stand-alone heat-only boilers)
3. BZD kindergarten no 82 (connected central heating)
4. BZD school no 85 and its dormitory (stand-alone heat-only boilers)
5. HUD kindergarten no 121 (stand-alone heat-only boilers)

10-17°C.

UBDC selected 5 school as pilot project for retrofitting

PROBLEMS



CLASSROOM, SHD KINDERGARTEN NO 91



CLASSROOM, SHD KINDERGARTEN NO 91

Schools and kindergartens are cold and damp and mouldy

- Temperatures are often 18-19 C or colder in winter, the standard is 22-25 C
- Some activities are ruled out by the cold
- Children can't concentrate, and get sick and miss school
- Teachers get sick and can't work

Too much heat is used, adding to air pollution and high heating bills

**PILOT
PROJECT
EXPECTED
RESULT**



EXPECTED ENERGY SAVING 40%

**EXPECTED PPP
ARRANGEMENT
TYPE**

BUILD

Private partner renovate kindergarten .

- eg wall and roof insulation, improved door windows, improvements to heating supply equipment

TRANSFER

Renovated kindergarten building will be transferred to UB

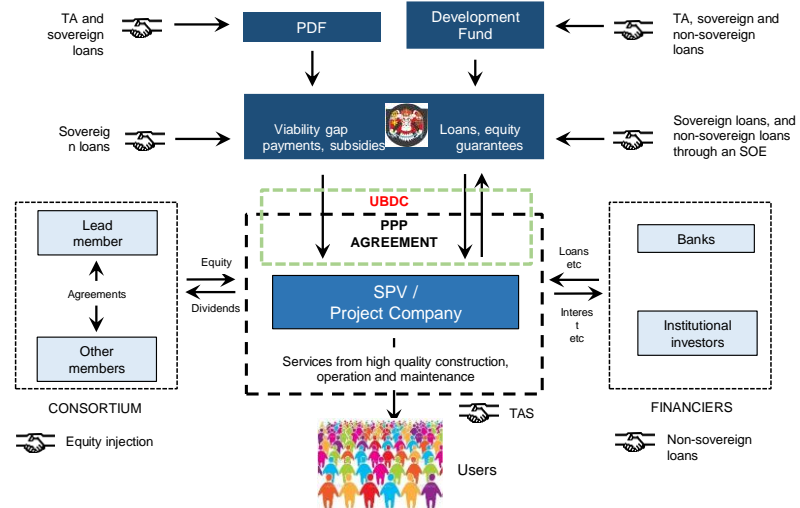
- Ownership right maintained by UB city

LEASE

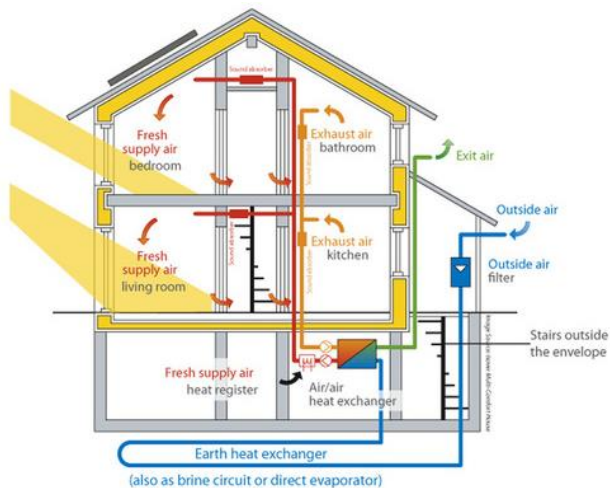
5-10 year leasing payment a performance-based indicator

- Monitor private partner performance

PROJECT VIEW



CONSIDERING TECHNOLOGY

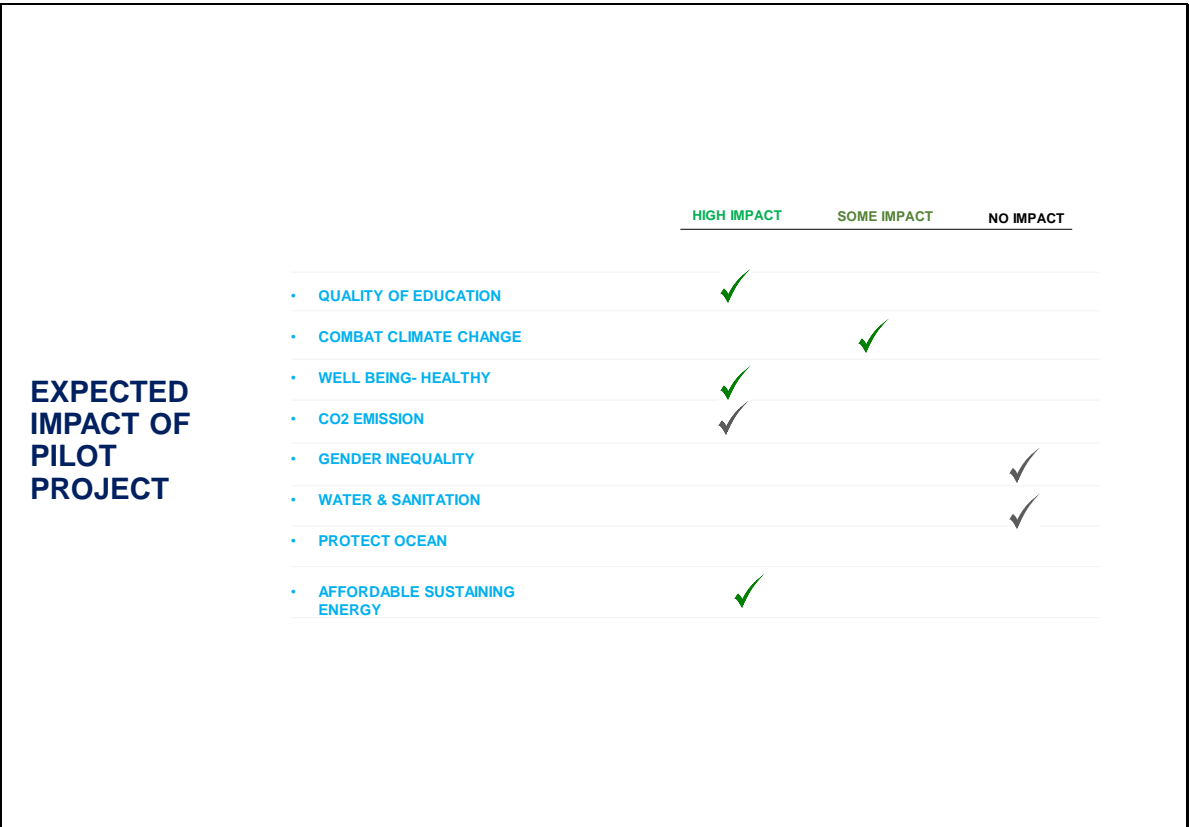
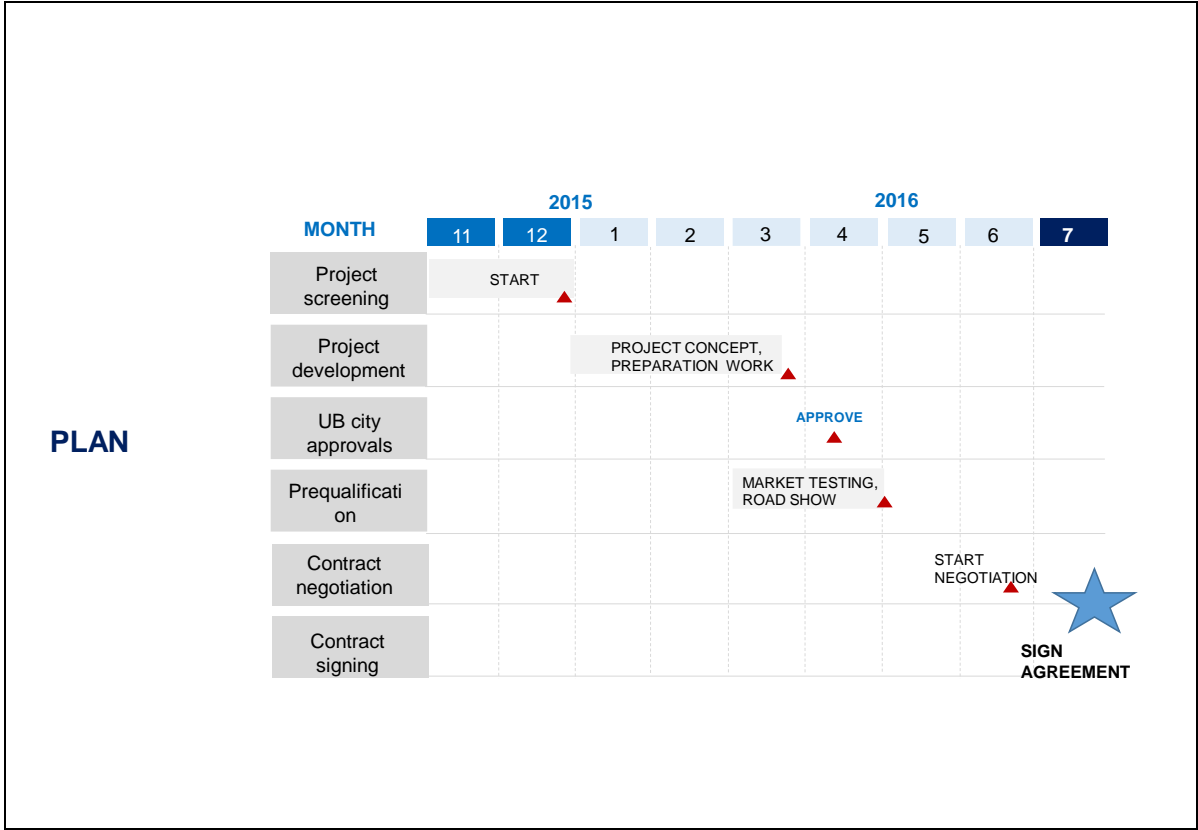


Passive house standard is a sensible alternative for school, kindergarden buildings.

- Up to 90% energy saving
- Fresh air
- Healthy
- Affordable price

Passive house standard - energy efficient, comfortable, affordable, ecological

- Energy sources inside the building
- Appropriate window, door
- Insulated exterior wall, roof
- fresh air ventilation system



Case 10

The Philippines

Health Sector

Hemodialysis Project: A model for PPP in Health

Case study presented by: Celso Manangan

Name of Project: National Kidney and Transplant Institute (NKTl) Hemodialysis Center P3 Project, the PHILIPPINES

Name of Speaker: Mr. Celso C. Manangan, Focal Point, International Specialist Centre of Excellence for PPP in Health, Philippines.

Email address: celso.manangan@gmail.com.

Public Sector: National Kidney and Transplant Institute (NKTl), a government-owned and controlled corporate tertiary specialty center attached to the Department of Health. Its mandate is to specialize in the prevention, diagnosis, rehabilitation and treatment of kidney and allied diseases through dialysis and transplantation. It focuses on service, training and research in the field of renal diseases and organ transplantation.

Private Sector: B. Braun Melsungen AG and B. Braun Avitum Philippines, Inc., has been a leading provider of renal care products for more than 40 years. More than that, the Company have over 25 years of experience in running renal care centers all over the world. In more than 350 renal care centers around the world, the Company provide high-quality care for patients suffering from chronic kidney disease.

Why is this project a Case Study for PPPs: The NKTl Hemodialysis Center PPP Project was established to provide an affordable and quality outpatient health care service to indigents that will address the increasing incidences of kidney ailments among the young and other work-related degenerative disorders. The rising demands for hemodialysis treatments proved that substantial investment in expanding NKTl's treatment centers was already necessary to give Filipinos optimum health care. It is important that a private sector service provider will be engaged for NKTl's Hemodialysis Center.

NKTl-B.Braun Hemodialysis Center P3 Project – The Philippines

Context:

The existing Hemodialysis Center of the NKTl had been servicing 40 in-house and out-patients daily. In 2004 alone, the Center recorded 15,827 hemodialysis treatments even as the equipment continued to depreciate year in and year out. While the demand for hemodialysis treatments has been soaring since 2000, the NKTl's 22 machines have not been increasing to accommodate the number of Filipinos needing medical attention, notwithstanding the fact that four of the machines already needed major repairs. The Center did not have back-up machines in case of operational problem. There would be an estimate of more than 1,200 short of treatments in 2005 for its in-house and regular outpatients if the machines would not be increased. In addition, the NKTl would not be able to accommodate other patients who would need treatments in the future.

To meet growing demand for hemodialysis treatments, the NKTl needs to contract a private sector company with a specialization in dialysis products and renal care services for the Hemodialysis Center to lease hemodialysis machines and provide supplies and services for the leased machines.

The Project involved the Lease Service Provider: (1) to provide equipment and related facilities in the operation of the Hemodialysis Center (hemodialysis machines, hemodialysis chairs, reprocessing machines, and water treatment systems and other furniture and fixtures); (2) to provide hemodialysis supplies and solutions; (3) to service and maintain the facility; and (4) to transfer technology.

The current private sector, **B. Braun Avitum Philippines, Inc.** is implementing the third contract. Two (2) contracts were previously implemented by another company from year 2003-2015.

NKTl-B.Braun Hemodialysis Center P3 Project – The Philippines

Strategy

NKTI needed Php 54 million (approximately US\$ 1.0 million) to meet the increasing demand for hemodialysis treatment. This, however, was difficult to achieve in light of NKTI's annual budget deficit. Faced with the immediate need to invest in additional machines, NKTI resorted to a partnership with the private sector to provide state-of-the-art machines and to modernize and improve their capabilities to deliver good health services. NKTI entered into a lease contract with the private sector.

The Project was implemented through a lease contract, which authorized the winning service provider to equip and modernize the Hemodialysis Center. The Service Provider financed, supplied and maintained all the necessary equipment/facilities and appurtenances and provide the required medical supplies and solutions for the operation of the machines.

The NKTI leased and operated the Facilities from the PRIVATE SECTOR COMPANY over the Lease Period. The NKTI paid the PRIVATE SECTOR COMPANY a Lease Fee Per Treatment.

NKTI-B.Braun Hemodialysis Center P3 Project – The Philippines

NKTI

- Provide sufficient space in the Hemodialysis Center;
- Provide the appropriate NKTI staff, such as physicians and other specialists;
- Provide, at no cost to the PRIVATE SECTOR COMPANY, utilities limited to electricity, water, air conditioning, waste disposal and janitorial services;
- Monitor and regulate the performance of the Facilities;
- Ensure compliance with government applicable rules and regulations in the operation and maintenance of the Hemodialysis Center including but not limited to Department of Health Rules and Regulations, Building Code, BFAD, etc.;
- Pay the PRIVATE SECTOR COMPANY the approved lease rate.

NKTI-B.Braun Hemodialysis Center P3 Project – The Philippines

Private sector

- Provide nurses, technicians and other paramedical staff during the Centre's operating hours;
- All the necessary hemodialysis machines, chairs, reprocessing machines, standard water treatment systems and other equipment;
- Sufficient and adequate supplies and solutions for the operation of the hemodialysis machines and the treatment of patients;
- Provide the minimum required office equipment, tools, furniture and fixtures;
- Any additions, revisions or improvements to plumbing, electro-mechanical and existing civil works that it deems necessary in order to provide all the required services;
- The required service and maintenance program including the supply of necessary spare parts and materials for all machines/furniture/fixtures including the standard water treatment system for hemodialysis and technology transfer;
- Technology upgrade.

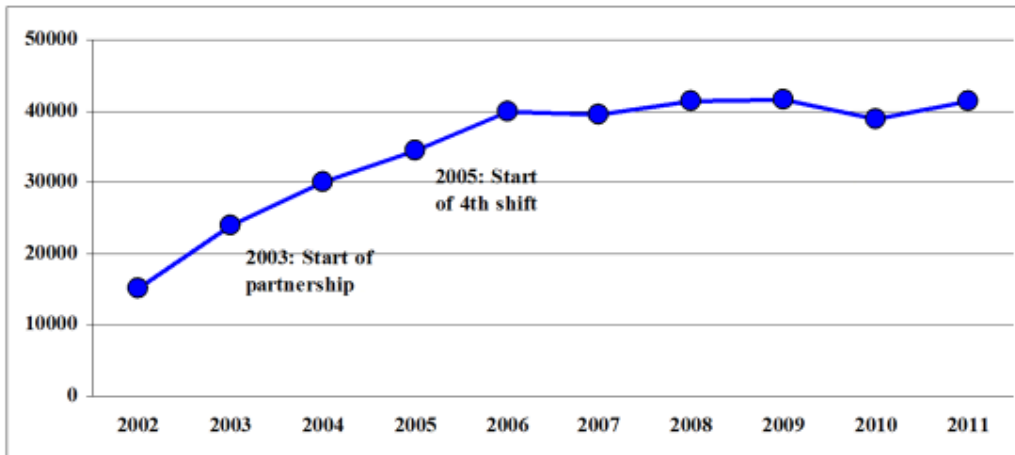
NKTI-B.Braun Hemodialysis Center P3 Project – The Philippines

Project KPI's:

- Highest level of hemodialysis service in the Philippines;
- Increased number of treatments in both in-house and out-patients (24/7);
- New machines and equipment;
- Round-the-clock maintenance crew to ensure quality of the machines;
- Availability of medical doctors and other specialized medical professional/staffing which guarantees the patients ultimate daily care daily;
- No price increase for the treatment.

NKTI-B.Braun Hemodialysis Center P3 Project – The Philippines

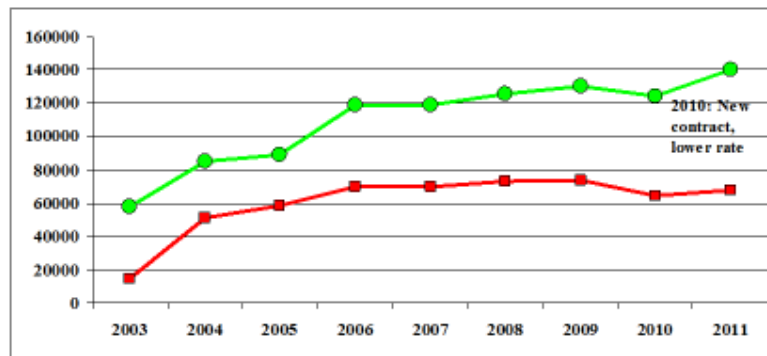
DIALYSIS SESSIONS



[Note: Based on available NKTl Records]

NKTl-B.Braun Hemodialysis Center P3 Project – The Philippines

Hemodialysis: Revenue against Lease Charges



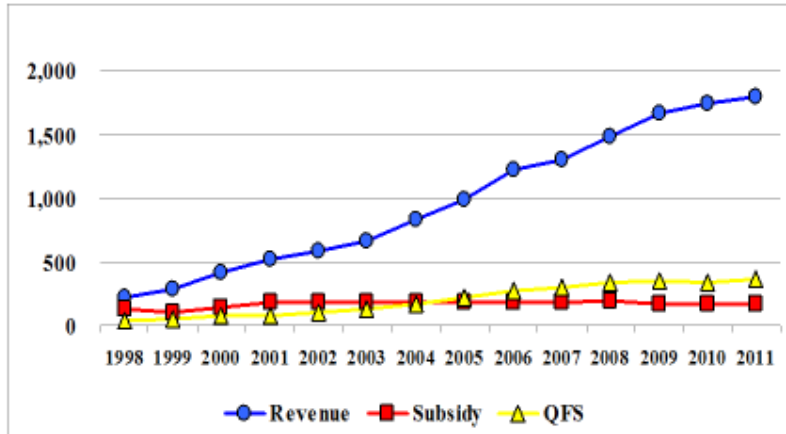
2003: P1700

2010: P1638

[Note: Based on available NKTl Records]
Exchange rate: 1 US\$ = Php 50.00

NKTl-B.Braun Hemodialysis Center P3 Project – The Philippines

Revenue, Subsidy & QFS 1997 - 2011



[Note: Based on available NKT records]

NKT1-B.Braun Hemodialysis Center P3 Project – The Philippines

Project milestones:

- Review/adoption of bidding/tender documents.
- Publication of the invitation to pre-qualify and bid.
- The qualification of prospective bidders.
- Conduct of pre-bid conference and issuance of supplemental notices.
- Conduct of bidding.
- Evaluation of bids.
- Recommendation for contract award.

NKT1-B.Braun Hemodialysis Center P3 Project – The Philippines

Impact on People & Planet:

Foreseen as the Asia's model in renal care, the NKTi Hemodialysis Center is now providing the highest level of hemodialysis service in the Philippines. The Center has started servicing patients in 2003. The new Center alone can serve more than 90 outpatients a day, as compared to the old Center that has been serving 40 in-house and outpatients a day. Aside from this improved service, NKTi has now been relieved of its responsibility of maintaining the new set of equipment. B. Braun provides a round-the-clock maintenance crew to ensure the quality of the machines and specialized staffing which guarantees the patients of ultimate care daily. There is no price increase for the treatment.

The HD Center delivers 41,701 dialysis sessions per year from the 15,185 sessions per year when the project started in 2003 at Php 1638/treatment (approx. US\$33) originally at Php 1700 per session. The need for dialysis treatments continue to rise annually.

The Project contributed to the increased number of treatment for dialysis; increased revenue contribution from the HD Center; increased revenue from the other ancillary services units: laboratory, radiology, nuclear medicine, physical rehab, etc. This financial impact provided more opportunities for the hospital to support free service to indigent patients.

The Project has been in successful operation for 14 years with contract re-bid every five (5) years. It has been replicated to different public hospitals at the national and local government units in the Philippines.

NKTi-B.Braun Hemodialysis Center P3 Project – The Philippines

SDGs	Sustainable Development Goals	no impact	some impact	high impact	describe impact
1	end poverty		★		
2	end hunger		★		
3	well being - healthy lives			★	
4	quality education	★			
5	gender equality	★			
6	water and sanitation for all		★		
7	affordable and sustainable energy	★			
8	economic growth & decent jobs for all		★		
9	resilient infrastructure, sustainable industrialization, foster innovation			★	
10	reduce inequalities within and among countries		★		
11	cities inclusive, safe, resilient and sustainable		★		
12	responsible consumption by all		★		
13	combat climate change		★		
14	protect the ocean	★			
15	take care of the earth	★			
16	peaceful and inclusive societies, justice for all, accountable institutions at all levels		★		
17	mechanisms and partnerships to reach the goals			★	

NKTi-B.Braun Hemodialysis Center P3 Project – The Philippines

Escalating the (Case Study) project:

- 1) Project can be replicated within the country in order to address the increasing incidence of kidney disease brought about by change in lifestyle, climate change and medical complications;
- 2) In addition, the Project can be replicated globally due to the reasons mentioned above. We especially mention the Government of Bangladesh for replicating the same project in their country.
- 3) Yes, we can extrapolate the experience to the other sectors due to the simple contractual arrangement adopted and the need to create innovative arrangements to make Projects work successfully;
- 4) Main key success factors for escalation are the following: Leadership by a “PPP Champion”, simple contractual arrangement, shorter period of engagement (maximum 5-years) considering life span of the machines/equipment, transparent procurement process, robust revenue stream, and interest from the private sector.
- 5) Proper understanding and ownership of a proposed Project should be embraced for future projects.

NKTI-B.Braun Hemodialysis Center P3 Project – The Philippines

People First is also about “those” that made it happen.

The main drivers of the Project are the following:

- 1) The main public organizations - National Kidney and Transplant Institute, Office of the Government Corporate Council, Commission on Audit - Philippines
- 2) The main private organizations - B. Braun Melsungen AG and B. Braun Avitum Philippines, Inc. (led by **Mr. Eduardo L. Rodriguez, Managing Director**)
- 3) The management teams - NKTI Management Committee & Bid and Awards Committee (led by **Dr. Jose Dante P. Dator, former Executive Director** and currently by **Dr. Rose Marie R. Liqueste, Executive Director**), Technical Working Group (led by **Dr. Romina A. Danguilan**), and the Joint Administrative & Technical Committee (JACT) in monitoring the implementation of the Project.

NKTI-B.Braun Hemodialysis Center P3 Project – The Philippines

Case 11
The Philippines
Regional Development
Public Private Partnerships in the Regional Development

Case study presented by: Yu Namba

Name of project: Butuan City Regional Development Program (Butuan City, Mindanao, Philippines)

Name of the speaker and email contact: Sam Tabuchi kstabuchi@toyo.jp / Yu Namba yu-namba@toyo.jp

Public Organization, managing the public interest: Butuan City and its affiliated agencies

Private Organization, developing the project: Chodai Co. Ltd., Equi-Parco Construction Company

Capital Providers, financing the project: JBIC, Development Bank of the Philippines, JICA, METI of Japan, etc.

Why is this project a Case Study for PPPs: In Butuan City, there are several unsolicited PPP projects—mini hydro power plants, bulk water supply, fish farming and agricultural improvement) have been implemented.

Why is this project a Case Study for PPPs based on SDGs: Butuan city's local leaders were desperate to find new ways to develop its waned economy. It had flourished with logging and prawn fish farming until illegal logging and water pollution became rampant.

TOYO UNIVERSITY contributed to the Regional Development Support Program to assess possibilities of economic development through PPPs. TOYO proposed the city and local industries to utilize Butuan's rich natural resources and improve conditions of tenant farmers. Butuan City reacted with the first-in-the-nation Local PPP Code to gain investors' confidence. TOYO provided several capacity building seminars for local officials and industries on structuring and implementing PPP projects. Average rice yield has doubled, high-valued fishery products are produced and exported, and hydro power plants and bulk water supply station are soon to be fully operational. Some \$250 million investments have been committed.

Context:

Butuan City's economy has been gradually slowing down since 1980's. Logging, agriculture and prawn fish farming were major industries in the City, but they were banned/abandoned. Only agriculture was left, but distorted owner-tenant relationship and low productivity kept some 30% of its residents below the poverty line. Butuan was rich in natural resources, but could not fully utilize them to improve the economy.

Improving rice production and finding remedy against owner-tenant relationship were both critical, while stable and sufficient power generation were also essential to attracting new industries. Providing sufficient electricity will attract food-processing industries which will add value to Butuan's agricultural products and improve farmers' lives. Even though Butuan is still a growing region, going towards fossil-fuel was not an option. Biomass (wood pellets) and waste-to-energy possibilities were investigated. On the other hand, Butuan was abundant in relatively clean water. Utilizing the water resource could be another possibility.

The City did not have enough resources to provide solutions to such challenges. Therefore, there was a need for partnerships. Private sectors (both local and international) were active to seek such possibilities, to make them sustainable business, and to strengthen the local industry/economy. Public authority (city) was active in setting up systems and enacted the Local PPP Code. It also supported private activities by clearing regulations and obtaining approvals.

Strategy:

Ashiga Hydro Power project, a mini hydro power generation plant started with an unsolicited proposal from the private sector. With its PPP code in place and PPP committee established, the City was ready to receive a proposal and proceed. Button City accepted and approved the project. City also played a role in obtaining feed in tariff (FIT) approval from the national government.

Water resource management and impact on the environment was carefully studied. Relationship with indigenous people and how to improve their quality of life was discussed in the feasibility study phase.

The project was structured as a PPP because it was much faster and efficient to use the existing public corporations and infrastructure to transmit, to provide power to each household, and to collect tariffs. Separation of power generation from transmission, provision and tariff collection mitigated risks of the private sector.

One of the largest Japanese bridge and civil consulting/engineering firm, Chodai, provided expertise in project finance, design verification, construction management, and overall project management to ensure quality and to avoid cost and time overrun.

No-longer-used second-hand machinery for rice planting and combines were imported from Japan to improve productivity. The City supported to clear the custom. Toyo University and three local universities partnered. Under this partnership, one university let a plot of land for test farming by a local company who purchased the imported machinery. A Japanese Agricultural Cooperative dispatched a specialist to teach planting and water level control.

Project KPI's:

Securing water usage right and TIF agreement were crucial to stabilize the project implementation ability and revenue structure. In addition, one of main concerns was how to negotiate with indigenous people, who have been living along the rivers. International investors were powerless in such negotiations. Equi-Parco, a local construction company negotiated with tribes and agreed to provide certain amount of electricity generated to the tribes as compensation. Public hearings were held before and during construction.

The project used Japanese Government grants for a feasibility study, and used a two-step loan from JBIC through Philippine Development Bank. The project is currently self-sufficient, thus the private sector's must put their effort to sustain the power generation in order to recover the Capex and Opex. Further, the project's environmental impact should be carefully monitored by both public and private entities.



	Capacity	Value	O&M starts	SPC	Equity investors
Asiga Hydro power	8MW	\$30M	Spring 2016	Asiga Green Energy	Hydro Resources Management and Consultancy, Equi-Parco Construction, Twinpeak Hydro Resources, Chodai
Taguibo Hydro Power	5MW	\$17M	FY 2016	To be established	
Wawa Hydro Power	23MW	\$91M	FY 2018	Wawa Green Energy	

Impact on People & Planet

Power generation:

Asiga Hydro Power created over 300 employment during its construction. It will also create 25 permanent positions once the operation starts.

The conditions of power shortage and instability are expected to improve once Asiga and other hydro power plants become operational. Asiga plant is recognized as a part of Philippine government's efforts to improve renewable energy portfolio.

Indigenous people living in hilly area will gain access to electricity.

Rice production:

Group of farmers attended training by a Japanese expert for planting, controlling water level, and using machinery. Average crop double in the test farm and in the farm of trained farmers. A rice mill is under construction, which will provide seed rice and milling service to contracted farmers with below average interest/cost.

For the farmers, less labor was needed and revenue improved. Once the mill is in operation and provides seed rice, it will improve the condition of tenant farmers who are suffering from high-interest from owners/mill owners.

For the environment, proper use of fertilizers will improve the soil condition and avoid water pollution.

Eel and prawn fish farming also revitalized abandoned fish farming ponds and created high-valued products.

SDGs	Sustainable Development Goals	no impact	some impact	high impact	describe impact
1	end poverty				
2	end hunger				
3	well being - healthy lives		✓		
4	quality education	✓			
5	gender equality	✓			
6	water and sanitation for all	✓			
7	affordable and sustainable energy	✓			
8	economic growth & decent jobs for all			✓	
9	resilient infrastructure, sustainable industrialization, foster innovation			✓	
10	reduce inequalities within and among countries		✓		
11	cities inclusive, safe, resilient and sustainable			✓	
12	responsible consumption by all	✓			
13	combat climate change			✓	
14	protect the ocean	✓			
15	take care of the earth			✓	
16	peaceful and inclusive societies, justice for all, accountable institutions at all levels			✓	
17	mechanisms and partnerships to reach the goals			✓	

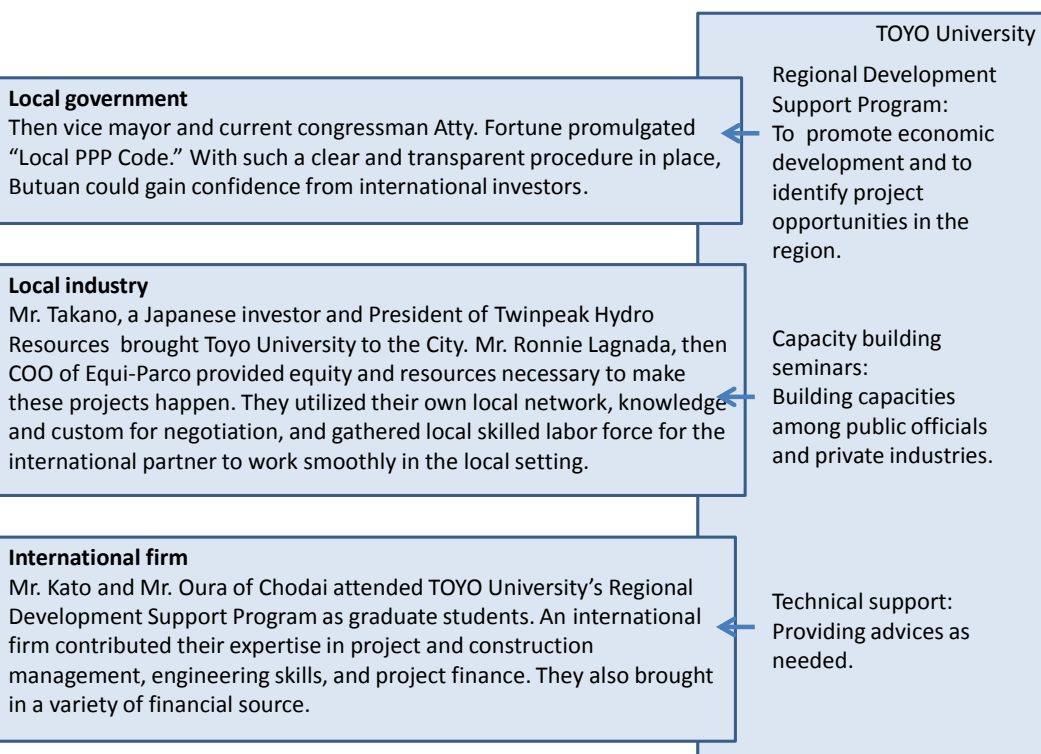
Scaling up the (Case Study) project

Project concepts and enabling mechanisms— PPP code, PPP Committee, procedures and so on— can be replicated in other cities/ regions in the Philippines, and potentially in other countries as well. However, it is difficult to “replicate/duplicate” local leaders’ will to implement projects. It is essential to have supportive leaders from both the public and private side.



The process of learning-by-doing was essential to project replication. The Local authority and PPP Committee acquired experience in processing unsolicited proposals and supporting PPP projects by giving/obtaining approvals. The City gained confidence from investors by putting the local PPP Code in place.

Local industry also gained experience to structure a complicated PPP project. An international firm also gained experience in doing business in the locale.



Case 12

Portugal

Urban Development

**Replicating Practical Experience on Urban PPP models from
Developed Economies to Developing Countries and LDC**

Case study presented by: Pedro Neves

Project: Replicating Practical Experience on Urban PPP models from Developed Economies to Developing Countries and LDCs

Project Proponent: Pedro Neves _ Founder of Global Solutions

Public Organization: Government of Portugal , Municipality of Lisbon , Municipality of Loures; Government of Pernambuco, Municipality of Recife, Municipality of Olinda; Government of Algeria, Wilaya d'Algers; Government of DRC, Government of Katanga

Private Organization: several developers in Portugal, Brazil, Algeria and DRC

Capital Providers: Public capital , DFI's, Private Capital, Infra Funds, Real Estate Funds

Why is this project a Case Study for PPPs: Based on the Urban Development program created by the Portuguese Government with the Municipalities of Lisbon and Loures, Parque das Nações (Nations Park) "The invented City" was developed in Lisbon for the Expo 98, by Parque Expo. For the development of the Invented City, several explicit PPPs were developed.

The initial project is the urban requalification of 330 ha of industrial water front into a new city involving new infrastructure assets combining simultaneously mobility, utilities, education, health, cultural and sports facilities along with real estate products including housing, retail and services.

The project had and has a significant economic, social and environmental impact in Lisbon. The project has been replicated in different ways in Portugal. The development of these Urban PPPs lead and inspired a number of international projects across the world, namely in Brazil, Algeria and DRC



Pedro Neves
Global Solutions _ Founder & Managing Partner
UNECE _ Business Advisory Board Member
UNECE _ SDGs Task Force Leader
TUPPP _ Contributing Specialist
Urban Renewal MBA _ Founder & Professor

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

1

1. Urban PPPs, why are they different

2. The Invented City . A case study replicated across the world

3. Replicating Urban PPPs Practical Experience from Developed Economies to Developing Economies and LDCs

3.1 Brazil . Recife Olinda Waterfront

3.2 Algiers . Plan Directeur d'Amenagement et d'Urbanisme d'Algiers

3.3 DRC . Mokambo Corridor . Cross Border Urban Development



Notes about replicating Urban PPPs to Developing Countries and Least Developed Countries

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

2

Urban PPPs, why are they different

1st economic PPPs

self sustainable

2nd social PPPs

require guaranties on revenue stream from public sector

3rd urban PPPs

number of stake holders grows exponentially

Alan Trager . Johns Hopkins University . Director & Senior Research Professor on PPPs



Land acquisition / Land fabrication

Time horizon / asset life cycle → “eternity”

Central and Local government

Multi sector : Mobility / Utilities / Social Infra / Real Estate

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

3



You can design and create, and build the most wonderful place in the world.

But it takes **PEOPLE** to make dream reality.

Walt Disney



Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

Nations Park > Parque Expo > The Invented City

- 1992 > 2001
- The urban project leading to The Invented City
- PPP solutions for Urban Development
- Explicit PPPs
- Governance model
- The Business model
- The economic output
- A Virtuous Cycle for Urban Development



Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October



• Residential:	1,240,000 sqm
• Offices:	610,000 sqm
• Retail:	170,000 sqm
• Others:	300,000 sqm
• Total:	2,320,000 sqm

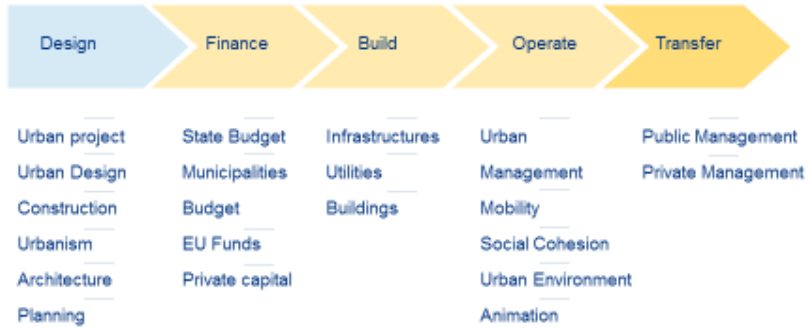
PARQUE DAS NAÇÕES – BALANCED CITY

From PARQUEXPO presentation

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

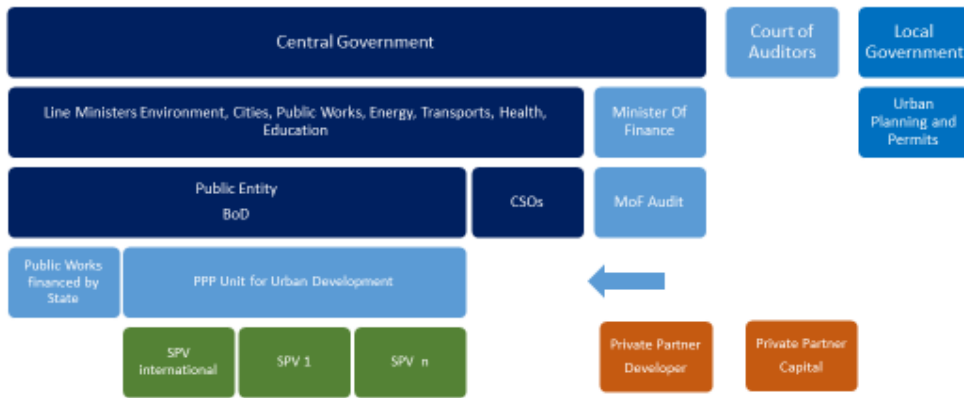


→ **Urban and Regional Sustainable Development Transformation Process Phases**



From PARQUEXPO presentation

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

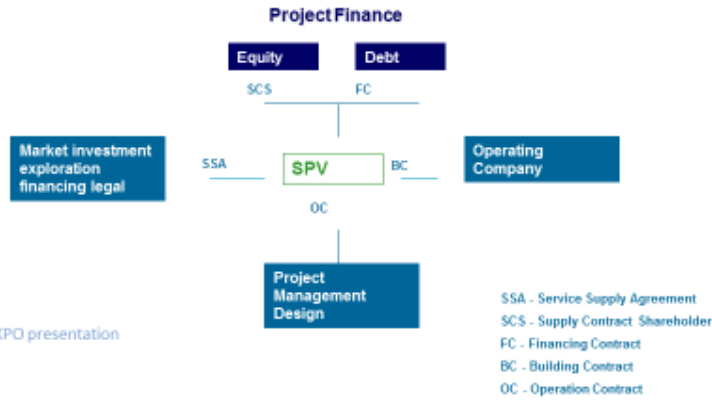


Governance Model interface with Public Shareholders and Stakeholders

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Project Finance Investment Concept



From PARQUEXPO presentation

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

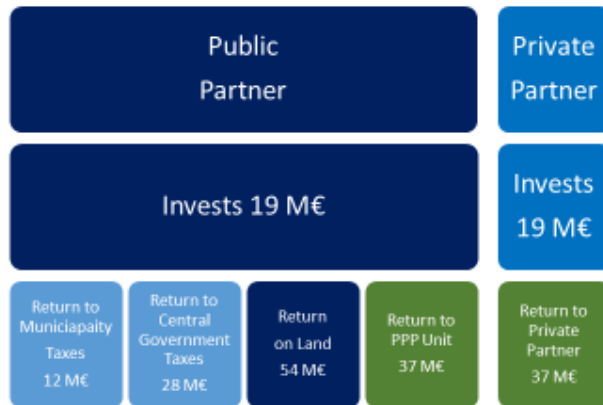
Developing Cities

Without Recourse to the Estate Funds

Associating Public Strategy with Private Dynamics

Executive Promoter

Tool for Transforming the Country



Investment process and return analysis on Explicit Model

Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October



The Invented City . Nations Park . Lisbon . Portugal.

Public Organizations Managing Public Interest : Expo98 (1st) Parque Expo (2nd)

Private Organizations: Bouygues , Somague, Comitur, MotaEngil, Inland ...

Private Capital Providers: Infra Funds, RE Funds, Commercial Banks

This Case Study represents a group of PPPs especially created to launch the Invented City project
All projects were developed and are today on their exploitation phase, public and private interests were fully achieved

All SPVs assumed a Sustainable Development approach based on People, Planet & Profit orientation.

Context	→ An environmental challenge transformed into a landmark prime destination
Strategy	→ Use a sustainable vision with a straight forward project how did we get there
Project KPI's	→ 330 ha of land transformed into 3.300.000 sqm of ABL above ground
People & Planet	→ 18.000 new permanent jobs, all utilities developed on eco friendly approach
Scale up & replicate	→ used as landmark example throughout the world
Management Team	→ Strategic Vision decided by Public sector, Dynamics mainly from Private sector



Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

Context:

- Lisbon is a city with thousands of years, the city grew towards the ocean and its east region was less developed, with a serious environmental problems with important social challenges
- East Lisbon although with a unique geographic location was the place for refineries with contaminated soil, slaughter house, obsolete industry, waste depot, unorganized container storage, also used for other illicit activities
- Urban planning and architecture was developed in small scale and quality was fairly poor
- Construction companies existed but were not used to maximum cost and maximum delay type of contracts
- Real Estate also was incipient and focused on the housing market
- Mobility was not integrated roads, rail, metro, airport didn't communicate
- Utilities were managed on a sector per sector approach
- Social infrastructure was managed according to each ministry agenda
- Portugal in the 1990's was growing with public investment coming from the state and from the EU
- Expo 98 and the Invented City "Nations Park" was a project that changed the City but more important changed how Citizens relate to the City, created sustainable jobs, developed a new way to see and manage the environment, created solid and profitable businesses, but above all raised their self-esteem to an unprecedented level



Replicating Urban PPPs from Developed Economies to Developing Countries and LDCs _ Palais des Nations Geneva 20-21 October

Strategy:

- The basic idea was to transform a problem into a landmark where all residents would like to live & work
- Government created a State Owned vehicle Parque Expo to acquire the land, clear the site, develop an Urban Master Plan that would create the Expo 98 but that would be the basis for private sector investment and this way to payback all public investment
- The project consisted of developing the new Invented City, but also all mobility projects necessary for it
- Over 2 billion USD were invested mainly through PPPs to develop a new bridge and a new metro line, with access to the airport
- The concept of Urban triple bottom line, today's SDGs, approach guided the feasibility studies
- The main topics were self sustainability where Real Estate provided the balance
- Careful models were developed for Public Only investment, PPP investment and Private only investment
- Focus was given to attain a unique Public Urban Service, from design phase to build and operation
- To ensure the Invented City DNA an animation team and program followed the whole process



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Project KPI's:

- The over project represented over 10 billion USD, 330 hectares of land, 2.300.000 sqm of buildable area above ground and 2.000.000 of buildable area below ground
- Land acquisition, soil decontamination, master planning and investments were public only
- Utilities, Mobility, Social Infra and a large content of Real Estate was developed through PPPs Broad sense
- Housing Real Estate was private
- The public financing was done mainly through sovereign guarantees with DFIs and commercial banks
- The PPPs were developed through PFIs with SPVs providing guarantees but with no recourse to the Government
- The concept was launched in 1992, land was cleared and decontaminated until 1995, in 1998 the Expo 98 was a world class event, in 2005 more than 95% of the plots were sold
- Today Nations Park is probably the most important CBD in Lisbon and the price per sqm keeps up with the best locations in the City
- Communication and Territorial Marketing were key to the project, since 1993 the Invented City was presented in all major Urban events, and in Portugal every Portuguese adopted the City as its own brand



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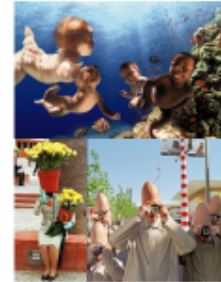


Impact on People & Planet:

- Nations Park is and was developed with a People 1st attitude since the first moment, promoting Portugal, the Portuguese self-esteem by providing a new environment that would combine:

People Agenda main achievements

- Definition of people first priority in the city since design stage with a water, people, building, car approach
- Creating 18.000 new and sustainable jobs
- Bringing back to Lisbon 25.000 new inhabitants
- Creating Cultural, Science, Sports, Leisure, destination to over 1.000.000 non residents per year
- Creating probably the best Schools & Health Facilities in the City
- Creating probably the best Shopping area in the city and one of the best in Europe
- Creating a unique animation program that kept the Expo spirit alive during all development phase



Planet Agenda main achievements

- Over 20.000 trees were planted in 110 hectares of green areas
- A state of the art water, heating & cooling and solid waste systems were implemented through concessions contract
- This represented new waste to energy solutions, new water and waste water treatment plants
- Traffic management to reduce cruising and with optimized underground parking solutions



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Sustainable Development Goals	No Impact	Some Impact	High Impact	Comments to Impact
1. END POVERTY		●		Project based on promoting social inclusion
2. END HUNGER	●			
3. WELL BEING – HEALTHY LIVES			●	New health facilities using top technology and innovative management systems
4. QUALITY EDUCATION			●	New facilities at all levels from kindergarten to university
5. GENDER EQUALITY		●		New environment brought new opportunities to promote gender equality
6. WATER AND SANITATION FOR ALL			●	New water cycle system fully integrated
7. AFFORDABLE AND SUSTAINABLE ENERGY			●	New energy system based on renewables and new operating network
8. ECONOMIC GROWTH & DECENT JOBS FOR ALL			●	18.000 new sustainable jobs
9. RESILIENT INFRASTRUCTURE, INDUSTRIALIZATION, INNOVATION			●	New city fully integrated from mobility, utilities, social infra and real estate
10. REDUCE INEQUALITIES WITHIN AND AMONG COUNTRIES			●	The project lead to significant upgrade of Portuguese standards of living
11. CITIES INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE			●	This was the target of the whole project
12. RESPONSIBLE CONSUMPTION BY ALL			●	All materials used and reused followed strict environmental procedures
13. COMBAT CLIMATE CHANGE			●	The city concept was based on reducing CO2 emissions at various angles
14. PROTECT THE OCEAN			●	Ocean as the future was the Theme of the Expo 98
15. TAKE CARE OF THE EARTH			●	The site was contaminated and the environment was at the heart of the project
16. PEACEFUL AND INCLUSIVE SOCIETIES, JUSTICE FOR ALL		●		A new city of justice was build to improve judiciary services
17. MECHANISMS AND PARTNERSHIPS TO REACH THE GOALS			●	Partnerships w/ EU, Central Government, Local Government, private sector & CSOs

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16

Scalability & Replicability of the (Case Study) project:

- Nations Park culture for urban renewal that has been used since 2000 in all major cities in Portugal
- The model has been visited to all World Major Urban Developers and Managers
- The Nations Park model has been used throughout Europe, Africa, Asia and the Americas
- The Explicit PPPs model has been growing across all sectors as it allows Public Strategy and Private Dynamics to be aligned from very early stage.



Success Factors :

- Alignment between PPPs with the Portuguese Court of Auditors and Ministry of Finance to follow and audit the financial framework and observation of public interest
- Very solid Management Teams from both Public and Private Sectors
- Very solid Governance models based on full transparency
- Great autonomy to be creative and implement new business solution based on public interest
- Unquestionable vision based on Sustainable Development People, Planet and Profit approach.
- In future projects Private Sector participation should come at earlier stage, to organize and prepare Investable Projects

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People First is also about the Management Team that made it happen:

- The public organizations were the:
 - Central Administration: GoPortugal at the highest level involving Prime Minister, MoF, MoE, MoPW
 - Local Administration: Mayor of Lisbon, Urban and Permit Planning Municipal authorities
 - Other public Local Stakeholders: Parliament, Court of Auditors, MoF Audit Unit
- The Private Organizations were Private Development Companies, Investment Funds, Commercial Banks
- All partnerships were developed through Direct Competitive Negotiation supervised by Expo BoD and GoP
- Parque Expo created a special unit to develop these explicit projects lead by : Pedro Neves (CEO) who created a dedicated team for this. Became via PPPs the second largest buyer of land in Nations Park.
- The Management Team had 3 main arms:
 - CEO . Strategy, Communication, Portfolio Management, Relation with Shareholders and Private Partners
 - CFO . Financial Management and insurance of financial feasibility and respect of targets and KPIs
 - COO . Operation Management, Capex and Opex management to guarantee Revenue Stream
- Growth strategy lead to develop equivalent projects in Portugal first and then across the world
- People, Planet and Profit aligned with Public Strategy and Private Dynamics were the basis of all partnerships developed



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1. Urban PPPs, why are they different

2. The Invented City . A case study replicated across the world

3. → Replicating Urban PPPs Practical Experience from Developed Economies to Developing Economies and LDCs

3.1 Brazil . Recife Olinda Waterfront

3.2 Algiers . Plan Directeur d'Amenagement et d'Urbanisme d'Algiers

3.3 DRC . Mokambo Corridor . Cross Border Urban Development



Notes about replicating Urban PPPs to Developing Countries and Least Developed Countries

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19

Placement

Conception and implementation of a masterplan which would be part of the Strategic Plan of the metropolitan area of Recife and that would help to revitalise the historic centres of Recife and Olinda, helping to create a new centrality. The idea of this project, through the constitution of a corporate vehicle, was to develop a sustainable urban and environmental redevelopment operation based on an economic and financial urban model. This operation, which includes land belonging to the Federal Government, is based on the generation of capital gains applicable in public investments of a social, cultural and environmental nature

Objectives

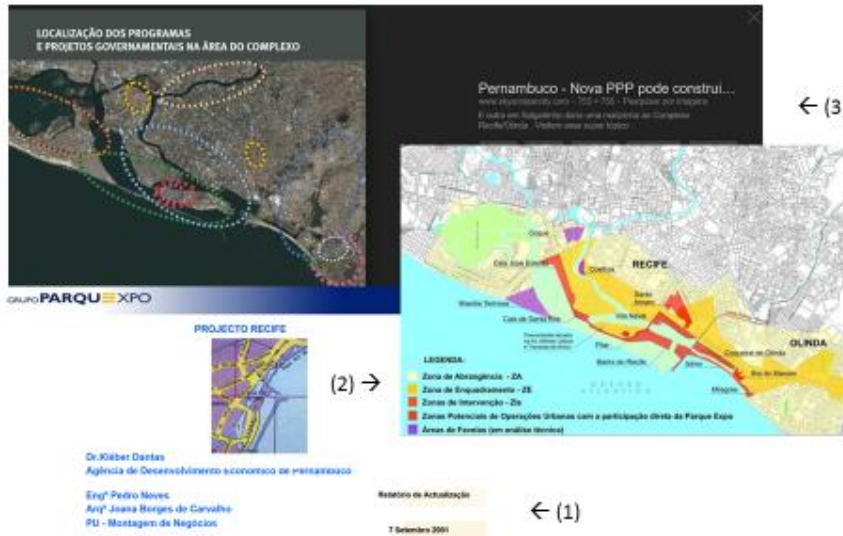
Raising the zone's level of world competitiveness, as a metropolitan hub with a port front;
Respect for the port's history – its physical references and experience – providing historical continuity for its aesthetic, cultural and social values as well;
To promote a spatial/ functional/ experiential connection of Recife-Olinda, reinstating its original relationship;
Assumption of urban planning innovation as a key reference;
Constitution of a network of quality and sustainable urban spaces from the point of view of use and maintenance;
Recovery of public space as a space for socialising and bringing people together, reviving the feeling of a relationship between citizens and their city;
Reduction of consumption needs and structural dependence on energy, water and materials.

Source : www.berjrecife100.com



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20



- 1) Project Starts in 2001
- 2) Parque Expo develops the Olinda Recife Waterfront
- 3) New Urban PPPs take place in Pernambuco

Placement: Revision of the Plan d'Aménagement et d'Urbanisme de la Wilaya d'Alger (PDAU d'Alger), defining the dynamics which will structure the model of spatial planning and long-term development of the territory (over a period of 20 years), based on key areas such as demography and geography; the economy; mobility and transports; housing and equipment; natural spaces and agriculture; networks and infrastructures; public space and patrimony; and natural and technological risks.

Within the political and regulatory framework of Algeria, the new PDAU d'Alger aims to be structured as a new strategic instrument of spatial planning and territorial development which covers all of the 57 communes that make up the Wilaya d'Alger.

The project to revise the PDAU d'Alger, besides being a technical operation on a macro scale, also applies to the conception of architecture and infrastructure projects for urban interventions in the public space of the centre of Algiers, which, through the application of a charter of public spaces and a new 'way of conceiving' the territory, embody an innovative and participative model of planning and experiencing the territory



Source : www.nbrsuexpo.com

Objectives: Definition of a new instrument of territorial management for Wilaya d'Alger (the new PDAU d'Alger), through the creation and implementation of a global regulatory framework, articulated and integrated on a sectorial level, which 'guides' public spatial planning policies;
 Establishment of a 'Metropolis Contract' which, based on a 20 year strategic vision for the territory (2009/2029) aims to integrate, articulate and institutionally commit the public agents responsible for the spatial planning and territorial management of the Wilaya d'Alger; Redevelopment of the public space of the centre of Algiers through the execution of a set of 18 priority urban intervention projects so as to enhance the effect of "positive contamination" for the rest of the territory of Wilaya d'Alger;
 Promotion of a participative process of presentation, reflection and discussion of the new PDAU d'Alger in terms of the 13 "Circonscriptions Administratives" and of the 57 Communes of the Wilaya d'Alger, aimed at involving its citizens in the taking of technical decisions concerning the construction of their own future.

PARQUEXPO

Mme Sarah
Ministre de la poste et des TIC
Boulevard Ann De Naxos
Alger

Libonne, 29 octobre, 2003

Cc: Dr. Mustapha Vaira – Président de Parque Expo

Chère Madame,

(3) →

Suite à notre conversation téléphonique du 18 août et ainsi comme support l'habitat de votre projet de développement d'un site dédié, je vous adresse diverse documentation en annexe.

Annexe 1 – Présentation de Parque Expo
Annexe 2 – Copie lettre de recommandation
Annexe 3 – Documentation

Pour ailleurs (je compte sur un à venir) sont prévues d'annexes

Pour la préparation de ce projet par documentation relative à :

1. Carte program.
2. Synthèse des données disponibles
3. Phase d'analyse


Je suis certain que ce dossier de projet, et de prospective, disposition pour évaluer et

Vous pouvez agréer mes salutations

Mustapha Vaira
Président de Parque Expo
Directeur Coordonneur pour le développement

INTERNATIONAL PROJECTS ALGERIA
Revision of the Plan d'Aménagement et d'Urbanisme de la Wilaya d'Alger (PDAU) of Algeria, defining the dynamics which will structure the model of spatial planning and long term development of the ...

← (1) (2)




- 1) Project starts in 2003
- 2) Parque Expo is responsible for the PDAU d'Alger
- 3) 2016 PDAU is approved

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WBG (IDA, FC, MGA) Country assistance strategy, context on DRC Mobility

Project Identification: 19 Morocco | Road - Border Post - 11




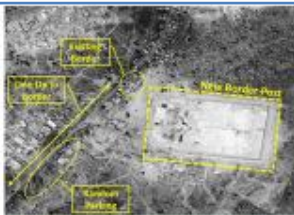

Infra Gap results from Country Assistance Strategy provided by World Bank Group

These Gap require integrated solutions adapted to local context

Integrated Solutions represent opportunities to promote Urban Sustainable Development Projects

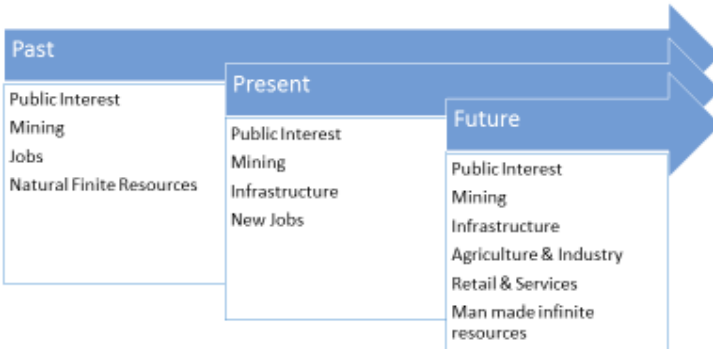
In DRC Katanga mobility concession contracts have been signed to provide these solutions



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To be beneficial for a country's development, non-renewable resource extraction should be leveraged to build long-term assets, such as infrastructure, that will support sustainable and inclusive growth.



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25

Notes about replicating Urban PPPs to Developing Countries and Least Developed Countries

1. Country DNA and City DNA have to come from Local Decision makers
2. Process Central of Gravity needs to be as close to site as possible
3. Training of Local Team is vital, involving local academy is a must
4. Involving as much as local content as possible: financial institutions, contractors, consultants
5. Ensuring experts available at all levels locally, and internationally particularly with IFIs
6. Defining a clear Governance plan based on transparency with clear read lines towards corruption



26

Case 13

Madagascar

Port of Ehoala : New Deep Sea Multipurpose Port and Economic Trade Zone in Madagascar

Case study presented by: Marc Frilet

I. Description of the project

Port of Ehoala represents 260 million dollar investment project both in port infrastructure and public services.

II. Development of the project: how the project exemplifies progress and innovation in PPP development in this emerging market?

1. Critical socio-economic infrastructure for the State of Madagascar and more particularly for alleviating poverty in the South East of the Country;
2. The State had no capacity to finance or to guarantee repayment of loans for such investment (more or less 260 million dollars)
3. Project not financially viable by private sector investor under traditional project finance models
4. However, a world class mining deposit of ilmenite has been discovered and evaluated by Rio Tinto / QMM with a potential of export of more or less 1 million tons per year for 40 to 60 years
5. Several options were possible for shipping the ilmenite including a buoy and a mineral wharf.
6. However, both State and Rio Tinto / QMM agreed to maximize the benefit of the project for the local population and the economic development of Madagascar. Two series of in depth studies were commissioned during the prefeasibility and feasibility phases prior to any investment:
 - ✓ An EISE based on international best practices and taking into account local ecosystem and socioeconomic situation.
 - ✓ An analysis of all the potential socio economic externalities of the project for the region, for Madagascar and for international shipping, fishing and cruising sector.
7. Upon completion of the studies, the ingredients for a modern concession-PPP project emerged through an integrated and inclusive approach of the micro and macroeconomic potential taking into account socio environmental factors
8. Additional studies were commissioned to maximize the benefits of the project with the local institutions. The conclusions were to consider inter alia the development of a growth pole for a sustainable economic development of the region.
9. The State entered into negotiation with a subsidiary of Rio Tinto / QMM (Port d'Ehoala SA) in order to conclude a public service concession according to which Port of Ehoala SA would finance, build and operate the deep sea multipurpose port and the related economic zones for the duration of the Rio Tinto QMM mining titles.
10. Since the new port economic and financial model appeared at the same time essential for the economic development of Madagascar and not viable only through the port estimated revenues, an element of public subsidy for the investment in the port has been considered. The State obtained a soft loan from the World Bank which has been transformed in subsidy directly paid to the builder of the port.
11. The concession agreement concluded between the State and Port of Ehoala SA includes various performance criteria and clauses on tariff setting and tariff adaptation in order to maximize the activity of the port together with adjacent economic development zone of 400 hectares comprising an EPZ status.
12. The agreement also provides that the State may impose new investments if justified in the interest of the public service and it include various clauses for implementing the State decision based on structured exchanges and on its impact on the concession economic model which is annexed to the agreement and which includes the principle of economic equilibrium (this mechanic avoids hazardous renegotiations since it is regulated as from the origins through an agreement between the parties in the contract itself).

13. The Concession agreement also contain various clauses essential for long term investment such as stabilization clauses, detailed tax and custom regimes as well as a structured dispute avoidance mechanism through a contractual partnering system followed by structured conciliation and international arbitration.

III. Project outcome: the development of economic externalities

The port is in operation for three years and its perspective for the economic development for Madagascar as well as for the economic model already launched remains most promising in the particular context for the future.

✓ Employment creation

The World Bank has created at Madagascar an Economic Development Board.

According to the estimation of this Board, 57.000 jobs have been created within 3 years in the sub region thanks to the existence of the new port. This outcome is already a success while the roads and other infrastructures planned for maximizing the externalities have not been realized yet and while the export processing zone (EPZ) has not been internationally promoted yet.

✓ Continuous reference to the content of the convention

Comments of Philippe Murcia, Director of the Concessionaire Company:

“Thanks to a high quality programming and to a very large exchanges and understanding of the fundamentals of the public-private partnership between the State, the national companies and the concessionaire (private company); and lastly thanks to the support of the World Bank, the project has been synthesized in a very balanced partnership agreement which is critical in several respect for smooth day to day operation.

It regulates various issues too often forgotten or considered as secondary at the stage of negotiation or of completion of the concession agreements questions which are in reality essential for the success of the project”.

Philippe Murcia indicates that he refers at least weekly to the concession agreement when discussing with the authorities or the operators. This permit to easily resolve the majority of the problems faced.

Case 14

Ivory Coast, Liberia, Serra Leone and Guinea

WAPP Interconnection Line – CLSG

Case study presented by: Marc Frilet

I. Project's presentation:

Within the WAPP (West African Power Pool), the governments of Ivory Coast, Liberia, Sierra Leone and Guinea have decided to cooperate in order to develop a regional high voltage transmission line called "Interconnection Line" in compliance with the ECOWAS Energy Protocol¹.

The objective of this project is to build an interconnection line between Ivory Coast, Liberia, Sierra Leone and Guinea through several cities². This line will include 2500 towers (1264 km of high voltage transmission line) and 12 sub-stations.

II. Project feasibility's development:

Several technical and economic feasibility's studies have shown that the Interconnection Line would be able to decrease (up to 50%) the cost of energy production within the countries involved in the project.

Moreover, the studies revealed that the project includes many significant social and economic externalities.

They have also shown that due to the poor and fragile economic state of the countries' national utilities, it was not realistic to resort to procurement before launching a long and in-depth analysis on the conditions of implementation and operation of the line permitting to have the most efficient economic conditions.

Taking into account 1) the costs savings that the line will permit on the production costs, and 2) the tariff that the operator will bill to users for the energy transport, the investment on the line would be profitable if it is operated during a basis of approximately 30 years.

However, on the basis of regulatory due diligences, their practices and the developed risks matrix, it appears that such a project could not take the form of a classical concession scheme signed with a private investor, unless an institutional and legal framework identical to the four States (knowing that the four States have different social, economic and legal cultures) is put in place. It was intended that the framework could create or improve the overall procedures (SEIA, land rules, expropriation, commitments of the Utilities and the States to favor the project, etc.) in the texts as well as in practice.

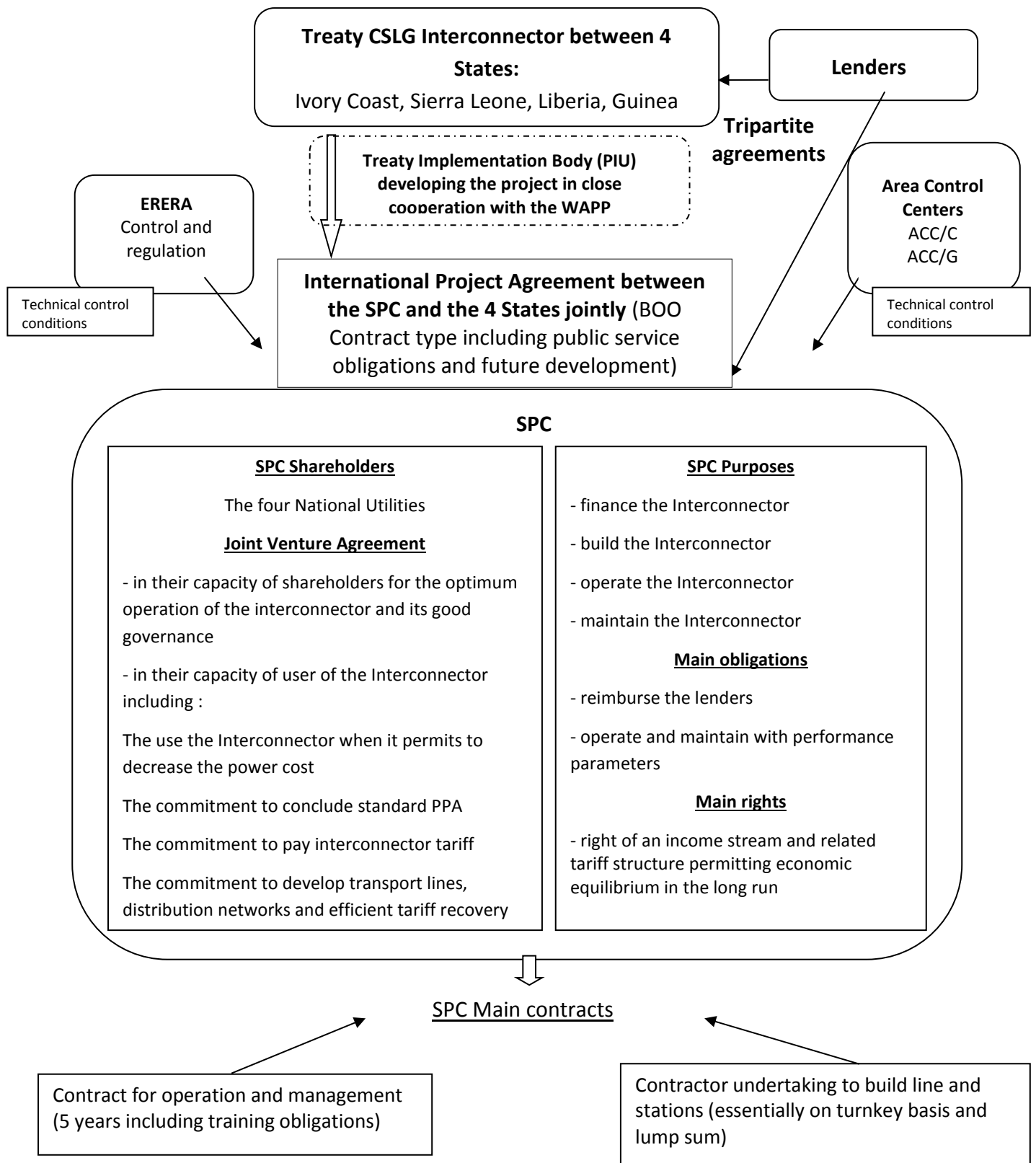
To permit the implementation of this project, the feasibility studies have resulted in the following conditions:

1. The investment and operation should be developed on a long term basis by an ad hoc company following commercial laws and benefiting of a set of guarantees (not only financial guarantees)
2. An agreement between the States which deals with several identified issues

¹ The objective of the WAPP is to establish a regional electricity market in West Africa through the judicious development and realization of key priority infrastructure that would permit the accessibility to economic energy resources, to all member states of the ECOWAS and help meet the energy needs of the ECOWAS citizen by providing least cost reliable and sustainable electricity supply for economic development.

² Man (Cote d'Ivoire) – Yekepa (Liberia) – Nzerekore (Guinee) – Buchanan (Liberia) – Monrovia (Liberia) – Mano (Liberia) – Kenema (Sierra Leone) – Bikongor (Sierra Leone) – Bumbuna (Sierra Leone) – Yiben (Sierra Leone) – Kamakwie (Sierra Leone) – Linsan (Guinee).

The institutional and legal framework of the project is the following:



The overall scheme takes into account the lessons learnt in regional power projects in Africa (in particular: CEB and SOGEM projects).

The major difference is to limit the role of the ad hoc company to the energy transportation (it does not deal with the activities of purchase and resale).

III. Steps of the Project's implementation:

1. A Treaty has been negotiated and signed between the four States (December 2011 – March 2012).

This Treaty creates, inter alia, a special purpose company ("Transco CLSG") following commercial laws whose former stakeholders are the four national Utilities.

The Treaty establishes the main principles of an International Project Agreement to be agreed by the four States and the SPC.

2. The Articles of incorporation and the Shareholders agreement of Transco CLSG have been executed in March and June 2012.

3. The International Project Agreement (which contains various set of clauses similar to a public service concession) includes clauses permitting to the company to restore its financial viability and economic equilibrium if substantially affected and not in default. The IPA has been initialed July 5th, 2012.

Taking into account the particulars of the project which is similar to an institutional PPP, the term of the agreement is of 99 years.

4. The project is financed by a consortium of development banks: African Development Bank, World Bank, European Investment Bank and Kreditanstalt für Wiederaufbau (KfW).

5. The interconnector is now under construction.