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Training Workshop for Developing successful Public-Private Partnerships (PPPs) for increased transport connectivity in Botswana

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Case studies: PPP Transaction Management

Objective:

For participants to gain an insight in developing the scope of PPP contracts, the design of technical requirements , consideration of Risks matters, estimating Risk Adjusted Costs and main outputs and Key Points on Project Scope, Technical Requirements and Cost.

Developing the Scope of PPP Contracts

- The basic scope is provided in the Identification Phase
- Remember: certain obligations or services may be given to other parties or reserved to the public sector
  - Health/hospitals: clinical services may or may not be included in the contract scope ; soft services may or may not be included; and
  - Transport/rail: operations may or may not be included; the scope may include full infrastructure or only certain elements.

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Developing the Scope of PPP Contracts

- The scope decision/definition
  - Delineates the **boundaries and interfaces between the public and private sectors**;
  - Defines the **general** framework from which to outline the technical and performance requirements; and
  - Provides the **context to decide upon the revenue regime which will form the basis of the financial and risk structure of the PPP**.
  - **Designing of Technical Requirements of PPP Contracts**
  - Technical requirements lie at the heart of the contract design;
  - The project team should develop enough technical detail to allow precise definition of the design of the infrastructure, without being too prescriptive;
  - Costs are assessed based on the technical requirements, providing a key input to the commercial feasibility;

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Designing of Technical Requirements of PPP Contracts

- Detailed Technical Requirements allow bidders to accurately assess the technical risks and price the service; and
- Benchmark projects (when available) are a convenient source of information on requirements and costs.

- The technical requirements:
- Should be consistent with applicable regulatory standards and policy directives (e.g. safety regulations in roads);
- Depend on the project type/sector, [scope defined], contract type, and legal requirements; and
- Are typically composed of a project design, construction and performance requirements.

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Project Design & Construction Requirements of PPP Projects

- The procuring authority can choose from a number of design approaches:
  - functional design;
  - reference design; and
  - full design and construction prescriptions.
- The first two approaches are most common:
  - They are consistent with PPPs focusing on outputs/services, allowing flexibility for innovation and efficiency; and
  - Too much prescription hinders innovation.

Prescription may be appropriate if:

- the project is simple in technical terms or
- the Procuring Authority knows the optimal means and methods of meeting the need.

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Project Design & Construction Requirements of PPP Projects

Requires further work during Structuring Phase.

- A minimum level of detail is always needed to allow for:
  - Identification of the key design requirements that will later be included in the PPP contract as the specifications for construction of the infrastructure, including time requirements; and
  - A reasonably precise estimate of cost data to feed into the Financial Model.

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Performance Requirements and O&M Specification

- The Performance Requirements and O&M Specifications should include:
  - A very accurate description of the scope and minimum characteristics of the services to be delivered by the private sector;
  - Outputs generated by the delivery of the service in terms of effective benefits for users and the wider community;
  - The main responsibilities, related to the service to be delivered, to be retained in the public sector;
  - The preliminary requirements for an effective performance evaluation system that will create adequate and effective incentives during the life of the contract;
  - The minimum requirements for an infrastructure maintenance plan; and
  - Specific requirements about the service hand-over to government at the end of contract.

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Technical Matters and Preparatory Activities

- Technical preparation (and research) should include:
  - Identification of the land expropriation required, including mapping of the areas, identification of owners, and estimation of costs and time needed for the expropriation;
  - Provisional site identification and assessment of its availability should usually be done in identification]; and
  - Field surveys of the project site. (E.g. topographical, geotechnical, [hazardous], etc.)
  - Assessment of potential resettlement issues; and
  - Assessment of linked infrastructure requirements, such as availability of utility services or connecting roads.
- Archaeological and/or anthropological surveys to map the potential archaeological and/or anthropological findings, if appropriate;
- For linear transport infrastructure, the track or the layout should be identified and defined, the location of utilities should be mapped, and relocation needs should be assessed; and
- Environmental assessment.

Case Study 1: Dar es Salaam Bus Rapid Transit System

The case study covers Phase 1 of the Bus Rapid Transit (BRT) system of Dar es Salaam in Tanzania.

Project Background

- City of Dar es Salaam-old transportation infrastructure and services, long delays, high emissions, noise, high accident rates and old vehicles;
- Minibus (Dalala) main mode of transport;
- In 2007 the Tanzanian government approved an integrated Bus Rapid Transit (BRT) network that would be implemented over several phases, the first of which was 2008 to 2016, for which construction was completed in 2015. The BRT commenced operations on May 2016, covering 20.9 km and the total distance for the entire project is 130.3km.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Project Background

Six phased development of the BRT:

Phase 1	Morogoro -Kawawa North- Msimbazi-Kivukoni	20.9km
Phase 2	Kilwa-Kawawa South	19.3km
Phase 3	Uhuru Street-Nyerere-Bibititi-Azikiwe Street	23.6km
Phase 4	Bagamoyo-Sam Nujoma	16.1km
Phase 5	Mandela Road	22.8km
Phase 6	Bagamoyo Road	27.6km

Source: Chengula D & Kombe K (2017) 'Assessment of the Effectiveness of Dar Es Salaam Bus Rapid Transit (DBRT) System in Tanzania.' International Journal of Sciences: Basic and Applied Research.

Case Study 1: Dar es Salaam Bus Rapid Transit System

- **Project Background**

Relationship with government and development stakeholders

- The Ministry of Transport is responsible for setting the strategic goals for the sector as well as overseeing the performance of the institutions under its mandate including the regulatory and operator institutions. The truck and regional roads are under the responsibility of the Tanzania National Roads Agency (TANROADS), a semi-autonomous body, which is responsible for the road infrastructure sub-sector.

- Responsibility for regulating the road transport industry (i.e. licencing and regulating passenger fares) lies with the Surface and Marine Transport Regulatory Authority (SUMATRA) Act 9 of 2001.172

- The Dar Rapid Transit Agency (DART) operates under the Prime Minister's Office, Regional Administration and Local Government through the Ministerial Advisory Board to establish and operate the BRT. DART came fully into force on 16th June 2008, established by government notice 120 of 25 May 2007, under the Executive Agency Act 30 of 1997

Case Study 1: Dar es Salaam Bus Rapid Transit System

- **Project Background**

Relationship with the National Development Plan and other Legislation

- Driving Tanzania's policy framework on sustainable development and poverty reduction is its Development Vision 2025 and the second Five Year Development Plan (FYDP), which replaced the first FYDP and the National Poverty and Reduction Strategy II (Mukuta II). Mukuta II, effective from 2010 to 2015, focused on achieving the country's MDGs and reducing poverty through three broad outcomes: (i) growth and reduction of income poverty; (ii) improved quality of life and social well-being; and (iii) good governance and accountability.
- Three policies that more narrowly focus on transport infrastructure are the National Transport Policy (2003) and the two five-year Transport Sector Investment Programmes (TSIPs) (first phase from 2007/2008–2011/2012 and second phase from 2012/2013–2016/2017).

Case Study 1: Dar es Salaam Bus Rapid Transit System

- **Project Background**

Relationship with the National Development Plan and other Legislation

- The TSIPs outline a 10-year plan for investment in the transport sector in Tanzania. The first TSIP was not fully implemented due to limited financial resources (with 40% coming from donors), and deficiencies in implementation and management capacity.
- TSIP I was criticised for (i) failing to look at transport infrastructure holistically and (ii) adopting separate and uncoordinated approaches for different modes of transport, which the TSIP II seeks to rectify.
- Lastly, the Tanzanian government has an Implementation Strategy of the Transport Sector Policy of 2011 to 2015.

Case Study 1: Dar es Salaam Bus Rapid Transit System

- **Project Background**

Project Term- Funding, Preparation and Implementation

- Phase 1 cost 134 million euros, which was funded by the African Development Bank, the World Bank and the Tanzanian government. The BRT is operated by UDART (Usafiri Dar es Salaam Rapid Transit) under the surveillance of the SUMATRA. Since April 2015 DART signed a contract with UDART, a specially formed company intended to provide interim services of the DBRT system – namely to provide training to future operators and build up local capacity;
- The BRT system is operated as a $40.9 million PPP arrangement with two private bus operators. The operators, fare collectors and fund managers were competitively hired in April 2018. Project implementation is undertaken by the City Council through municipal roles.
- All aspects of project management, including procurement, contract management, financial management, and social and environmental safeguards, will be fully executed or overseen by TANROADS.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Project Term- Funding, Preparation and Implementation

- TANROADS is responsible for road infrastructure and DART responsible for operations: DART will be responsible for:

(i) procurement and management of contracts for capacity strengthening; (ii) transaction advisory services; and

(iii) managing capacity for public transport operations

Role of international/ national DFIs and the applied financial arrangement by stakeholder

The World Bank's transactional advisers have been involved in the project. For the specific improvement of the Ubhongo Intersection and complementary road safety infrastructure of Phase 1, the World Bank valued the project at $99.9 million including $2.4 million contingencies.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Applied Machinery and Equipment

- Unlike more traditional bus systems, the BRT system uses dedicated bus lanes separated from other vehicle traffic and station platforms, with on-board fare collection systems to reduce slowdowns and to promote traffic flow;
- A BRT system costs less to implement compared to metro or light rail, but still provides the same capacity and speed, making it an ideal mode of public transportation for developing countries;
- Currently Phase 1 of the BRT corridor is serviced by 140 golden dragon busses providing express services from 5am to 11pm daily and consists of 20.9 km of trunk road, 57.9 km of feeder roads, 5 main terminals and 27 stations; and
- The entire 20.9km is being provided with tree-shaded bicycle and pedestrian ways on both sides of the road with an average distance of 500 meters between bus stops and is designed to carry more than 300 000 commuters daily.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Environmental impact and local community assessments

- A comprehensive environmental and social impact assessment was undertaken prior to the construction of Phase 1 of the BRT in accordance with the requirements for an environmental impact assessment in terms of the Environment Management Act 20 of 2004. The Social Impact Assessment study was intended to ascertain the socio-economic and environmental impact implications likely to result from the proposed BRT road project.;

- A full report of the environmental and social assessment (ESA) was released in 2015, highlighting that the project was characterised by developed residential buildings, industrial buildings and high concentrations of trade, manufacturing and other social services along the proposed BRT route. The ESA revealed that community concerns, inter alia, were centered on soil erosion and disturbances; poor air quality from the construction; and displacement of people and properties in the line of the BRT route; and the rise of HIV/AIDs in the community through the presence of construction workers.

- Scoping was done through consultation with various relevant stakeholders, reviewing various reports, studies and literature relevant to the environment and road developments in Dar es Salaam. Additional information to augment the data obtained from project scoping was acquired through field studies. Public participation was done through broad consultations that involved public meetings and focus group discussions, with key ward officials and sub-ward leaders.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Environmental impact and local community assessments

- In the end the ESA established that the gains from the BRT outweighed potential losses that could ensure and that most of the project's negative impacts could be mitigated with appropriate measures. The ESA also built in the costs from the proposed mitigation measures, compensation of assets and cost of relocation of utilities were also catered for in the costs of the project.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Status Quo of the Project

- The project has moved into its second phase, which includes constructing 20.3km of road, including two flyovers and 29 bus stations along Kilwa Road. Total costs for the project, disbursed as loans by the AfDB and the Africa Growing Together Fund (Chinese trust fund managed by the AfDB), and from the Tanzanian government is $159 million. Project activities were supposed to be completed by December 2019 and the project closing date was projected to be December 2020 but there have been delays due to COIVID-19 and other constriction delays;
- TANROADS continues to be the executing Agency for the project that will procure and manage the BRT infrastructure contracts. The DART Agency is responsible for procurement of services, bus operators (private), the fare collection system and Intelligent Transport Systems and overseeing the operations of the BRT system; and
- The implementation of the third and fourth BRT phases will be supported by the Dar es Salaam Urban Transport Improvement Project.

Case Study 1: Dar es Salaam Bus Rapid Transit System

Sources of Finance

Funding Body	Amount (US$)
AfDB	$ 63 218 689
Tanzanian Government	$ 11 424 400
Co-Financier	$ 28 741 443
Delta	$117
Total	$103 384 649

Source: https://www.afdb.org/en/projects- nd-operations/project-portfolio/p-tz-db0-021

Case Study 2: Gautrain Rapid Rail Link, South Africa

Background

- A high speed state of the art rail link between the OR Tambo International Airport in Johannesburg and Tshwane that was developed as the largest PPP project in Africa and the first high speed rail link.
- The network consists of 80km of railway lines of which 15km are underground and another 15km on raised ground or viaduct, and 10 stations.
- The first part of the system, between Sandton and OR Tambo Airport, opened to the public on 8 June 2010, in time for the 2010 FIFA World Cup. The route from Rosebank to Pretoria and Hatfield commenced operations on 2 August 2011, while the remaining section from Rosebank to Johannesburg Park Station opened on 7 June 2012.
- Gauteng Provincial Government is the public sector partner with the private sector party being Bombela Concession Company Ltd who have a 20 year concession. The day today management of the system is under the Quatrain Management Agency (GMA).
- The Gauteng province has a high population density and a strong and vibrant economic base. One of the consequences is that the province also faces traffic congestion, especially on the N1 Schoeman freeway which is located between Pretoria and Johannesburg. In the early 2000s (and prior to the Gautrain PPP), the N1 freeway had up to 157,000 vehicles driving on the freeway every day, and was overwhelmed by traffic congestion. With the annual traffic growth rate of 7% for Gauteng province, it was argued that the traffic congestion was bound to get worse.
- The project was conceptualised in 1997 and implementation started in 2000 when the proposal for a rapid-rail-link system was put out for tender in 2000.

Case Study 2: Gautrain Rapid Rail Link, South Africa

Background

Contact Details

- In 2006, a contractual agreement between Gauteng provincial government and the Bombela Consortium was entered into, creating the official Gautrain-Rapid-Rail-Link (Gautrain) PPP. The Gautrain PPP is a 20-year concession contract between the Gauteng provincial government (which is the public sector partner in this PPP) and the Bombela Consortium (which is the private sector partner).
- The Gautrain PPP is a DBFOT (build-design-finance-operate-transfer) concession agreement. The Bombela Concession Company is responsible for connecting the City of Johannesburg with the City of Pretoria - with a detour to connect Johannesburg with the Johannesburg International Airport. To enable the operation of the rapid-rail-link, the Bombela Concession Company is tasked with the responsibility to provide and operationalise depot equipment; trains; signaling systems and feeder/distribution buses.
- The 2002 Environmental Impact Assessment for the Proposed Gautrain-Rapid-Rail-Link between Johannesburg, Pretoria and Johannesburg International Airport Report notes that “feeder bus services transport passengers from points of destination to the train stations while distributor bus services transport passengers from train stations to their final destinations”.

Case Study 2: Gautrain Rapid Rail Link, South Africa

Background

Contact Details

- The Gauteng provincial government was tasked under the PPP agreement to provide land for the construction of the track. In addition, the provincial government bears the patronage guarantee obligation which stipulates that regardless of low demand for Gautrain services, the Gauteng provincial government would pay Bombela Consortium patronage fees to cover the capital, maintenance and operational costs of the Consortium.
- The Bombela Concession Company is the special purpose vehicle (SPV) set-up with the sole purpose to govern the construction and operational side of the project. The SPV is responsible for managing the operational aspect of the project such as appointing contractors for the building of the actual infrastructure and the actual operation of the project, including associated services. For example, besides the operation of the Gautrain, it also manages the bus service contracts

Case Study 2: Gautrain Rapid Rail Link, South Africa

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Background

Role of Government

- This project was the first PPP of its kind in South Africa, thus requiring a certain level of adaptation by the government. The government of South Africa formed a PPP unit to promote PPPs and provide advice to Procuring Authorities on contract management and team set-up. The Ministry of Finance and Treasury provided advice and support to the Procuring Authority on this project.
- Initially, the Procuring Authority was the Department of Roads and Transport of the Gauteng province government. Subsequently, Gautrain Management Agency was formed following the approval of the relevant legislation by the Provincial Executive Council in December 2006. The Procuring Authority (Gautrain Management Agency) provides the necessary capacity to fulfil the province's contractual obligations and manage its relationship with the Project Company and all other stakeholders.
- The objectives of the Procuring Authority are defined by the Gautrain Management Agency Act. Overall, its objective is to manage, co-ordinate and oversee the project in the interest of the government as a whole and the province in particular. The Procuring Authority's responsibilities include matters such as managing the relationship between the province and the Project Company in terms of the PPP contract, managing assets and finances, liaising with all relevant government institutions and interested parties promoting the project, promoting Broad Based Black Economic Empowerment, and integrating the project with other transport services.

Case Study 2: Gautrain Rapid Rail Link, South Africa

Background

Gautrain Financing

- The Provincial Government is the public sector partner in the Gautrain PPP. It is also the financier of the project. The total development cost of the Gautrain is R26 billion ($1.9 billion) and the costs are spread across five sources of funding, namely: the national budget allocation (through the annual Division of Revenue Act which is channeled through the Department of Transport); an MTEF budget allocation from the Gauteng Provincial Government; private sector equity; private sector borrowing and provincial borrowing.
- The government contributes 88.7% of the costs of the project while the private party, the Bombela Consortium, only contributes 11.3% to the cost of the Gautrain PPP. It must be borne in mind that this type of PPP is one where government is the financier, and the private sector provides the actual infrastructure. The private partners borrow finance from the government (88.7%) and fund the remaining 11.3% with their own revenue (which could be through their own private borrowing, or equity).
- Government receives a return on their borrowings through the interest charged to the Bombela Consortium, while the Consortium is awarded the rights to the proceeds of the Gautrain for the duration of the PPP. The risk is shared in that the Bombela Consortium is contractually obligated to provide the infrastructure at the standards agreed to, as well as repay the government loan on the terms set. On the other hand, the government takes a risk in assuming that Bombela can fulfil its contractual obligations

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Gautrain Project Cycle

- The lifespan of the Gautrain is divided into two phases: the first phase lasting 54 months and the second, 15 years. The first 54 months were for the designing and construction of the rapid-rail-link system while the remaining 15 years constitute the operational period.
- The construction phase commenced in 2006 and was supposed to end in mid-2010, while the operational phase would start in the mid-2010 and end at 2026 after which period the rail-rail-link system would be transferred wholly to the Gauteng provincial government, bringing an end to the PPP agreement.
- Initial works for the Gautrain started in May 2006 and construction commenced after the signing of the Concession Agreement between the Gauteng provincial government and the Bombela Concession Company on 28 September 2006. Construction took place in two concurrent phases: the first phase involved the construction of the section between Sandton and ORTIA, as well as the Midrand station. The second phase included the remaining seven stations.
- The first phase entailed the following: The inception phase began in February 2000 when the project was announced and a project technical team was appointed. It ended in June 2000 with the development of an inception report. Between 2001 and 2002, the following submissions were made to National Treasury which resulted in the first and second PPP Treasury approvals being granted in 2002: a feasibility study, a Request for Qualification (RFQs) submission; issuance, receipt and evaluation of RFQs were completed; a bid evaluation report, and a Request for Proposals (RFPs) documents.

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Gautrain Project Cycle

- RFQs were completed; a bid evaluation report, and a Request for Proposals (RFPs) documents.
- The announcement of Bombela and Gauliwe consortia as successful bidders was done in 2002. The evaluation of the latter consortia's proposals was done between 2003 and 2005. The evaluation report on the proposals were submitted to the PPP Unit and thereafter the third Treasury approval was obtained in 2005 which led to the start of negotiations with the Bombela Consortium. The PPP agreement Management Plan was then submitted to National Treasury which resulted in the subsequent announcement of the Bombela Consortium as the preferred bidder in 2005.
- Phase 3 of the PPP project was the development phase of the project which began in August 2005 and lasted until June 2012. The main activities include the mobilisation of resources including finances. For example, it was during this phase that R7.1 billion ($536.2 million) was set-aside in the national budget in 2006 and a R3.1 billion ($234.1 million) loan commitment was made by Rand Merchant Bank and Standard Bank to Bombela Consortium in 2007.
- In addition, the following was also achieved: the relocation of utilities such as water pipes and electricity grids; finalisation of agreements with Bombela Consortium; preliminary design of all sections of the rapid rail link; commencement of construction; dispute settlement and monitoring and receipt of progress reports commenced. Phase 4 is the delivery of the construction which took place in June 2012. The delivery of the operational phase continues as noted earlier until September 2026 along with the exit.

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Implementation Challenges

- Copper cable thefts-rampant & in 2010/11 financial year, twelve cases of cable theft were reported.
- Strikes by employees of the Bombela Concession Company have also caused problems for the Gautrain PPP. Between August 2011 and February 2012, the Company experienced five employee strikes. Four of the strikes were by bus drivers while one was by security guards. The Bombela Concession Company alleged that the strikes resulted in a loss of train passengers of between 10% and 15%.
- Disputes between the Bombela Concession Company and the Gauteng provincial government pose another challenge to the Gautrain's planned project cycle. The 2013 GMA Annual Report notes that despite Bombela Concession Company indicating that it had fulfilled its construction obligations for the construction phase of the project and the Independent Certifier confirming the same in June 2012, the Gauteng provincial government refused to take delivery. According to the Report, the Gauteng provincial government argued that water leakages along some parts of the underground tunnel of the rapid-rail-link were enough evidence that the construction was not satisfactorily done. The matter has since been resolved by the Arbitration Foundation of South Africa which ordered Bombela Consortium on 23rd November 2013 to conduct corrective works along some parts of the link.

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