

**THE NIGERIAN INSTITUTE OF QUANTITY SURVEYORS
(NIQS) 30TH BIENNIAL CONFERENCE**

THEME:

**INTEGRATED COST MANAGEMENT SOLUTIONS FOR
SUSTAINABLE INFRASTRUCTURE PROJECTS DELIVERY:
A KEY TO NATIONAL ECONOMIC DEVELOPMENT**

TOPIC:

**A COMPREHENSIVE ASSESSMENT OF PUBLIC PRIVATE
PARTNERSHIP PROCUREMENT SYSTEM: TOWARDS
SUSTAINABLE INFRASTRUCTURE DEVELOPMENT IN
NIGERIA**

BY

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INTRODUCTION

The key issues to be address in this paper include:

- **Infrastructure is the live blood that sustains the economy of any nation. It is the economic bedrock of any nation.**
- **The cost of provision of requisite infrastructure for sustainable economic development is outrageously high that most governments of the world can hardly afford that.**
- **Nigerian infrastructural challenges are two folds – 1). infrastructure deficit: the existing infrastructure are grossly inadequate for meaningful economic development., 2). the existing infrastructure are in a terrible state of decay and dilapidation.**
- **From the synopsis of the conference theme, Nigeria will require \$2.3 Trillion in the next 30 years and \$150 Billion per annum to effectively address its infrastructure deficit.**
- **Public Private Partnership (PPP) is the procurement system where the government only provides the regulatory and legislative framework that enables her tap the technological, financial, managerial and other dynamic and innovative potentials/expertise of a private sector partner with the view to providing the requisite infrastructure and services required for sustainable economic development.**
- **For effective provision of necessary infrastructure by the government and her private sector partner, the Quantity Surveyor has some indispensable role to play not just in the cost management of the infrastructure project but most importantly in the procurement management (documentations, prequalification of contractors, tender analysis/report), Contract drafting(recommending and incorporating appropriate Standard Form of Contract/Conditions of Contract in the BOQ), Contract Administration/Management and the overall financial management of the project during execution.**

Concept of Public Private Partnership

According to the government approach (Okereke, 2019) PPPs bring public and private sectors together in long-term partnerships for mutual benefit.

It covers a wide range of different types of partnership, including:

- The introduction of private sector ownership into state-owned business using the full range of possible structures (whether by flotation, or the introduction of a strategic partner). With sales of either a majority or a minority stake.**
- The private finance initiative (PFI) and other arrangements, where the public sector contracts to purchase quality services on a long-term basis, so as to take advantage of private sector management skills given the incentive of having private finance at risk.**
- The franchising of government service provision into wider markets, and other partnership arrangements where private sector expertise and finance are used to exploit the commercial potentials of government assets.**

Origin of PPP in Specific Countries

- **Britain**
- **Australia**
- **Canada**
- **India**
- **Japan**
- **Russia**
- **United States**

Public Private Partnership Initiative in Nigeria

- **The strategic objective for the Infrastructure Concession Regulatory Commission, (ICRC), 2005 is to accelerate investment in national infrastructure through private sector funding.**
- **The Act provides for the participation of private sector in financing the construction, development, operation, or maintenance of infrastructure or development projects of the Federal Government through concession or contractual arrangements; and the establishment of the Commission to regulate, monitor and supervise the contracts on infrastructure or development.**
- **The act provides for the participation of private sector in financing the construction, development, operation, or maintenance of infrastructure or development projects of the Federal Government through concession or contractual arrangements; and the establishment of the Commission to regulate, monitor and supervise the contracts on infrastructure or development.**
- **The scope of the Federal Government's programme for PPP is the creation of new infrastructure and the expansion and refurbishment of existing assets at the federal level.**
- **Although each State is responsible for its own investment projects, many PPP projects within a State will be financed with the support of a guarantee by the Federal Government. In providing any such guarantees, the government will have regard to best practices as exemplified by its own PPP policy and guidelines. These are extracts of the government on PPP policy.**
- **The ICRC Act was enacted by the Obasanjo administration in 2005 and the Commission was formally established by Musa-Yaradua's administration in 2009.**

Types/Models of Public Private Partnership

- **Design-build (DB):** The private-sector partner designs and builds the infrastructure to meet the public-sector stakeholder's specifications, often for a fixed price. The private-sector partner assumes all risk.
- **Operation and maintenance contract (O&M).** The private firm, under contract, operates a publicly owned asset for a specific period. The public partner then retains ownership of the assets.
- **Design-build-finance-operate (DBFO).** The private-sector company designs, finances and constructs a new infrastructure component and owns the operation and maintenance under a long-term lease. When the lease is up, the private-sector partner transfers the infrastructure component to the public-sector partner.
- **Build-own-operate (BOO).** The private party finances, builds, owns and operates the infrastructure component perpetually. The public-sector partner's constraints are stated in the original agreement and through ongoing regulatory authority.
- **Build-own-operate-transfer (BOOT).** Privatization is granted for financing, design, building and operation of an infrastructure component (and to charge user fees) for a specific time, after which ownership is transferred back to the public-sector partner.
- **Build-lease-operate-transfer (BLOT).** The private-sector partner designs, finances and builds a facility on leased public land. The private-sector partner operates the facility for the duration of the land lease. When the lease expires, assets are transferred to the public-sector partner.

- **Operation license.** The private-sector partner is granted a license or other expression of legal permission to operate a public service, usually for a specified term. (This model is often used in IT projects.)
- **Finance only.** The private entity partner, usually a financial services company, funds the infrastructure component and charges the public-sector partner interest to use the funds.
- **Design, Build, Operate and Transfer (DBOT) ;** In this model, the private investor is charged with the responsibility to design a project, build it, operate within an agreed period of time, and thereafter transfer ownership title and operations to the government.
- **Rehabilitate, Operate and Transfer (ROT) ;** This is an agreement to rehabilitate existing public infrastructure, operate it for an agreed period of time and transfer ownership to government at the expiration of the contract.
- **Joint Development Agreement (JDA) ;** This model encourages the private and public sector to come together and sponsor the development of a project from scratch. At completion, both parties maintain the stakes in the management and running of the venture.
- **Management/Lease Contract;** Management contract and lease contracts involve a private firm taking over the management and control of a public enterprise for a given period of time although the facility continues to be owned by the public sector. The public sector may retain the responsibility of financing the investments in fixed assets. In the case of management contracts, the public sector also finances working capital. In this plan, it is 100% Public sector owned.
- **Divestiture;** Another form of private participation in infrastructure is divestiture where a private entity buys an equity stake in a State-Owned Enterprise through an asset sale, public offering or mass privatization. For a country where the majority of the citizens is stricken by poverty, whatever model is adopted should place the benefit of citizenry at top most priority.

THE PUBLIC PRIVATE PARTNERSHIP PROCESSES

According to Obozuwa (2011), the PPP processes will be as follows:

Project Development

- Identification of need;
- A systematic appraisal of technical solutions to the identified need;
- Preparation of economic, social and environmental cost benefit analysis, and an environmental impact assessment if required;
- Value for money (VFM) and affordability testing of different procurement options;
- Preparation of financial analysis – the pre-feasibility study;
- Budget allocation within the National Development Plan and, subsequently, the Medium Term Expenditure Framework (MTEF);
- Approval of Outline Business Case (OBC) prior to the commencement of procurement.

Procurement:

- Creation of a project team and management structure;
- Preparation of an information memorandum and bid documentation;
- Market consultation, if appropriate;
- A competitive and transparent procurement process, with a clear audit trail for the selection of bidders and the evaluation of bids;
- Approval of Full Business Case (FBS) before the decision to award a contract

Implementation:

- Monitoring of design and construction and subsequently operation and maintenance to ensure compliance with the required service standards;
- Monitoring payments against services delivered and any contingent liabilities.
- Inspection and preparation for the handover of any public assets in accordance with the specified requirements, if appropriate;
- Analysis of future service delivery options and further procurement, if appropriate;
- Contract close and recording of lesson learned;

The government will provide further guidance through ICR on the effective management of each phase of a PPP project.

- **Project development:** guidance on options appraisal, business case analysis, the definition and scope of the requirement, and value for money and affordability assessment;
- **Project procurement:** guidance on creating structured and competitive procurement processes, maintaining commercial confidentiality, allowing due diligence by third party investors, preparing a full business case;
- **Project implementation:** guidance on achieving contractual and financial close, contract supervision and management, performance monitoring and change management;
- **Contract compliance monitoring:** guidance and procedures for the regular review of contractual obligations, tracking the performance of all parties to the contract, the resolution of any dispute;
- **Project maturity:** guidance on project close and handover of any public assets (if appropriate), reviews of future service needs and delivery options analysis (Turley & Semple, 2013).

Infrastructure

Definitions

- Okereke (2019) defined infrastructure as the large-scale public systems, services, and facilities of a country or region that are necessary for economic activity, including power and water supplies, public transportation, telecommunications, roads, and schools.
- Infrastructure has been further defined by the infrastructure Concession Regulatory Commission to include among others power plants, highways, seaports, airports, dams, irrigation, telecommunications, railways, interstate transport systems, industrial estates, housing, information technology networks and database infrastructure, satellite and ground receiving stations, land reclamations projects.
- Infrastructure is the basic physical and organizational structures needed for the operation of a society or enterprise and in Sullivan & Sheffrin's (2003), infrastructure was defined to be the services and facilities necessary for an economy to function.
- Infrastructure has further been defined by the American Heritage Dictionary to typically refer to the technical structures that support a society, such as roads, water supply, sewers, power grids, telecommunications and so forth.
- Okumagba (2008) however classified infrastructure into three categories such as:
 1. Economic infrastructure which consists of public utilities (i.e power, telecommunications, water supply, sanitation/sewage, solid waste collection/disposal and postal services);
 2. Public work (i.e roads, dams, canals, works for irrigation and drainage)
 3. Transportation (i.e urban transportation, railways, sea ports and water ways, airports and air transportation), and
 4. Social infrastructure which refers mainly to healthcare delivery and education.

Differences between PPP Projects and Conventional Projects

There are significant differences between a conventional construction procurement project and a PPP project that need to be clearly understood. The main differences according to Colverson, (2011) include:

- PPP projects are different from conventional construction projects in terms of project development, implementation, and management. The administrative and approval processes in the case of PPP projects are also different.
- A PPP project is viable essentially when a robust business model can be developed.
- The focus of a PPP project should not be on delivering a particular class/type of assets but on delivering specified services at defined quantity and levels.
- The risk allocation between the partners is at the heart of any PPP contract design and is more complex than that of a conventional construction project. Both partners should clearly understand the various risks involved and agree to an allocation of risks between them.
- A PPP contract generally has a much longer tenure than a construction contract. Managing the relationship between the private company and the implementing agency over the contract tenure is vital for the success of a PPP project.

Limitations of PPPs

There are many important economic, social, political, legal, and administrative aspects, which need to be carefully assessed before approvals of PPPs are considered by the government. PPPs have various limitations which should also be taken into account while they are being considered. The major limitations according to Dominic *etal* (2015) include:

- Not all projects are feasible (for various reasons: political, legal, commercial viability, etc.).
- The private sector may not take interest in a project due to perceived high risks or may lack technical, financial or managerial capacity to implement the project.
- A PPP project may be more costly unless additional costs (due to higher transaction and financing costs) can be off-set through efficiency gains.
- Change in operation and management control of an infrastructure asset through a PPP may not be sufficient to improve its economic performance unless other necessary conditions are met. These conditions may include appropriate sector and market reform, and change in operational and management practices of infrastructure operation.
- Often, the success of PPPs depends on regulatory efficiency.

Public Private Partnership Responsibilities

As according to Corrigan (2005), Preparation entails creating and constantly updating a plan for development showing specific sites for private investments opportunity. In addition, the public partner must identify development goals and resources, including commitment for inducements and incentives for prioritized projects in the plan. This specificity will enable develops to understand the true scope of the development opportunities in the community.

•Assess Your Capabilities:

In the early stages of the process, the public sector should asses its institutional capacity to act as a partner. Creating an entity to handle the partnerships, such as a redevelopment authority. The public partner needs to make sure that it has the expertise to negotiate with the sophisticated private party and the authority to retain the use of one or more consultants to assist in developing the partnership

•Create a Public Vision

The vision for the program should be the result of a consensus-building process that identifies the opportunities, objectives, and ultimate goals for the community (Corrigan, 2005).

•Be Legislatively Prepared

Corrigan (2005), stated building codes and regulations support the vision established for the development, including the potential for streamlining building codes and regulations to remove potential obstacles to effective partnerships.

•Be Resourceful with Funding

As according to Corrigan, (2005), with the increasing scarcity of public sector funds, the complexity of the financial package will necessarily on the increase. It is therefore, essential to be imaginative and forward thinking to capitalize on all and any funds that might work.

•Have the Land Ready

The public partner should examine its ability to assemble the necessary land. Evaluate the capacity for the right of eminent domain. (Corrigan, 2005). Consider the potential for land banking to avoid any land assembly issues if the opportunity makes itself available.

•Manage Expectations

During the stage of the process, establish a schedule that clarifies the expectations of the public decision makers. It is a good idea to craft public awareness program to inform stakeholders of the goals of the development strategy and the specific projects that are identified.

The Public Private Partnership Life-Cycle

When implementing Public-Private-Partnerships, it is important to adopt a life-cycle perspective. Success depends, in great part, on the government's capacity to execute and manage innovative partnerships. All too often, too much emphasis is placed on the transaction, overlooking other critical factors. Certainly, the transaction is an important component of Public-Private-Partnership, but it is only one small part of a broader framework. Equally important are establishing the legal, regulatory, institutional, and policy framework for PPP; ensuring stakeholder buy-in; managing the change process; applying appropriate risk models; developing adequate oversight and monitoring structures; and incorporating Public-Private-Partnership into broader sector strategies. In other words, in order for Public-Private-Partnerships to be successful, they need to be implemented within a broader policy framework which takes into account all phases of the Public-Private-Partnership life-cycle (Adekunle, 2015)

The public- private partnership life-cycle according to Adekunle(2015) generally involves three major phases:

1. Policy and Planning Phase: This phase includes the establishment of the legal, regulatory, institutional and policy framework for Public-Private-Partnership.

2. Transaction Phase: The purpose of the transaction phase is to secure the best value for money. This is achieved through a quantitative and qualitative analysis of project options (feasibility studies) and the establishment of performance standards and incentives. It is imperative to structure the deal so that it is bankable, while simultaneously achieving optimal risk allocation.

3. Partnership Phase: During this phase, the private partner operates the infrastructure facility, while the budget organization provides oversight and compliance monitoring. The partnership phase involves a number of different stages, including: (i) construction; (ii) operations and management; and (iii) termination / asset handover. (Okereke, 2019).

The Legal and Regulatory Framework for PPP in Nigeria

The Infrastructure Concession Regulatory Commission (Establishment) (ICRC) Act 2005, provides the legal and regulatory framework for Public-private partnerships in Nigeria. The Act established the Infrastructure Concession Regulatory Commission (ICRC) as the regulator of Public-private partnerships at the federal level, and provides that any Federal Government Ministry, Department or Agency (MDA) involved in the financing, construction, operation or maintenance of infrastructure, by whatever name called, may enter into a contract with or grant concession to any duly pre-qualified project proponent in the private sector, for the financing, construction, operation or maintenance of any infrastructure that is financially viable or any development facility of the Federal Government.

Benefits of Public Private Partnership

According to Colverson, (2011) & Colverson (2012), the following benefits can be derived from PPP initiatives:

- **Value for money:** Utilizing private sector skills and technology to deliver projects in a more efficient manner, resulting in either lower costs or a superior product for the same investment.
- **Optimization of design and operation:** Using outputs based specification allows room for and promotes innovative solutions from the private sector on the design, operation and maintenance aspects of the project, with the intention of improving effectiveness while reducing costs over the whole life cycle of the project.
- **Quicker delivery of project:** Private sector capacity and flexibility are seen to be superior to the public sector, and PPPs therefore allow projects to be finished more quickly and on schedule than those attributed to public sector provision. With PPP, the bureaucratic tendencies are reduced thereby making projects to be completed on time.
- **Risk transfer:** Project risks (e.g., finance, timeframe, planning permits, community consultations) are transferred to the party best equipped to deal with it, both in terms of expertise and costs, to the stability and benefit of the project.
- **Increased investment:** In public infrastructure, governments are able to implement projects more frequently and on a larger scale because the private sector finance element reduces its need to raise or budget additional funds, as is the case in standard procurement.

- **Increased budget/financing certainty:** The transfer of responsibility (and risk) to the private sector for some of the project elements shields governments from unforeseen financial liabilities following cost overruns, delays, or operational difficulties that would otherwise impact upon the budget bottom line.
- **Improved service delivery:** PPP allows both sectors to operate within their sphere of expertise, the government in policy and governance, the private sector in the technical aspects of design, construction, operation, and management.
- **Access to additional capital/off-balance sheet financing:** Because all or a large percentage of finance in PPP is provided by the private sector, the government is not responsible for raising funds from within its own coffers or adjusting budgets to allow for large infrastructure spending.
- **Political advantage:** There is political leverage to be gained from PPP agreements in terms of public perception and financial management credentials, as projects are delivered on time with less impact on the budget and provide superior quality infrastructure or services.
- **Private sector growth and stability:** PPPs provide the private sector with access to reduced risk, secure, long-term investment opportunities that are underwritten by government contracts. Such agreements ensure private capital flows, provide investment opportunities, and stimulate local industry and job markets.

CASE STUDIES

1. Lekki-Epe Expressway Toll Road Concession Project

Project Name: Lekki-Epe Expressway Toll Road Concession Project

Country: Nigeria

Sector: Transportation

Type of PPP: Concession/BOT

Status: Operations

Project Overview / Case History

Lekki Concession Company Limited ("LCC") is a Special Purpose Vehicle set up specifically to execute the Eti-OsaLekki Toll Road Concession Project. The project is designed to deliver essential road infrastructure and services along the Lekki Peninsular of Lagos.

Lekki Concession Company Limited is strongly committed to providing high quality road infrastructure and related services to our customers and other stakeholders, and therefore places a premium on providing sustainable solutions to the challenges brought about by historic heavy traffic congestion along the Lekki Peninsular of Lagos.

The 49.4km road starting from Ozuomba Mbadiwe in Victoria Island through Lekki and Ajah to Epe was conceived for reconstruction through public private partnership arrangement via concession in 2006. The project involves the upgrade, expansion and maintenance of the expressway (Phase I), and construction of approximately 20km of the coastal road (Phase II) on the Lekki Peninsular.

The project is designed as a Build-Operate-Transfer (BOT) model of infrastructure delivery, under a 30 year concession agreement, after which the asset was to be transferred to the Lagos State Government in good condition. Revenue from toll collection would provide the concessionaire with the cash inflow required to recover the cost of investments, service and repay the debts whilst meeting capital and operating costs.

Below are the pictures of Lekki-Epe Expressway Toll Road Concession Project.



Lekki-Epe Expressway Toll Road Concession Project



2. Second Niger Bridge Project

Project Name: Second Niger Bridge.

Country: Nigeria

Sector: Transportation

Type of PPP: Design, Build, Finance, Operate and Transfer (DBFOT)

Status: Construction

Project Overview / Case History

The Second Niger Bridge was awarded to Julius Berger in 2014 by former President Goodluck Jonathan. The contract was based on a Public-Private Partnership arrangement. The Second Niger Bridge project has been completed and is operational and was formally commissioned by President Muhamadu Buhari in May, 2023. The project, which is divided into three phases, bypassed Onitsha and Asaba to connect the Owerri-Onitsha Expressway at Nkwerre-Ezunaka, and then crossed Atani to the Asaba-Benin Expressway at Okpanam with a total length of 44 kilometres. With this length, the Second Niger Bridge has surpassed the world's longest bridge in China (42.4km), to become the world's longest bridge.

The project was constructed under a Public Private Partnership (PPP) scheme. A Consortium JB (Julius Berger)-NSIA (Nigerian Sovereign Investment Authority), is working on the project on the basis of Design, Build, Finance, Operate and Transfer (DBFOT), at a total cost of N108 billion. The Bureau of Public Procurement (BPP) reviewed the concessionaire's cost of N138 billion down to N108 billion. The project phases will be constructed under Engineering, Procurement and Construction contracts awarded by the Federal Ministry of Works (FMW).

The Federal Government committed to contribute N30 billion (28%) of the project cost. The remaining 72% was raised by the Consortium under a 25-year concession. A team of local and international consultants was engaged through a rigorous and competitive procurement process. The NSIA has spent the sum of \$2.21 million on consultancy and another \$247,586 on due diligence to determine project viability. The first-class advisory services.

Below are the Pictures of the Second Niger Bridge project:





Second Niger Bridge project



Second Niger Bridge project

3. Abuja Light Rail Mass Transit Project

Project Name: Abuja Light Rail Mass Transit (Lot 3 and Lot 1a)

Country: Nigeria

Sector: Transportation

Type of PPP: Design, Build, Finance, Operate and Transfer (DBFOT)

Status: Operations

Project Overview / Case History

The Abuja light rail mass transit project consists of six lots (6 lots) covering a distance of approximately 285km. Lot I (also known as the Blue line) is about 43km long and originates from Ring Road1 passing through transportation centre in the Central Business District (CBD) to Gwagwarada, a distance of about 24km. It then joins the commuter rail network in a southwardly direction to the airport, a distance of 8km and Northwards from Gwagwarada to Kubwa, a distance of about 13km. The route traverses the high density areas of Garki, Wuse, Jabbi, Life Camp and Gwagwa. Initial demand is estimated at 136,000 passenger trip daily, growing to 830,000 by year 2030. Lots 2 (known as the red line) covers a distance of about 22km from Nyanya to the transportation centre. Beginning from section D,

Former President OlusegunObasanjo in 2007 performed the official foundation laying ceremony of the Abuja light rail project. The \$84 million, 280km Abuja Light Rail System (ALRS), was designed to convey commuters from satellite towns to the city centre. However, lack of funds delayed the project by many years. The contract for the light rail project was awarded to **China Civil Engineering Construction Corporation (CCECC)**.

The first phase of the project will connect the city centre to NnamdiAzikiwe International Airport, stopping at the standard gauge railway station in Idu. The project was completed at the cost of \$823 and launched in December 2017.

Below are the pictures of Abuja Light Rail Mass Transit project:



Abuja Light Rail Mass Transit project

Abuja Light Rail Mass Transit project



Abuja Light Rail Mass Transit project





CONCLUSION

- **PPP had benefited many developed nations, as it is still doing till date and holds tremendous benefits for developing nations like Nigeria in the area of infrastructural growth if properly harness. PPP can improve sustainability and growth of infrastructure development through value for-money project assessments and improved delivery performance. However realizing these commendable results call for an institutional architecture, with robust preference for private sector involvement campaign, which handles market development, regulation, dispute resolution among others and implementation of infrastructure projects in a single clear hull. The paper acknowledged the timeliness of the initiative in Nigeria owing to the wide infrastructure gap and progressive severe cut back in budgetary allocation and implementation.**
- **The article further stated that the idea that private provision of infrastructure represented a way of providing infrastructure at no cost to the public has now been generally abandoned; however, interest in alternatives to the standard model of public procurement persisted. In particular, it has been argued that models involving an enhanced role for the private sector, with a single private-sector organization taking responsibility for most aspects of service provisions for a given project, could yield an improved allocation of risk, while maintaining public accountability for essential aspects of service provision.**

RECOMMENDATIONS

- For public sector to be able to realize its objective of infrastructure development and the private sector to make her profit the following recommendation are worthy of note:
- The establishment of the necessary regulatory framework for proper implementation of PPP projects, most importantly with respect to dispute resolution during the tenor of the contract.
- The possession of political will by the agents and leadership of government to deal with corruption without any fear or respect for the position of the individual or body involved.
- Nigeria banks through the CBN should be assisted to cope with PPP financing, as sustainable long term financing mechanism is key to the success of PPP projects.
- Proper definition of PPP as a concept should be made as the ICRC Act failed in this regard. The paper recommended that political will, good governance and human capacity building will be required to maximize the benefits from the initiative by all stakeholders.

THANKS FOR LISTENING