Project Citizenization: Imperative for Rebooting Value-Driven Public Infrastructure in Nigeria BY MEETING MEE-EDOIYE ANDAWEI

NIGER DELTA UNIVERSITY
WILBERFORCE ISLAND, BAYELSA STATE.

46th Inaugural Lecture

Project Citizenization:

Imperative for Rebooting Value-Driven Public Infrastructure in Nigeria

BY

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Motto
Creativity, Excellence, Service

Vision
To be a centre of excellence defined by well articulated programme that will produce creative and innovative minds

Mission
To strive to maintain an international reputation for high quality scholarship, research and academic excellence for the promotion of thesocio-cultural and economic well-being of mankind

NIGER DELTA UNIVERSITY ANTHEM (THE BRIGHTEST STAR)

Like the brightest star we are, to lead the way
To good education that is all our due,
The dream of our fathers like the seed has grown;
Niger Delta University if here to stay.

Let us build on this noble foundation
And with love, let our dedication increase,
To rise and uphold this noble vision
Ev'ry passing moment let our zeal never decrease.

In all that we do, let us bring to mind
Our duty as staff and students of N.D.U
Ev'rywhere to promote peace towards mankind.
Creativity, Excellence and Service

CHORUS
Rejoice, great people old and new, rejoice
For the good fruit through us is shown;
Be glad in our worthy contribution
To the growth of humanity (x2)

Dedication

I dedicate this inaugural lecture to God Almighty who made it possible for me to deliver this lecture today. I return all Glory to God.

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Preamble

Mr. Vice-Chancellor Sir, distinguished ladies and gentlemen, is with humility and sense of purpose that I welcome you to this inaugural lecture. In several years of research and participation in the fragile construction project environment, I have tried to define the product process chain of the construction industry by improving on the quality of project outcomes for the benefit of customers, clients and performing organizations (Andawei, 2018).

In trying to achieve this objective, various resource optimization methodologies such as Critical Path Method (CPM), Programme Evaluation and Review Technique (PERT), Earned Variance Analysis (EVA) were deployed in the product assembly space (Andawei, 2001; Andawei. 2003:1; Andawei, 2004; Andawei, 2005:1; Andawei, 2006; Andawei, 2014:3).

Given that the production chain works within the boundaries of the *iron triangle*, further efforts were also made to achieve project outcomes within defined time, cost and scope baselines by deploying reward systems that aided improved on-site workers' productivity(Andawei, 2002:2; Andawei, 2003:2; Andawei, 2014:1; Andawei,

2015). With the understanding that the *iron triangle* is not cast in stone and that the inability to control any given variable will have multiplier effect on others, works dealing with project delay, extension of project time request, time/cost trade-off were undertaken (Nworuh and Andawei, 1999; Andawei, 2002:1; Andawei, 2005:2; Andawei, 2014:2). The harvest of the above research efforts is to create project outcomes that are financially efficient, accomplished within established schedule and scope that delivers value to stakeholders.

Arising from the above, I feel obliged and intellectually compelled to underscore that the overriding factor of the project production process, irrespective of magnitude or sector, is to deliver value to the end-user. It is in this context that this inaugural lecture with the title: *Project Citizenization: Imperative for Rebooting Value-Driven Public Infrastructure in Nigeria* is presented.

The lecture encapsulates the governance process of public infrastructure in Nigeria and the place of citizen-needs in their evaluation and delivery in a rapidly changing world. It is my view that the outcome of this lecture will showcase some useful technical and methodological guide to public infrastructure providers in their quest to meet the citizen needs.

Jain (2021) defined public infrastructure as the nation's facilities that are owned and maintained by national, state or local Governments or ministries, departments or agencies; the services of which are made available through project activities for the use of the public with or without charge. Public infrastructure essentially provides services and products that support and sustain good living standards of the citizens. Generally, the economic development of nations are defined by the extent of government's public infrastructure investment.

Public infrastructure is grouped into eight categories: political, transportation, educational, health, power and energy, telecommunication, water and recreational infrastructures.

a. Political infrastructure are the institutions of government including the three arms of Government - executive, legislature and judiciary, security services - police and other security agencies, regulatory agencies - electoral commissions etc.
b. Transportation infrastructure are roads, railways, air and marine transportation infrastructure.
c. Power and energy infrastructure are solar power, wind and hydro power stations, gas supply lines

and other sources of power.

d. Telecommunication infrastructure are government owned broadband networks, mobile telephone services providers and Wi-Fi services.
e. Educational infrastructure are public primary, secondary and tertiary academic institutions, universities and libraries amongst others.
f. Health infrastructure are primary and tertiary health institutions, Government-owned specialist hospitals.
g. Water infrastructure are public water supply, drainage and sewage systems and water resources.
h. Recreational infrastructure are national parks, biological parks, historical sites, game reserves and other natural reserves.

Vaidya (2021) sees public infrastructure as the basic physical and technological assets within a nation, established for economic growth and development to promote and support the wellbeing of the larger public. He categorized public infrastructure into three major groups namely, hard, soft and critical infrastructures.

Hard infrastructure refers to all physical facilities and networks such as roads, telecommunications, airport,

public utilities and the underlying assets necessary for the proper functioning of economic activities. The soft infrastructure represents the institutional frameworks such as financial institutions, healthcare and educational systems that supports the nation's economic, health, social and environmental standard and the critical infrastructure refers to housing, public utilities, telecommunication, public health, water and sanitation, agriculture.

Irrespective of the classification and operating environment, Vaidya (2021) argues that public infrastructure is central to the delivery of value-based outcomes for citizen benefits. It is regrettable to note however that sustained investment in public infrastructure is limited in Nigeria despite the growing importance as key drivers of economic growth and development. More disturbing is the huge public investment on grandiose projects and programmes that are not central to the social and economic benefit of citizens (IMF, 2012).

From available data, Nigeria like every other developing nation of the world has its substantial proportion of public infrastructure deficit (PROSHARE, 2021). Despite being ranked as the 27th largest economy in the world with an average GDP growth of 2.5% for the third quarter of 2021,

it has a GDP per capita of less than $2,500 with over 70% of its population living within the World Bank 2021 poverty threshold of $3.20 per day(Simona, 2021:2; IMF Statista, 2021; wikipedia.org/wiki/List of countries by GDP (nominal), 2021).

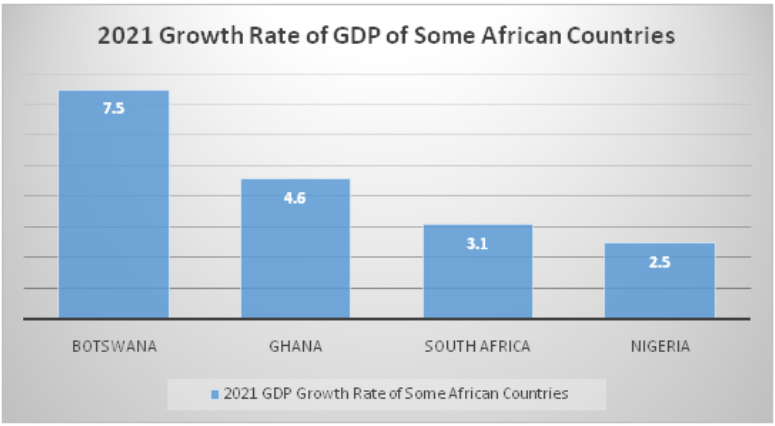

Figure 1.1 2021 Growth Rate of GDP of Some African Countries
Source: IMF Statista 2021 *Datalink*: imf.org

The situation is further compounded by the ever-increasing youth unemployment of over 53% with less than 47% and 62% of Nigerians having sustainable access to improved drinking water and power from electricity grid respectively (World Health Organization, 2021)

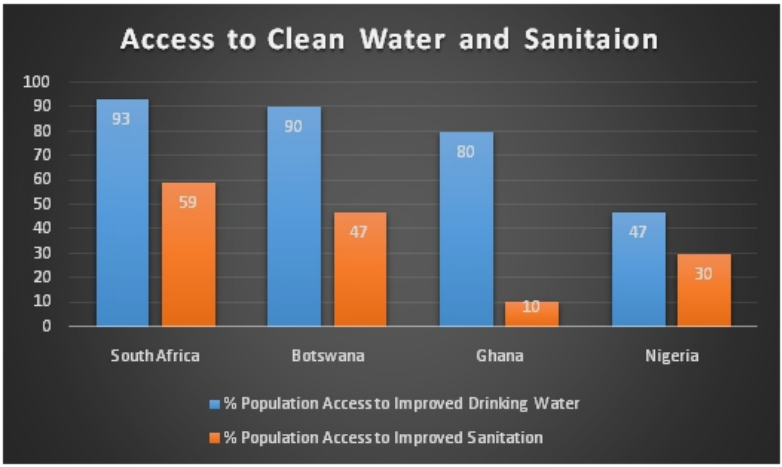

Figure 1.2. Population Percentage Access to Clean Water and Sanitation
Source: World Health Organization 2021 *Datalink*:
http://www.who.int/whosis/en/index.html

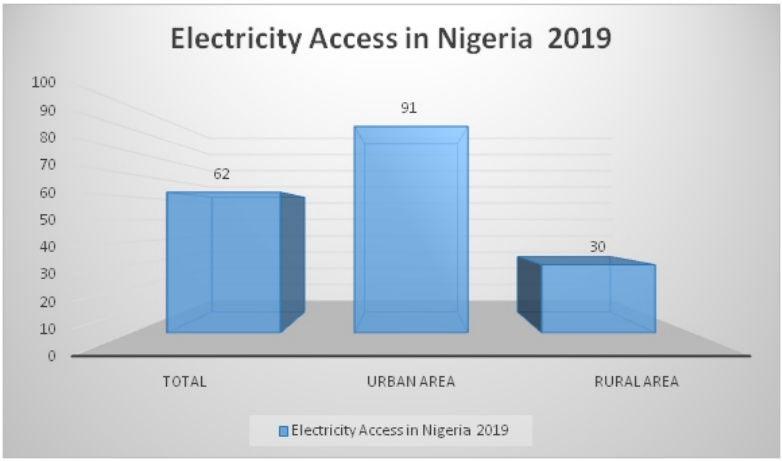

Figure 1.3 Electricity Access in Nigeria 2019 *Source*: Statista 2021

In the health sector the story is not different. Available statistics show that Nigeria is one of the fastest growing populations globally with a fertility rate of 5.5 live birth per woman and 3.2%population growth annually. It is estimated that Nigeria's population will be as high as 440million by 2050 (Worldometer, 2021). Despite this projected population boom, it is reported that Nigeria provides healthcare for only 3% of its current over 200million population such that over 70% of her population spend out-of-pocket to pay for their healthcare services (Okunola, 2020). This is further corroborated by the ranking of Nigeria's healthcare system as the fourth worst in the world (Nwachukwu, 2021). This abysmal scorecard is repeatedly the same in the transport and other key sectors thereby hampering rapid economic growth and development.

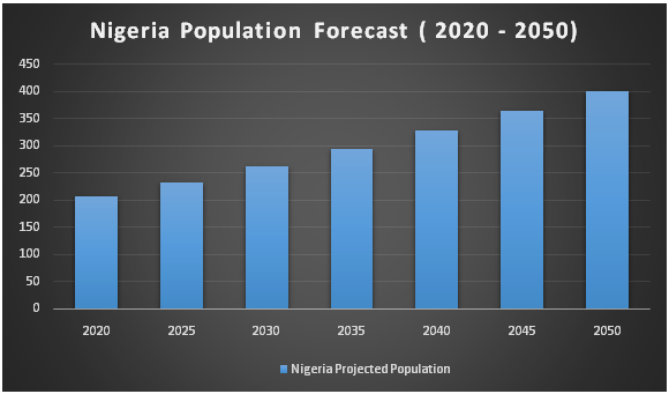

Figure 1.4. Nigerian Population Forecast (2020 - 2050)
Source: Worldometer 2021 Datalink: www.Worldometers.info

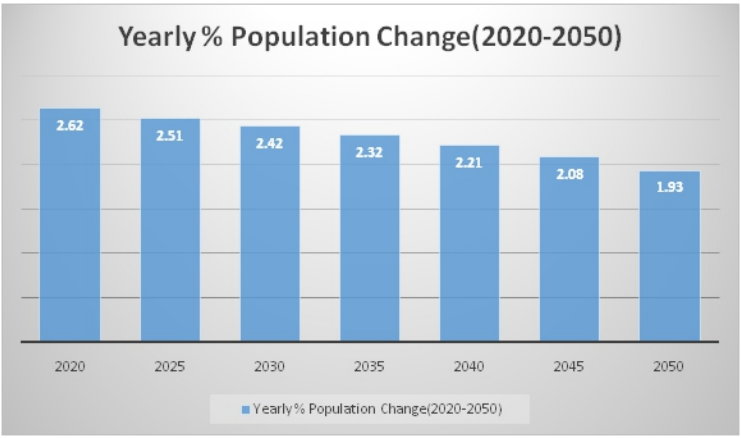

Figure 1.5. Nigerian Yearly Percentage Population Change (2020 - 2050)
Source: Worldometer 2021 Datalink: www.Worldometers.info

The above statistics indicates that the present state of public infrastructure in Nigeria is poor and inadequate. Nigeria with an estimated annual population growth of 2.30% in the next twenty-nine (29) years, requires an average of $100bn dollars (N36tr naira) annually to address the current infrastructural deficit for the next three decades (Simona, 2021:1; Emefiele, 2021; Ahmed, 2019).

In the face of this escalating deficit, Ahmed (2019) admitted that Nigeria does not possess the required fiscal resources to self-finance its infrastructural needs. Similarly, Emefiele (2021) feared that the achievement of the projected 5-7% growth average required to boost productivity and drive sustainable business growth is very unlikely; at least in the next three decades.

The Vice President Prof. Yemi Osinbajo, in expressing similar concerns for this widening gap, admitted that Nigeria needs about $3tr dollars to bridge the infrastructure deficit in the next thirty (30) years. For this to happen, the nation has to invest an average of N10.81tr, the total amount of the revised 2020 budget, on capital expenditures only for the next ten decades or more in order to meet this target(Osinbajo, 2020).

However, in their legitimate attempts to bridge this gap and to justify government expenditures, public administrators at Federal, State and Local levels have been providing budgetary allocations annually to fund public infrastructure, whose outcomes are rarely citizen-centered because of the following reasons.

Firstly, public infrastructure which are mega public sector projects are not always open to citizen's scrutiny, as required by law and best global practices; and as such public interest which should generally guide their evaluation and delivery process is, in most cases, jettisoned. Secondly, most public office holders in Nigeria are known to be unrepentant manipulators of the extant public procurement process thereby sacrificing public interest for their own selfish gains. Thirdly, most public

office holders in Nigeria appear to be stronger than public institutions. As such, they determine which project is initiated and executed at any location as against public interest. In spite of these very obvious shortfalls, public fund managers continually proclaim that they are delivering good governance*: a reality too difficult to confirm*. This lecture presents an inclusive project governance framework that deliver value for public infrastructure that has the potentials to deliver citizen centered value for the general good of society.

Introduction

Mr. Vice-Chancellor sir, project management is as old as the universe itself when viewed from the context of time through the process of creation by which two essential factors of project management literature were fully utilized. Everything that was envisaged came on time and within the quality requirements as contained in the holy book - The Bible, with the phrase "it was good", before the next stage of progressive execution (Gen.1:3-27).

Man, in his quest to be superior to other animals and to rule over them as mandated by God started building cities (Gen. 4:17) for his comfort. In course of time man offended God and God in His wisdom decided to raise a new generation by commissioning Noah to build an ark - the first mega project of the time with all the design specifications given by God Himself. Other similar projects that followed thereafter include the Tower of Babel, the Great Pyramid of Egypt, the Walls of China just to mention a few (Akpan 2009).

Evolution of project management concept

While Fredrick W. Taylor (1856-1915) is credited as the father of scientific management for his pioneering work on "work-study" followed later by the "time and motion

study" by Frank Gilbert (1868-1924) with additional inputs and practical applications by Henry Ford with the assembly line methodology (Jaja & Zeb-Obibpi, 1999). Henry Gantt (1861-1919) is given the credit and honour of being the forerunner of modern project management when he came out with the chart named after him, a variant of the bar chart. The simplicity and ease of understanding by non-technical users accounts for its wide application across industry lines(Frank and McCaffer, 1985; Andawei,2001). Despite its acceptability by users, the Gantt chart could not easily display the relationship and the nature of interdependencies between project activities. It was also difficult for the chart to identify and isolate critical activities that uniquely control and influence the project duration(Dennis, 1996; Lockyer, 1981, Kerzner, 2017).

In another account, Haugan (2011) viewed Fredrick W. Taylor's theory of scientific management as a policy instrument that establishes structured methodology of performing operation with the best resources. It is believed to be responsible for the pre-world war manufacturing revolution that laid the foundation for today's project management body of knowledge.

He opined that the skill set required for the management of a typical project is dissimilar to those skills and techniques required for the management of manufacturing processes. The recognition of these skill differentials in the late 1950s played a major part in the development of complex weaponry.

The need to find a more comprehensive framework for managing projects gained greater momentum after the World War II not necessarily to help in the reconstruction effort but to fast-track the development of the various defense systems. Again, Bernard Schriever's (1910-2005) pioneering work in the US Airforce's ballistic missile programme was credited with the coinage of the term project management in 1954 and can rightly be regarded as the founding father of modern project management (Akpan, 2009). However, the birth of Program Evaluation and Review Technique (PERT) and the Critical Path Method (CPM) in 1958 marked the beginning of the network application in the project management practice space (Akpan and Chizea, 2005).

Mr. Vice-Chancellor sir, history has it that, PERT was pioneered by Booz, Allen and Hamilton Consultants in

collaboration with the United States Navy in the development of the Polaris missile project and it is reported to have saved twenty-four months during the engineering and development stages (Akpan, 1997). The model considers the activity time as probabilistic and assumes that duration cannot be predicted with certainty and requires optimistic, most likely and pessimistic time estimates based mainly on beta distribution, for each project activity (Andawei, 2006).

Similar effort at the same time was undertaken at E. I du Pont de Nemors & Company code-named Critical Path Method (CPM) for the planning, maintenance and overhaul of their chemical plants (Akpan, 1997). The aim of this model is to reduce the maintenance and overhaul time. It was reported that the model helped to reduce the planned downtime by forty percent (40%) with cost reduction of not less than $1m during the first twelve months of its inception. Critical Path Method assumes that activity times are deterministic and that most activity duration can be reduced if extra resources are assigned to such activities (Lockyer, 1981; Dennis, 1996; Udosen, 1997; Andawei, 2003:1)

The successes recorded by these network-based approaches and their wide acceptance and overwhelming

interest by industry practitioners led to the emergence of two leading project management regulatory bodies: Project Management Institute (PMI) which originated from the United States (US) and the Association of Project Management (APM) which has its origin from the United Kingdom (UK) (Akpan, 2009). In their quest to provide a universal framework for the practice of project management, they separately developed a compendium of knowledge generally referred to as Project Management Body of Knowledge (Akpan, 2009).

Despite their commonalities and shared priorities, Akpan (2009) considered their focus as their distinguishing feature. In his view, while PMBoK focuses on the management content of the project management process, APMBoK lays more emphasis on the technical component.

In identifying the dissimilarities further UK Essays (2018) noted that while PMBoK addresses key socio-economic and quality and risk management issues, APMBoK defines the criteria for project failure or success and other post-planning appraisal and human resource related issues. Irrespective of these scholarly dissimilarities, there is an apparent consensus amongst practitioners that the

two bodies have tremendously advanced the knowledge and practice of project management and have increased the visibility of the project management professionals across industry lines on both sides of the Atlantic.

Project Management Methodology

i. Project

Mr. Vice-Chancellor sir, in order to have a good understanding of the project citizenization concept, the knowledge of a project is key. Project is seen as a set of impermanent activities, executed to provide individualized service or products that meet the needs of stakeholders. These set of related activities are always done within a defined time frame and are said to have been completed when the project objectives are realized or it becomes obvious that the objectives are no longer realizable (Uzair Waheed, 2015; Baguley, 2003; PMBoK, 2004).

Baguley (2003) believed that projects alter, modify and in some cases transform the infrastructural architecture of our changing world. To achieve this, projects behave in manners that create, energize and activate. In his view, the attraction of a project as a change-making process and prism through which an agency or an individual processes

efforts and resources to attain a desired outcome is of great significance.

Baguley (2003) identified five fundamentals that are common to all projects irrespective of scope and complexity as summarized in table 1.1 below.

Table 1.1 Common Fundamentals of Projects

Fundamentals	Characteristics
▪ Projects are one-off efforts and temporary	▪ Projects come and go, appear and disappear, leaving behind the deliverables
▪ Projects are unique	▪ No two projects are exactly the same; every project has its core elements
▪ Projects have defined duration	▪ Every project has deadline or completion date
▪ Projects have defined outcomes	▪ Projects deliver services or products that are tangible.
▪ Projects are about change	▪ Projects creates the new and sometimes demolish the old and the change have significant effect on the social, economic and political lives of the stakeholders.

Source: Baguley (2003)

ii. Project management

Haugan (2011) define project management as the process where technical and managerial skills and tools are deployed to project activities to achieve stakeholder expectations. This is done by allowing the project to pass

through project management processes of initiating, planning, executing, monitoring and controlling, and closing. He posited that, given the importance of these processes in the overall project management framework, the five process groups should be adopted in all projects irrespective of size or complexity as shown in figure 1.6 below.

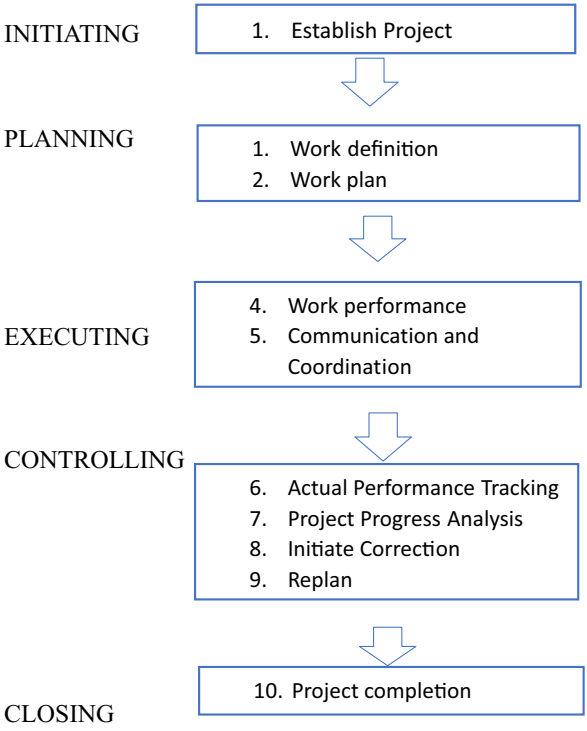

Figure 1.6-Basic Project Management Process
Source: Adapted From Haugan 2011 p.17

iii. Initiating Stage

This stage of the project consists of steps that precede detailed planning and execution. The focus at this stage is to establish the project goals and ground rules that will ultimately guide the project team. On large projects, initiating is planned and executed as a distinct project phase commonly referred to as *feasibility*; involving the application of parametric estimating, discounted cash flow analysis, internal rate of return, cost benefit analysis, and other project evaluation models (Haugan, 2011).

The initiating stage essentially provides relevant technical, social, economic and environmental information for rational decision making. He opined further that project initiating phases is often objective-driven and as such, are founded on customer needs that are rational, unambiguous and inclusive and enjoys top management buy-in. Other sub-steps at the initiation stage include statement of objectives, deliverables definition and project charter.

a. Statement of objectives

Establishing project objectives is the first step in the project development cycle. At this stage, the project team determine the reason(s) for the project, and how and time

frame within which to achieve project goals and the appropriate project team required to meet stakeholders' expectations. While it is appropriate to agree that project goals are unique and vary from project to project, Haugan (2011) argued that it is the aggregated goals of individual activity and task that make up the project goal(s) that are specific, capable of being measured, can be achieved, realistic, time-bound and unambiguous to both the stakeholders and the project team.

b. Definition of deliverable

Project deliverable states the form of products or services and are usually unique to individual projects. The deliverable defines the types of products or services; when and where the products or services are provided; the number and cost of providing the products or services and the quality requirements of such products or services.

ii. Planning Stage

In their classic book on management and as quoted in Haugan (2011), Koontz and O' Donnell(1959) viewed organizational planning as a process of making things happen that will not naturally occur. They averred that planning requires an intellectual processing of relevant

information that provides a framework for appropriate fact-based decision making. APMBoK(2004) maintained that project plan helps in establishing the project scope and objective and defines the appropriate action plan for its execution. Haugan (2011) and PMBoK (2004) identified work definition and planning as the two key components of the planning process group. The work definition, which includes development of work breakdown structure, preparation of statement of work and specification is considered as the most challenging task in the planning process.

Preceding work definition is the work planning made up of definition of activities and activities' duration, development of network and schedule, assignment and scheduling of resources and cost, development of cost estimates, establishment of check points, performance measures and baselines and development and approval of project plan. Though many industry players consider project planning as a difficult component of the project management process, its relevance as an instrument for direction and control in the project management framework cannot be over-emphasized.

iii. Executing

It is at the stage of the project the plan is implemented. It usually follows the planning stage of the project and involves two major activities namely, performance and coordination of the planned work. Most project resources are expended and cost incurred at this stage. Therefore, commencing executing stage before thorough planning does not just invite trouble but increases the risk profile of the project. The performance and coordination steps of the executing stage involve budgeting and work authorization, human resources management, real-time outcomes, change request inclusion, work coordination, progress reports and real-time performance review (Haugan, 2011; Uzair Waheed, 2015).

iv. Controlling

Project control is performed concurrently with the executing stage. At this stage, the project manager measures the actual work done and controls it against what should have been done as per the project plan. This stage of project requires the collation of actual performance data; comparison of actual performance with planned cost and schedule baselines; identification of trends and significant variances; variance impact analysis

of project objectives; initiation of corrective actions and re-planning of the work(s), where necessary (Haugan, 2011; Uzair Waheed, 2015).

v. Closing

Mr. Vice-Chancellor sir, despite the temporary and time-bound nature of projects, the realization of the project objectives do not necessarily mark the end of the project and the team's activities. The sub-steps of the closing stage of a project include close-out report; customer agreement; archiving of project data and lessons learnt documentation (Haugan, 2011). The closing stage of the project evaluates the efforts of the total systems and keeps details of all the quantity and type of materials, personnel, plant and equipment and other relevant resources utilized in the execution of the project and key lessons learnt.

All these data are collated, indexed and archived in an orderly manner as organizational assets for future use (Kerzner, 2017). It is worthy to note that irrespective of the target end-users and scale of the project, project-based activities are generally goal-driven; therefore are founded on knowledge-based processes that optimizes citizen satisfaction (Andawei, 2015:1; Andawei, 2014:4).

Project Management Knowledge Areas

My Vice-Chancellor sir, project management knowledge areas are prerequisite processes that must be completed to achieve proper and effective project management. It is important to note that project management knowledge areas and process groups are interconnected; such that they interplay in the project management framework. *PMBoK® Guide,* identifies ten knowledge areas that are common to most projects, which include:

Integration Management: involves project charter development; management of project knowledge and works; project monitoring and control; integrated change management and project close-out. These processes help to aggregate and coordinate other project management processes.

Scope Management: includes definition, planning, validation and control, requirements collection and creation of work breakdown structure. These steps define the ordered series of actions, required to enable the inclusion of all relevant works for project success.

Schedule Management: focuses on the ordered series of actions required to ensure that projects are completed within established time lines. For this to happen, the project team must simplify the project by defining the project activities, determine their logical sequence, estimate the activity durations and develop and control project schedules.

Cost Management: includes the sequence of events that help to plan, estimate, budget, finance, manage and control project's cost such that projects does not experience budget slip.

Quality Management: includes an ordered series of actions undertaken by the performing organization which help to define issues of policies, objective and key responsibilities on project quality such that stakeholder expectations are not compromised.

Resource Management: focuses on the ordered series of actions that support project organization, management and team leadership. It includes activity resource estimation, resource acquisition and control, development and project team management.

Communication Management: includes the sequence of events that help total project information management process ranging from information planning, collection, creation, dissemination, storage and retrieval processes.

Risk Management: focuses on the ordered series of actions help to ensure that project risks are identified, planned, analyzed, controlled and appropriate risk response plans are initiated for effective project performance.

Procurement Management: describes the sequence of events required for the purchase or acquisition of products, goods and services including procurement and solicitation planning.

Stakeholder Management: includes the sequence of events that help the project team to single out persons and organizations that shall have an impact on project activities; and develop appropriate strategies for genuine and effective engagement process that is inclusive and end-user (citizen) driven.

Public Sector Projects

Mr. Vice-Chancellor sir, public sector projects are micro-components of public infrastructure that are funded principally with public revenues (taxes and mineral resources) and formulated and executed by public agencies - ministry, department or agency on behalf of national, state or local Government. Kassel (2010) as cited in Gasik (2016) in corroborating the above view, opined that public sector project outcomes are intended principally to deliver economic and social benefit to the larger public.

History had it that the Great Pyramid of Gaza, one of such projects, had a duration of twenty(20) years and engaged more than 200,000 salary-earners. In the same vein, the post-world war II Marshall Plan which supported the rebuilding of Western Europe was said to have distributed in excess of $13b in technical and economic assistance within four years of its existence(Wirick 2009). He emphasized the relevance of public sector project outcomes to the citizen's living standard as symbolizing the effectiveness of government agencies. Secondly, considering the increasing utilization of projects as vehicles to operationalize public policies and programmes for service delivery, an understanding of the public sector space is therefore key (Waldt,2011).

Nature of Public Sector Organizations

Mr. Vice-Chancellor sir, the public sector organization theory was claimed to have been first found in the work of Plato evaluating the *development of the democratic city-state*. He argued that individuals are not independent of each other; but that everyone needs the help and support of others in the provision of necessities of life (Callender. 2001). This implies that an individual is too small to provide for his personal needs and as such requires the support of others from time to time.

In the English speaking world, the emergence of public sector organizations could be traced to the valiant William the Conqueror, who in 1066 developed and utilized instruments of public institutions to support the financial capability of the British monarch. However, in the 80s, citizens became more aware of their rights such that they began to call for accountability and delivery of programmes and policies that support their welfare. The increasing public awareness eventually forced most governments to re-think the public sector management regime (Callender, 2001).

Public sector organization are not just different from private organization but are of several different types.

Wirick (2009) sees public sector organizations as public agencies responsible for the provision of services which include municipal utilities - water, electricity and waste water, on a self-supporting basis. Some exist as commissions to set standards for the industries - telecommunication, commerce, transportation, financial and other service-sectors of the economy, others act as compliance watchdogs to other agencies. Given the above, I have established that public sector agencies or organizations are highly regimented and operate within the legal framework to advance public good.

Challenges of Public Sector Organizations

Mr. Vice-Chancellor sir, in highlighting some of the difficulties in the public sector project management, Wirick (2009) posited that although the key reason public sector organizations exist is to create outcomes that serve the larger public, the product and service delivery process is not without difficulties. The reasons based on my research include but not limited to the following.

Firstly, the process sometimes complicates the management of these agencies and their projects. This is because the process of identifying the project objectives is made much more difficult and complex as the "public"

itself has difficulty in clearly defining its expectations (Kwak, Liu, Patanrakul and Zwikael, 2014).

Secondly, evaluation criteria for public sector projects are more complex than the simple measures of performance which are usually applicable in the private sector. Thirdly, while the schedule and budget performance of public sector projects can be evaluated with ease as with the private sector projects, their impact on the public is sometimes difficult to assess and measure. The fourth area of concern in public sector project management is the interwoven multiple oversight mechanism of public sector agencies.

Usually, the extant laws establishing public agencies also provides the regulatory framework that governs their operation. Most public agencies operate under the oversight of elected executives such as governors or presidents; or elected legislative bodies such as state house of assembly or national assembly or congress and their authorized agents or oversight agencies such as bureau of public procurement, budget office at the state and federal levels and so on. Furthermore, the overlapping and sometimes overbearing oversight mechanisms of these regulatory agencies is one of the major constraints in

the attainment of business like objectives of public sector agencies (Wirick, 2009).

It is worthy to note that most public sector projects have very short planning periods due to tenure constraint of elected officials that oversee them. In trying to keep to their vague and sometimes unrealistic electoral promises, elected officials often have little or no time for project planning. As such, public sector projects do not have sufficient time to follow-through the established project planning processes.

The sixth area of concern is the hostile political environment that public sector projects contend with. Each public sector project is often a subject of conflict between the government and the opposition party thereby making public sector projects veritable theatre of war between opposing political parties. Even in situations where there is glaring evidence of misjudgement by government agencies, elected officials often times give flimsy excuses to justify their nepotistic and self-serving actions (Kwak *et al* 2014).

Public Sector Project Delivery Process

Mr. Vice Chancellor sir, it is uninspiringly true that the

operating environment of public agencies, innations like Nigeria where institutions of state are weak and seemingly compromised, is toxic, and as such is not likely to deliver citizen-centered project outcomes. The reasons are not far-fetched. Firstly, the clumsy project development cycle of public sector projects in itself is an invitation to failure as it passes through multiple oversight agencies, legislative and supervisory alike.

A typical public sector project in Nigeria for example, passes through six critical stages before deliverables are realized: i.e. initiation, budgeting, procurement, execution, monitoring and control and closure. Given that the derivable value of project outcomes depend largely on how well such projects are initiated, funded and procured, my research had found initiation, budgeting and procurement as the key in the public sector project cycle (Oguara and Andawei, 2018).

Initiation

As in the private sector, this is the first step in the project development cycle. It is considered as the most important phase particularly for public sector organizations. This is because, it is at this stage that the initiators will determine the social, technical and financial feasibility and how well

project outcomes align with policy initiatives of such organizations and the expected derivable value to the larger public (Haugan, 2011).

In most major public sector projects, the initiation stage itself is treated as a project the reason being that the decision to undertake a particular project over several others is taken at this stage and is usually based on informed opinions from economical, technical, financial, social and in some cases political experts(UNIDO, 1986).

In multi-faceted projects where the outcomes affect several strata of the larger public, effective stakeholder engagement is often recommended at the very beginning of the initiating phase of the project; as poor stakeholder engagement results in project outcomes that are unconnected with customer needs. Stakeholder engagement helps clients in both public and private sectors to discern the otherwise hidden customer/citizen needs which forms the rationale for project selection (Trentim, 2015).

The stakeholder theory was first propounded by Edward Freeman in 1984 when he identified some groups of individuals that are capable of disrupting the operation of

the organization and recommended strategies to manage their expectations and divergent interests (Trentim 2015). Bryson (2004) cited in Trentim (2015) defined stakeholder as:those individuals or group of individuals or organizations that should be taken into account by the project team. Stakeholders generally help the project team to achieve its objectives where they are managed properly; conversely they can also affect the project and its outcome where they are poorly managed. While stakeholder categories are determined by the nature of project, their effective engagement is crucial to the successful delivery of project outcomes (Trentim, 2015; DPAC, 2011; Egeland, 2009).

Budgeting

Mr. Vice-Chancellor sir, budgeting is the second phase of the public sector project development cycle. In Nigeria and most nations of the world, it is a constitutional requirement that elected executives seek legislative approval to spend public funds (S.78(2)(3)(4) CFRN 1999). This is done through the instrument of annual budgets. These annual budgets, which are proposals in the first instance, discloses the proposed capital and recurrent expenditures of the government - national, state or local thus stating their sources of funding (S.79(1) (2) CFRN 1999).

In Nigeria the annual budgets are preceded by a Medium Term Expenditure Framework (MTEF). It is a three (3) years expenditure plan that sets out the expenditure priorities and key budgetary constraints that form the basis for sector planning and development. Usually, the MTEF and the annual Fiscal Strategy Paper (FSP)that provides the basis for annual budget planning requires legislative approval (Philippe, 2002).

The legislature, in exercise of its oversight function, usually request the heads of spending units: ministries, departments and agencies of government whose expenditure and revenue proposals are contained in the budget proposal to appear in person with their management teams to defend their respective budgets. This process may take three months or more depending on the speed of the legislative committees and the relationship between the two arms of Government (S.79(1) (2) CFRN 1999).

As noted in my research, in Nigeria and most presidential system of government, the power to appropriate funds is vested in the legislature; and as such, it is illegal; for elected executives to spend public funds on any project without appropriation by the appropriate legislative organ

of Government (S.78(2)(3)(4) CFRN 1999). In most cases these legislative privileges are abused resulting to reckless increase in some capital and recurrent expenditure items commonly referred to as "*budget padding*."

Procurement

Mr. Vice-Chancellor, procurement commences as soon as the executive receives legislative approval which makes the budget an Act of national, state or local legislative assembly. The implication of this is that, the executive can no longer have powers to change or amend any part of the Act without recourse to the respective legislative arm of Government.

In Nigeria, the procurement of public sector projects is governed by the Public Procurement Act of 2007 as amended (PPA, 2007). It was enacted principally to achieve economy, efficiency and value for money through the use of competitive and transparent processes to procure goods, works and service for ministries, departments and agencies of the Federal Government of Nigeria. It involves the following: pre-qualification of suppliers and contractors, invitation to tender, bid opening, bid evaluation and determination of the winning

bid. The bid process is therefore a search process that enables the client to select the appropriate contractor to execute the project at the right price and within a reasonable time (PPA, 2007).

Pre-qualification: This is the first step in the procurement process, where notice is given to all interested contractors and suppliers of goods, works and services to submit relevant company documents. The notice is given through an advert in national newspapers, notice boards or official websites of procuring entities. Where such notices will be given is determined by the size and complexity of the proposed works. A project whose value is not more than =N=5billion is to be procured through national competitive bidding.

The advert is placed in at least one national newspaper, a public notice board and the website of the procuring entity. Projects whose value is more than =N=5billion are to be procured by international competitive bidding, The advert is to be placed in at least two national newspapers, one international newspaper and the website of the procuring entity. The advertisement is necessary because it gives all participating contractors equal access to information, enhances competition, efficiency and

transparency, the hallmark of procurement process outcome (Oguara and Andawei, 2018).

The pre-qualification advertisement must have the following information: name and address of pending unit/procuring entity, brief description of procurement, scope of work, location of work, place and deadline for submission and criteria of pre-qualification documents. The two basic pre-qualification criteria are responsive and non-responsive criteria. The responsive criteria includes: evidence of incorporation, evidence of tax clearance for the past three (3) years and evidence of value added tax registration and tax identification number. The non-responsive criteria are: evidence of financial capability and bank support, evidence of technical competence, list of similar projects executed and knowledge of project location. Usually only bidders that meet all the responsive criteria and seventy percent (70%) of the non-responsive criteria are pre-qualified for the next stage of bidding. Where none of the bidders meet the above benchmark, the procuring entity shall be required to call for fresh pre-qualification exercise (Andawei, 2008).

Invitation to Bid: The pre-qualified bidders are issued the following bid documents: working drawings, bill of

quantities, form of tender, conditions of contract and articles of agreement to enable them submit both financial and technical bids. The invitation to bid must state the date, time and place of submission. Bids received after the closure of the deadline and those that are unduly qualified shall be rejected.

Bid opening: The bids are opened immediately after the close of the bidding period. It is a standard practice that the opening is done with the bidders and the public represented and bid figures announced and recorded openly.

Bid evaluation: The bids are then evaluated by either the procuring entity or their representatives (consultants) strictly based on the pre-qualification criteria. Some of the technical considerations for evaluation are the pricing policy of the bidders and the project duration.

Winning Bid: The bid that is most responsive and has the lowest project cost is usually considered as the winning bid. Nevertheless, a bid that is unreasonably low might be rejected.

Compliance Review: Upon the determination of the winning bid, the procuring entity shall forward to the Bureau for Public Procurement for compliance review. The letter of request by the procuring entity is accompanied with bid returns for the award of contract. These includes background documents, bill of quantities, working drawings, advertisement details, pre-qualification details, pre-qualification evaluation report, evidence of invitation and bid evaluation report. The essence of the compliance review is to ascertain whether the award process of the contract is right, whether the winners is right one and whether the cost of award is right. The review will likely result in three outcomes as follows (Andawei, 2008).

Outcome A: Where the process is right, the cost is right and the winner is right. The Bureau of Public Procurement will issue a "Certificate of No Objection" for the contract award for the approval of the Federal Executive Council.

Outcome B: Where the process is not right, the Bureau of Public Procurement shall decline the issuance of the "Certificate of No Objection." The procuring entity will be required to re-procure.

Outcome C: Where the cost is not right, the Bureau of Public Procurement shall decline the issuance of the "Certificate of No Objection." The bureau shall reduce or increase the project cost to a fair and comparable amount for the approval of the Federal Executive Council.

Despite the many inadequacies of public sector organizations and the complicated project management framework, the project outcomes are seen as key performance of governance indices.

Public Sector Projects and Good Governance

Mr. Vice-Chancellor sir, the World Bank in its effort to support less developed countries in Africa, identified lack of good governance as the main challenge of Africa's development (Gisselquist 2012). Like other international donor agencies, the World Bank believes that the rate of economic growth in Africa would have been better if the leadership in the continent has embraced good governance. It is their conviction that good governance will to a great extent guarantee judicious utilization of support funds from donor agencies and speedy delivery of project outcomes that supports citizens.

Gissel quist (2012) and Ibaba (2020) maintained that good governance which essentially promotes citizen participation and operates within rule of law, transparent and responsive, builds consensus and inclusive and equitable, efficient, effective and accountable, has the potential to deliver outcomes that meet the needs of the larger public within available resources.

Project success and the triple constraint concept

Traditionally, every project irrespective of the sector, operates within three criteria of time, scope and cost. Over the years project success has been measured using these three factors commonly referred to as '*triple constraints*' or "*the iron triangle*".

Figure 1.7 Triple Constraints
Source: *Adapted from Flat Rock Outsourcing 2020*

The concept of triple constraint or iron triangle came into existence over seven decades ago and was considered as one of the important theories in project management practice. The underlying principle of this concept is that every project, irrespective of size and complexity is subjected to time, cost and scope limitations and that understanding the interactive behavioral pattern of these constraints is key to project success(Everitt, 2020).

Time constraint

One of the key characteristics of a project is that, it has beginning and end dates. Between these two extremes is the project's time constraint. The project team is therefore under pressure to meet major milestones, phase deadlines and deliver the project deliverables within the established project duration. Successful completion of a project within the time limitation requires proper scheduling and effective time management.

Scope

Projects are initiated to provide solutions to existing problems through deliverables. The scope therefore defines the detail of work required to deliver deliverables that are functional and customer-centered. It includes the

project goals, features and functions of the deliverables and the task required to produce such deliverables.

Cost

The cost constraint defines the extent of financial resources available for the execution and completion of the project within the established schedule and scope. It is important to note that project funds are not unlimited and are expended on materials, labour and plant and equipment and other project related tasks throughout the life of the project.

In emphasizing the relevance of the concept in project success, Everitt (2020) opined that tradeoffs between all the three sides of the triangle is required. She argued that the visual reminding capability of the triangle is an added value. It is therefore important to plan and manage project budget, schedule and cost in integrated manner.

Mr. Vice-Chancellor sir, despite the age-long acceptance of this veteran concept in the project management space, it is not devoid of criticisms particularly with the ever changing processes and customer needs. In one of such criticisms, Baratta (2006) submitted that the triple constraints concept is a triple illusion and that it is both

wrong and not useful as a model. He argued that most of the assumptive outcomes of the triple constraints are not realizable.

For instance the concept says that you must increase the project cost to shorten the project schedule and that an increased project scope attracts an increased project cost and schedule. He cited examples of projects that are over budget that are not on schedule and also others that are both late with budget overrun. In his view, these outcomes are at variance with the triple constraints concept. He contended that whereas time is a fixed factor expressed in terms of money, time in itself is a relative factor such that a dollar on every project - small or large has the same value. On the contrary, the impact of one month delay may not necessarily be the same for all projects. Baratta (2006) posited further that the use of cost and time as the only measure of project success is not comprehensive enough; given that projects delivered within time and cost constraints do not necessarily deliver business value and vice versa.

In an attempt to address these deficiencies, he proposed the *value triple constraint* which considers business value as the key determinant of project success. This model

derived its inspiration from Hartman's (2000) quote as cited in Baratta (2006) which says that "*long-term return gained on investment is the best benchmark for project success*". In this model, Baratta (2006) considered value, which is the summation of project benefits(+), cost of identifying opportunities(-), decision opportunity cost (-), cost of project schedule(-) and delivery cost(-), as central to project success.

Given that projects are principally undertaken to deliver value to the target customers (the end-users), he argued that project value is a function of project scope and process capability as stated in the following equation.

$$\text{Project value} = f(\text{scope, capability})$$

Mr. Vice-Chancellor sir, in advancing the superiority of his claim over the triple constraints concept, Baratta (2006) identified some key benefits of the *value triple constraints*. Firstly, the model enables users not only to measure project's value but also measures value against planned value of each project or portfolio of projects. Secondly, the model enables the service providers (management) and the intending customers (end-users) to jointly identify and quantify measureable project benefits.

Thirdly, the model has the capacity to compel service providers to establish and accept the intended project benefits. Fourthly, the model provides a platform for the project manager and his team to engage all relevant stakeholders to deliver greater project benefits.

Given that public sector organizations are established essentially to deliver project outcomes for the sole benefit of the community (larger public), application of value-driven concept such as the value triple constraints has the potential to improve citizenized project outcomes in the public and private sectors.

Project Citizenization

Mr. Vice-Chancellor sir, the concept of *project citizenization* is new in the project management vocabulary. Since the advent of the triple constraints in the project management space in the 1950s, project success have been measured by performing the work within time, cost and scope boundaries (Kerzner and Saladis, 2009).

Project citizenization views the use of the triple constraints as the only determinant for project success as skewed and inadequate and insist that completing a

project within the triple constraints do not necessarily guarantee value-driven project outcomes for the client and customers.

The concept therefore shares and rely on the works of Baratta (2006) and Kerzner and Saladis (2009), who separately considers business value as central in evaluating project success. Kerzner and Saladis (2009) opined that the relationship of customer expectations of quality and usefulness of the project outcome in the short, medium and long-term and the amount expended on the project activities more important than the triple constraints. They argue that the standard definition of project success should be modified to include business components of value and in more specific terms product availability, operability, reliability, maintainability and social and cultural acceptability. They believe that project success is not automatically achieved by completing its activities within the defined time, cost and scope baselines, but when the intended business value is achieved within the time, cost and scope baselines, which is the focus of project citizenization.

In agreeing with the above submissions of Baratta (2006) and Kerzner and Saladis (2009), project citizenization

holds that, the value of project outcomes is more important to the citizens than the triple constraints. Essentially, public sector projects are expected to turn-in, goods and services as project outcomes capable of yielding economic, social, financial and environmental value; thereby improving the living standard of the larger public.

Project citizenization therefore considers citizen interest or public good central in public sector project formulation and implementation. In this framework, goods and services provided through the implementation of public sector projects are seen to be sold in the public market space where the citizens are the only customers; such that citizen interest is treated as the overriding factor in their evaluation process, within the time, cost and scope constraints as illustrated in the figure below.

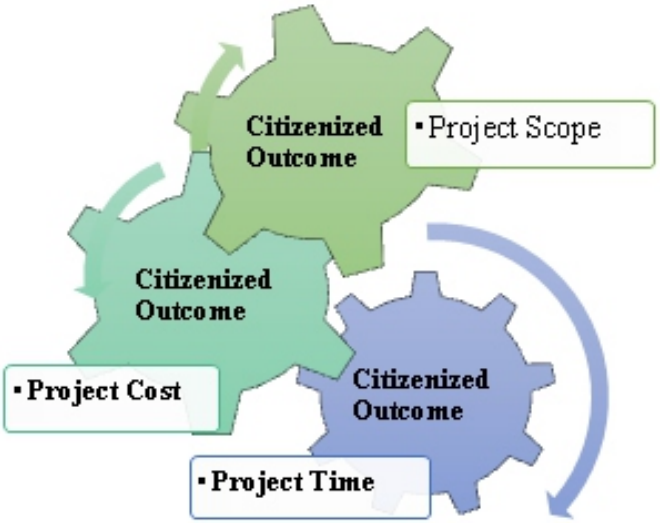

Figure 1.8 Triple Constraints and Citizen Interest

Mr. Vice-Chancellor sir, these citizen needs are processed as requirements of the project outcome and treated as mandatory criteria for selection in the citizenization framework. As evidenced in Nigeria, most public sector projects are at cross purpose with the needs of the larger public on whose behalf they are implemented. One of the reasons for this contradiction is the inability of public infrastructure providers to allow for detail and rational evaluation process. Secondly, most elected officials that drive the public infrastructure provision process in

Nigeria and most developing nations lack the required skill set and competence to deliver good governance (National Impact, 2018).

Thirdly the inability of citizens to understand the power of customers in the public sector project space and the blind reluctance to demand for services and products that add value to their lives from the public infrastructure providers has significantly contributed to the present deficient state of public infrastructure. Following the above, I think strongly that elected officials of Government, who has responsibility to deliver good governance and the citizens, who are the customers and end-users of project and programme outcomes, are key players of the project citizenization framework.

How do we Citizenize Public Infrastructure

The Citizen Participation

There is no gain saying that public organizations exist principally to utilize pubic funds for the good of the citizens through the legal instruments of state. Citizens therefore have a critical role to play if public agencies must adhere substantially to the principle of public interest. As established in my studies, public sector project management framework includes initiation,

budgeting, procurement, execution, monitoring and control and closing. Regrettably, all these processes are administered by either elected officials or their appointees at different levels of Government who are products of the electoral process.

The implication of this is that the type of public infrastructure formulated and implemented largely depend on the competence and sense of service of such office holders or their appointees. It therefore behooves on the citizens to take their destinies in their hands by actively participating in the political process through which these officials emerge; such that, credible individuals who understand and believe in the principle of public good are elected.

Secondly, citizens should show increased interest in the budgetary and procurement process of Government. This can be done through constructive engagement of elected officials and active participation in public hearings, budget defence sessions and other executive and legislative processes that eventually births public infrastructure. Thirdly, citizens should leverage on the power of community-based organizations and other constitutional windows to hold elected officials accountable (Omidiji, 2010).

Policy, project and programme alignment

Projects essentially serve as frameworks through which policies of Government are implemented globally; such that the type of projects formulated and implemented by a given Government shows its priorities and policy direction. For instance, initiating an airport project within the policy framework of poverty alleviation can be seen as clear misguided priority. This is because committing public funds for such huge project in a state where there are no immediate export potentials is a clear disconnection between the policy framework and project and programmes. It is therefore important for public infrastructure providers to create the needed convergence between public policy initiatives and projects whose expected outcomes will promote citizen welfare.

The national profitability analysis

One of the key challenges in public infrastructure delivery is the inability of providers to properly identify and select projects that add real social, economic and environmental value to the citizens. For this to happen Andawei (2015)suggested the use of appropriate evaluation techniques to establish the project's operational and managerial efficiency, technical, financial, economic, social and environmental viability.

Usually, the choice of technique adopted is determined by the project size, its complexity and the objective of the executing agency. For public sector projects, evaluation techniques that help to measure a project's direct and indirect contribution to the economy of citizens and the nation are usually adopted.

One of such techniques is the *national profitability* analysis (UNIDO, 1986).The national profitability technique, utilizes social rate of return, identify the project's costs and benefits and assesses the indirect (linkage) effects of the project. It is worth noting that national profitability analysis is multi-dimensional in nature and as such it requires contributions from experts such as *quantity surveyors, project managers, architects, builders, urban and regional planners, surveyors and valuers, environmentalist, sociologist, economists, political scientist*s, *engineers* and a host of others.

Following the findings of my research on this subject matter, I strongly recommend that competing public infrastructure projects should be subjected to *national profitability analysis* as a pre-budgetary process; such that, only projects that meet the required social, economic and environmental benchmark are considered in the

medium term expenditure framework and annual budget of public institutions.

The Civil Society Organizations

Mr. Vice-Chancellor sir, in the world-over, civil society organizations are seen as non-profit advocacy groups that promote citizen welfare. They usually play important roles in all processes that encourages transparency in the conduct of public businesses and ensure that the tenets of good governance are realized. One of such ways to achieve these key objectives is by actively engaging elected officials of governments or their appointees on budget formulation and implementation as well as transparency in public expenditure management by leveraging on the expert support of a knowledge-based "*community of experts*".

The community of experts are a group of subject matter experts who are willing to volunteer their expertise and act as watch-dogs on behalf the communities. As advocates for the communities, the community of experts usually engage elected officials on transparency, accountability, value for money and inclusiveness in the conduct of government business, particularly in public infrastructure provision. Given their successes over the

years in the social and political fronts, it is my considered view therefore that, their deployment in the public infrastructure delivery space will strengthen the citizenization efforts of public infrastructure.

The Religious and faith-based organizations

It is incontrovertibly true that the essence of public sector projects is to utilize public funds through projects and programmes to promote social, economic, and environmental satisfaction in the lives of the larger public. In agreement with the above assertion, Solomon in Proverbs 29 verses 2 and 7 emphasized the importance of righteous governance in public organization as key in the delivery of citizen-centred project outcomes. According to him, the larger public rejoices when the righteous is in authority because the righteous consider the needs of the poor and vulnerable as key components of their project evaluation framework.

Following from the above and given that righteousness is one of the key fundamentals of churches and other religious and faith-based organizations and most of these individuals leading these public institutions are part of their congregations, religious leaders should return to their core mandate of righteous teaching and amplify the

ongoing advocacy for good governance by openly admonishing erring leaders of public institutions.

Conclusion

Mr. Vice Chancellor sir, my research works over the years have substantially established that public infrastructure is provided principally for the social, economic and environmental advancement of society. Project citizenisation is therefore, driven by the principle of inclusivity and the urgent need for infrastructure providers to be responsive to citizen needs in the project and programme formulation and implementation framework; given that citizens who form the larger public and key stakeholders in the public infrastructure space and joint owners of the funds, are usually left to bear the consequences of the project outcomes - good or bad.

Their participation and or at least the inclusion of their needs in the public infrastructure development framework is therefore very crucial. It is my conviction that well citizenized projects and programmes will enjoy wide stakeholder acceptance and create project outcomes that support the social, economic and environmental life of citizens thereby aiding economic growth. A citizenized project management framework also has

the potential of increasing public stake in public infrastructure, thereby enhancing community ownership and protection. A citizen-centered project that addresses the economic and social needs of the larger public is more likely to attract funding support from the private sector and international donor agencies.

Given the ever-widening funding gap of the nation's public infrastructure and the narrow fiscal space available for self-financing in the face of shrinking revenue, it is my considered submission therefore that the adoption of project citizenization in the public infrastructure management space has the potentials to optimize the nation's scarce resources in favour of the larger public.
Thank you.

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NDU 46TH INAUGURAL LECTURER

Meeting Mee-Edoiye Andawei

B.Tech. (RSUST) M.Sc. Ph.D. (FUTO); FNIQS; PMP; MCArb
Professor of Quantity Surveying and Project Management
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ABOUT THE INAUGURAL LECTURER

Qs. Prof. Meeting M. Andawei hailed from Tugogbene-Opuama in Southern Ijaw Local Government Area of Bayelsa State. He was born on October 3, 1965 at Tugogbene to the family of late Mr and Mrs Andawei Tugo and had his primary education at State School Tugogbene-Opuama between 1972 and 1978 and secondary education at Government Secondary School Opuama between 1978 and 1983, all in Southern Ijaw Local Government of Bayelsa State.

He attended the prestigious Rivers State University of Science and Technology Port Harcourt (now Rivers State University) and obtained a Bachelor of Technology (*B.Tech*.) degree in Quantity Surveying (Second Class Upper Division) in 1989. He then proceeded to the famous Federal University of Technology Owerri and obtained his Master of Science (*M.Sc.)* and Doctor of Philosophy (*Ph.D*.) degrees in Project Management in 1997 and 2005 respectively.

He joined politics in 1990 and was elected Vice Chairman and appointed Supervisory Councillor for Works and

Housing in Yenagoa Local Government Council in the old Rivers State between December 1990 and August 1991. He later joined AES Consultants, a Quantity Surveying Consulting firm, as Project Quantity Surveyor in 1991.

He formally joined the academic world in 1997 when he was employed as an Assistant Lecturer in the Department of Quantity Surveying in the Rivers State University of Science and Technology Port Harcourt (now Rivers State University). He was later employed as Lecturer 1 in the Department of Civil Engineering, Niger Delta University, Wilberforce Island, Bayelsa State in November 2006 and became the Acting Head of the Department ten years later. During his period of headship, he worked assiduously with other members of staff of the department and secured full National Universities Commission (NUC) and COREN accreditation for the Bachelor of Engineering (*B.Eng*.) Civil Engineering Programme.

Qs. Prof. Meeting M. Andawei served as Special Adviser on Economic Matters to the Government of Bayelsa State between June 2003 and May 2005. He also served as Technical Assistant-Quantity Surveying to the Executive Director, Projects - Niger Delta Development Commission (NDDC) between 2009 and 2011.

Qs. Prof. Meeting M. Andawei who is the Dean of the Faculty of Environmental Sciences, Niger Delta University, is an accomplished scholar with several publications to his credit. He is a Fellow of the Nigerian Institute of Quantity Surveyors (FNIQS); a Registered Quantity Surveyor (RQS); a Registered Member of the Nigerian Institute of Chartered Arbitrators (MCArb); a certified Project Management Professional (PMP) and a minister of the gospel of Jesus Christ. He is happily married to Pst. (Mrs) Pere M. Andawei and they are blessed with Diriebi, Tuebi, Emmanuella, Samuel and Emmanuel.

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