



The Nigerian Engineer

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Harnessing Engineering Solutions for a Thriving Blue Economy in Nigeria

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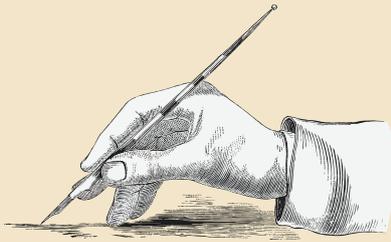
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The Nigerian Society of Engineers shall be one of the very best Engineering professional bodies in the world.



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1. The Nigerian Society of Engineers is dedicated to the provision of quality services aimed at embracing professional competence and development of its members at all times.
2. The Nigerian Society of Engineers is also committed to focus on collaboration with, influencing and providing quality advice to the various arms of Government, industry, commerce, academia and the society at large for the purpose of upliftment of the country as a whole.
3. The Nigerian Society of Engineers shall make meaningful contributions to the advancement of technology worldwide.



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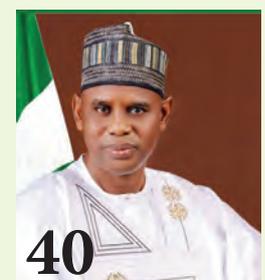
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Blue economy is, fundamentally, a conversation about optimizing ocean resources for economic growth, improved livelihoods, and the creation of sustainable jobs while simultaneously preserving the aquatic ecosystem. These resources include fish stocks, minerals, energy, shipping lanes, recreation, and more that have existed since creation with largely untapped potentials.

These are nature-bestowed wealth waiting to be creatively harnessed with the right technologies and skills.

The oceans produce up to 80 percent of the Earth's oxygen, support billions of livelihoods, and carry over 80 percent of global trade. Yet for Nigeria, a maritime nation blessed with 853 kilometers of coastline and extensive inland waterways, much of this vast potentials remain dormant, pointing to an urgent need for innovative exploration and utilization without avoidable degradation or collateral damages.

The blue economy is not merely an abstract policy, it encompasses vital sectors such as fisheries, aquaculture, renewable ocean energy, maritime transport, logistics, coastal tourism, shipbuilding, marine biotechnology, and ocean-based pharmaceuticals. Together, these represent a \$296 billion opportunity, according to projections from maritime authorities, and the key to diversifying Nigeria's economy beyond reliance on oil. Proper stewardship can enable high-value industries, generate millions of jobs, and ensure food security and climate resilience for coastal communities. However, Nigeria currently loses billions of dollars yearly due to inefficiencies, weak governance, infrastructural neglect, and environmental threats to our marine ecosystem.

This edition of the Nigerian Society of Engineers (NSE) Magazine arrives at a watershed moment. Our profession has an unprecedented chance to

Engr. Felicia Nnenna Agubata, PhD, FNSE

Chairman Editorial Board

lead national revitalization by focusing on engineering solutions to blue economy's challenges. Through world-class design, robust infrastructure, smart technologies, and expert project management, engineers are central to unlocking oceanic wealth while safeguarding precious marine habitats for future generations. The importance of this publication is clear: it prepares our minds and spurs us to meaningful action ahead of the Annual Conference scheduled for December 2025, themed "Engineering Innovation for a Sustainable Blue Economy". Every article, interview, and insight inside is tailored to ignite forward-thinking conversations and practical steps for advancing Nigeria's maritime future.

At the heart of these efforts are the remarkable achievements of Engr. Margaret Aina Oguntala, FNSE the dynamic NSE President whose strategic leadership has redefined our profession's national influence. Her partnership with the Bureau of Public Procurement (BPP) established frameworks for integrating engineering excellence into government projects. Her meeting with Professor Nentawe Yilwatda; the National Chairman of APC, yielded a sincere reaffirmation of the party's commitment to engineering-led development at Nigeria's highest political level. These high-level engagements demonstrate the rising visibility of the engineering profession as a catalyst for national transformation.

Excitingly, on the "Top Engineering professionals: Who's where" feature are the First ladies of Oyo and Borno states; Engr. Mrs Tamunominini Makinde FNSE and Engr. Dr. Habiba Umara Zulum FNSE, APC National Chairman Engr. Prof. Nentawe Goshwe Yilwatda FNSE among others.

Within these pages, seasoned engineers have laid bare Nigeria's longstanding maritime challenges and presented concrete, actionable solutions for sector-wide revitalization. Through detailed articles and interviews with technical elites and stakeholders, you'll encounter recommendations ranging from smart port infrastructure and automation to building climate-resilient coasts, encouraging sustainable aquaculture and eco-tourism, and enabling marine research and innovation. These insights reflect not just expertise but also genuine passion to see Nigeria's blue economy thrive sustainably and inclusively.

We encourage all Readers to immerse themselves in every page of this magnificent magazine. The knowledge and vision contained within can transform not only individual perspectives but also the future course of Nigeria's maritime economy. Let each story inspire fresh thinking, strategic collaboration, and bold action steps. Knowledge is not enough, it must be actioned to advance human civilization.

The challenges ahead may be complex, but the opportunity is vast, and with engineering ingenuity, Nigeria's blue economy can truly become a beacon of prosperity and sustainability for generations to come.

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Harnessing Engineering Solutions for a Thriving Blue Economy in Nigeria



Engr. Olusegun Toluhi, PhD, FNSE

Introduction

Nations across the world are increasingly turning to the ocean and coastal environments as new frontiers for economic sustainability (growth and innovation). This shift appears to have fully crystallized into the concept of the blue economy—the sustainable use of ocean resources for economic development, improved livelihoods, and environmental health. The blue economy is estimated to contribute more than \$1.5trillion annually to the global economy, with projections suggesting it could double by 2030. For coastal states such as Nigeria, the blue economy represents not just an untapped wealth of resources, but also a pathway to diversify economies, create jobs, and strengthen economic resilience in an era of global change.

Nigeria's geographical advantage is undeniable. With over 850km of coastline along the Gulf of Guinea, extensive inland waterways,

a vibrant fishing tradition in the Niger Delta and the northeast, and some of Africa's busiest ports, the country is well-positioned to anchor a robust blue economy. However, this potential remains largely underutilized due to infrastructural deficits, weak governance frameworks, maritime insecurity, and environmental degradation. At the heart of overcoming these challenges is the role of engineering solutions—the application of innovative technologies, design, and systems thinking, to harness resources efficiently, sustainably, and profitably.

To unlock Nigeria's blue economy, the call is imminent on the deployment of practical engineering solutions that is not only capable to harness existing potential in the management of its coastline but is enhanced to respond to further changes as it explores sector-specific opportunities, identifies persistent challenges, and outlines pathways for building a thriving,

sustainable maritime future. If Nigeria's blue economy must thrive, it must strive for excellence.

The Promise of the Blue Economy in Nigeria

Nigeria's blue economy straddles diverse sectors, each of which can be catalysed by engineering innovation. The Nigerian maritime transport and shipping sub-sector however remain pivotal, as more than 90% of Nigeria's international trade by volume is conducted by sea. Efficient, technologically advanced ports and shipping infrastructure can drastically reduce turnaround times, cut costs, and boost competitiveness. Nigeria's reality, despite huge expenditure, belies this economic fact.

The fisheries and aquaculture sub-sector is another critical node of the Nigeria's blue economy ecosystem. Nigeria consumes nearly 3.2 million metric tonnes of fish annually yet produces only (40-45) % of this demand domestically.



Engineering interventions in fish farming systems, cold storage, and post-harvest technology could bridge the supply gap, reduce import dependence, strengthen food security, conserve foreign exchange, and consequently improve foreign exchange rates.

Offshore energy also presents significant promise. While oil and gas dominate Nigeria's marine extractive industries, there is growing potential for renewable energy sources such as offshore wind, tidal, and wave energy. Advances in marine engineering make these sources increasingly viable, particularly as Nigeria commits to a low-carbon transition as it eyes a net-zero emissions in 2060 as put forward in her Long-Term Low-Emissions Development Strategy (LT-LEDS, 2024).

Beyond extraction and transport, the blue economy also encompasses marine biotechnology, coastal tourism, marine construction, and desalination—all of which require significant engineering inputs for productive exploitation.

Importantly, regional frameworks such as the African Continental Free Trade Area (AfCFTA) highlights Nigeria's need to modernize maritime infrastructure to remain competitive in continental supply chains. The stakes are pretty high and success in the development of a thriving blue economy in Nigeria will not only diversify Nigeria's economy but also define its role in shaping Africa's maritime future, considering its commanding leadership role in Africa.

Engineering Domains Driving the Blue Economy

Harnessing the blue economy requires targeted engineering expertise across multiple domains for a thriving blue economy:

Maritime and Naval Architecture

The design, construction, and maintenance of vessels and offshore structures underpin safe and efficient marine operations. Nigeria's shipbuilding capacity is very limited, but with engineering innovation, local shipyards could be upgraded

to handle repairs and retrofitting, as she eventually upgrades into full-scale vessel construction. The Asian nations of South Korea and China have clearly shown, in most recent economic history, that naval architecture is a key driver of building robust economies. The Asian pointed investments in smart offshore oil platforms, floating production storage units, renewable installations and responsive ports and harbour management, are efficient models for productive incitement of blue economies that is very easily replicable.

Port and Logistics Engineering

Nigeria's ports—Lagos, Port Harcourt, Calabar, and others—remain constrained by congestion, shallow drafts, and outdated cargo-handling systems. Engineering solutions such as dredging, automated cranes, smart terminals, and intermodal linkages (rail and road) are critical to transforming them into regional hubs. A modernized logistics chain can reduce costs of doing business, while smart-port technologies can increase transparency and efficiency.

Fisheries and Aquaculture Systems

Engineering can revolutionize aquaculture through improved hatchery design, water recirculation systems, aeration technology, and digital monitoring tools. Post-harvest engineering solutions—such as cold chain infrastructure, solar-powered preservation systems, and advanced packaging—are vital in reducing post-capture losses, currently estimated at up to 30% of fish landed in Nigeria.

Renewable and Environmental Engineering

Sustainable exploitation of marine resources demands green engineering. Offshore wind farms, tidal power systems, desalination plants, and waste-to-energy technologies all represent avenues where Nigeria can apply engineering to meet growing energy and water demands. Coastal engineering also plays a role in protecting vulnerable shorelines from erosion, storm surges, and sea-level rise.

Digital and Smart Technologies

Engineering innovation today is inseparable from digitalization. Artificial intelligence (AI), Internet of Things (IoT) devices, sensors, and satellite monitoring can enhance marine safety, optimize logistics, and improve environmental monitoring. For instance, predictive maintenance systems for ships and port machinery can reduce downtime and costs, while remote sensing enables real-time surveillance against illegal fishing or piracy. Effective port and cargo management reduces demurrages and improves consumer pricing which excites the market thereby improving the economy.

Challenges and Constraints

Despite huge potentials and opportunities, Nigeria's blue economy faces persistent challenges that undermine its growth.

Weak regulatory and policy frameworks is cardinal in this regard. The governance of Nigeria's maritime sector is fragmented, with overlapping mandates among multiple agencies. Outdated laws and weak governance structures reduce investor confidence, limit innovation, and encourage inefficiencies. So, with maritime insecurity where Nigeria is largely seen, in recent years, as a global hotspot for piracy, illegal fishing, and smuggling, in the Gulf of Guinea. These activities increase operational costs, discourage shipping lines, and pose risks to workers. Engineering solutions such as advanced surveillance systems can help, even as insecurity remains a systemic challenge requiring multi-sectoral response.

Infrastructural deficits, where ports, terminals, shipyards, and cold-chain logistics are moribund or inadequate if not outdated, impact negatively on possible gains of productive blue economy. Acute gridlocks on access road to ports, underdeveloped inland waterways, and unreliable power supply, are further matters that impinge on the development of a thriving blue economy.

A significant gap in the training of skilled maritime



engineers, technicians, and operators occasioned by weak maritime education and training infrastructure, undermines purpose in the management of Nigeria's blue economy. A consequent brain drain from Nigeria of its scarce skilled labour in the field, exacerbates the problem, as many skilled professionals seek greener opportunities abroad. High capital and operating costs, environmental risks, limited research and development (R&D) and poor technology adoption are veritable issues to which engineering must seek and proffer solutions, if Nigeria must thrive within the global blue economy ecosystem.

The development of a thriving Nigeria's blue economy is no doubt complex, further underscoring the need for analytical minds and responsive implementation methods for sustainable solution. Deliberate engineering is clearly a veritable vehicle for the husbanding and deployment of veritable solutions, for useful policy interventions in the seeming intractability that has bedevilled the management of Nigerian waters.

Pathways and Engineering-Led Solutions

To move away from being a 'perennial' potential to an urgent 'productive' reality, Nigeria need become strategic as she deploys available and feasible engineering solutions across identified pathways:

Reforming Policy and Regulation

Establishing a coherent, enabling regulatory framework is critical. Modernized laws that incentivize investment, enforce environmental standards, and streamline maritime governance will create stability for engineering-driven growth.

Building Resilient Infrastructure

Engineering investments in modern port facilities, shipyards, cold storage systems, and transport linkages must be prioritized. Projects should be climate-resilient, incorporating design standards that withstand extreme weather and sea-level rise.

Human Capital Development

Revamping maritime education and training is urgent. Engineering curricula should be updated, laboratories upgraded, and partnerships established with industry. Exchange programs, scholarships, and mentorship initiatives can build a skilled workforce capable of sustaining the sector.

Digital Transformation

Nigeria should embrace digital engineering for its blue economy. Smart ports, AI-powered logistics, satellite surveillance, and IoT-based aquaculture systems can enhance efficiency and safety. A national marine data infrastructure could provide real-time information for decision-making.

Innovation in Project Financing

Public-private partnerships (3Ps) can unlock capital for large-scale engineering projects. Incentives such as tax breaks, risk guarantees, and concessional loans will encourage investment. Exploring blue bonds or climate finance instruments can also help fund sustainable projects.

Sustainability at the Core

Engineering solutions must integrate environmental safeguards—wastewater treatment plants, renewable energy systems, eco-friendly vessel designs, and coastal protection work. This ensures that Nigeria's blue economy remains viable for future generations.

Multi-Stakeholder Collaboration

Government, academia, industry, and communities must work in synergy. Universities can serve as hubs for marine R&D, private firms can drive innovation, and local communities can contribute indigenous knowledge for resource management. This is the thrust of the triple helix concept, which requires traction.

By focusing on these pathways, Nigeria can transform engineering innovation from an aspiration into the engine of its maritime prosperity.

Conclusion

Nigeria stands at a maritime crossroads. With abundant resources, strategic geographic location, and a burgeoning youthful population, eagerly seeking opportunities. The country has all the raw ingredients for a thriving blue economy which it must find the courage to exploit. With concerted effort made in the exploitation of appropriate engineering technology in innovation, resilience, and sustainability; the gains of boundless blue economy can be fully harnessed.

Ports must be modernized, ships built and repaired locally, aquaculture systems redesigned, and renewable energy aggressively harnessed offshore. Digital technologies must be embedded into logistics, security, and environmental monitoring, thereby, minimising human interface, which nullifies the nagging issues of corruption in operations. Most importantly, Nigeria must invest in people, a spirited and programmed training of a new generation of marine engineers, technicians, and scientists capable of designing solutions for a 21st century ocean economy.

The stakes are continental and global. As Africa integrates under AfCFTA, maritime competitiveness will determine leadership in the ecosystem. Nigeria's ability to harness engineering for the development of its blue economy, could be the fine definition of its role, not just as a regional powerhouse, but as a global maritime player. Singapore did, China is doing, south Africa is ramping up, there's no justification for Nigeria's lag.

With efficient engineering practice driving the process, Nigeria can chart a sustainable course towards prosperity, resilience, and leadership, on the blue frontier. The call for action cannot be louder.

Olusegun Ayobami Toluhi, PhD



Nigeria's rebirth belongs to Engineering...

"The whole of our infrastructure, from sewers to power supplies and communications, anything that wasn't invented by God is invented by an Engineer.

"The human population of the world is growing and is occupying more space... But somehow or other, that balance, to try and fit as many people unto this globe as comfortably as possible without doing too much damage, I think ultimately, it's going to be Engineers that decide that.

"After the war..., it seemed to me that the thing that really needed encouragement was manufacturing, which was always dependent on engineering, to try and recover from the war. We were completely skint, seriously badly damaged. It seemed to me the only way we were going to recover a sort of viability was through engineering".

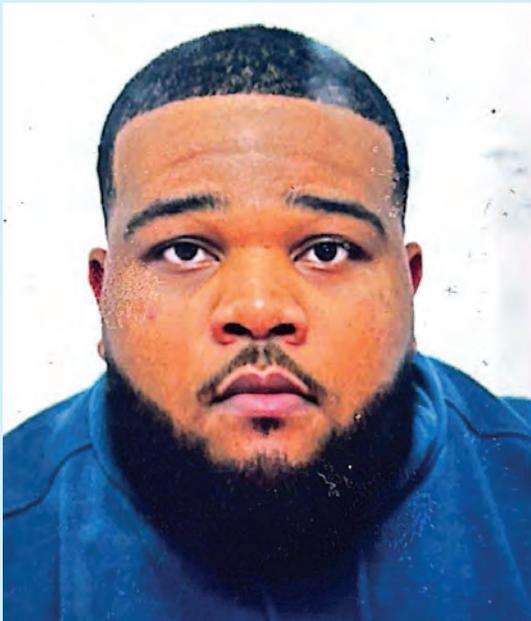
*-Prince Philip
The Duke of Edinburg*

One couldn't agree more with the Duke. Indeed, in Nigeria today, the career of oil is completely skint, seriously badly damaged. The only way our country will recover some sort of viability is through ENGINEERING.

Think Development and Prosperity. Think the Nigerian Engineer.



Remanufacturing of Marine Equipment as a Circular Strategy in the Blue Economy: Opportunities and Challenges for Mechanical Engineering



Sean KiireOluwa Segun-Toluhi

Abstract

An important industry for the Blue economy is the maritime industry as it supports global trade, transportation, and energy. This is an industry that faces growing challenges caused by emissions, waste, and increasing resource demand. This is where a process called Remanufacturing comes in, remanufacturing is the restoration of used equipment to close to new condition which provides a circular economy solution by reducing the number of materials used, carbon emissions, and increasing the life of marine systems. This paper reviews applications of remanufacturing in engines, gearboxes, and other equipment, with special attention to mechanical engineering factors such as corrosion, wear, redesign, and testing. Some benefits of this are reduced cost, maintenance, and improved environmental effects. However, some hinderances are still present, which include lack of clear policies, skilled labour, and certification processes, also a high investment and, a need for advanced infrastructure. In the future opportunities include the use of digital tools like Internet of Things and Artificial intelligence to track components and predictive maintenance, and new applications in renewable energy systems. Remanufacturing can aid in overall ocean sustainability by allowing responsible production all while supporting the goals of the blue economy.

Introduction

The sustainable use of the ocean's resources to drive economic growth, create jobs, and improve livelihoods while ensuring the health of the marine ecosystems referred to as the Blue Economy. With a span of three quarters of the planet and producing more than half of the oxygen we humans need to

breathe and function, the ocean also supports 3 billion humans with food, trade, transport, energy, and tourism. Regulating the climate, providing food for billions and supporting global commerce, the Blue Economy is pivotal to human survival and prosperity. Managing it in a sustainable way is paramount in achieving the UN's Sustainable Development Goals and securing a better future

for both people and the planet [1]. They are challenges related to the blue economy which can be linked to waste, carbon emissions, and the demand for raw materials. The different species in the marine ecosystem face endangerment because of pollution and waste, most especially microplastics, chemicals, and debris from different industries like shipping and aquaculture, which



deteriorate biodiversity and coastal livelihoods. Also, very high carbon maritime sectors, like oil and gas, industrial fisheries, and sea transportation heavily contribute to greenhouse gas emissions, further increasing the impact of climate change such the warming of the earth which includes the ocean, acidification, and the increasing of sea levels. There is also a rapid growth of industries which operate on the ocean, this also increases the demand for raw materials, materials like minerals for seabed mining to biomass which is used for aquaculture and biotechnology, which causes friction between resource exploitation and the protection of ecosystem.

Remanufacturing is the restoration of goods that have been used and durable to a close to new condition, preserving the material, financial worth whilst reducing the dependence of raw materials and energy compared to regular recycling methods. By designing products for manufacturability, manufacturers enable repair and reuse at the end of a product's life. This approach supports environmental goals and offers economic benefits, as remanufactured products cost less to produce and sell at a fraction of the price, with companies like Xerox, Ford, and Mercedes-Benz successfully profiting from this sustainable practice. More companies of note including, Rolls Royce, and Caterpillar.

The aim of this paper is to explore the role of remanufacturing in marine industries from a mechanical engineering perspective, examining how restoring used components and equipment can enhance sustainability, reduce raw material demand, and improve energy efficiency while maintaining performance and reliability.

Literature review

Definitions: repair vs reuse vs remanufacture vs recycle

Repair involves fixing faults in a product to restore its function without necessarily returning it to like-new condition, while reuse refers to using a product or its components again with little or no modification. Remanufacturing goes further by disassembling, refurbishing, and restoring a product so that it meets original performance standards, preserving most of its added value. Recycling, in contrast, breaks products down into raw materials for new manufacturing, conserving material value but often requiring significant energy input.

Circular economy in marine industries

Global trade is very reliant on the maritime industry, with 90% of global goods being transported by this means by there is immense pressure on the industry to reduce emissions, with 50% reductions targets set by the IMO to be reached by 2050. The current circular economy is focused on ship recycling, with recovery rates reaching up to 98% of the vessel's weight, even with this repair, reuse, recycle and remanufacture which are considered high-value strategies are not being looked upon. The methods increase equipment lifecycles, preserve materials and energy consumption, and lastly reduces CO2 emissions. Although, they are hurdles related to the adoption in the marine industry, like regulatory hurdles, segmented supply chains, and bad public perception about remanufactured products. The expansion of circular economy practices like remanufacturing, can improve sustainability significantly if stakeholders offer their support and collaboration.

Past applications: shipping, offshore turbines, subsea equipment

Previous applications of remanufacturing in the marine industry have concentrated on important assets such as the engine of the ship, offshore turbines, and subsea equipment. An example is the long-lasting support the EPA offers to marine engine remanufacturing programs which reduces emissions by maintaining compliance and extending the vessels life [14]. Looking at the offshore wind sector, reliability has been improved, and cost has been reduced by applying remanufacturing and refurbishment to turbine gearboxes and gears. The potential for remanufacturing to improve sustainability, reduce costs, and prolong the lifecycle of important marine and offshore infrastructure can be observed in these applications

Methodology

This study will be based on literature review and previous case studies. Existing research and practical examples from marine industries are examined to understand the current application, benefits, and challenges of remanufacturing.

Application in Marine Equipment

Many complex marine equipment can benefit from the remanufacturing process like engines, gearboxes. A great example is the Rail- actuator which constitutes of parts made of stainless steel cover and POM (Polyoxymethylene), which are corrosion resistant, and durable, making them highly suitable for the very harsh marine environment. With remanufacturing parts which are properly functioning to be reused meanwhile the defectives ones get recycled, reducing the reliance of raw materials,

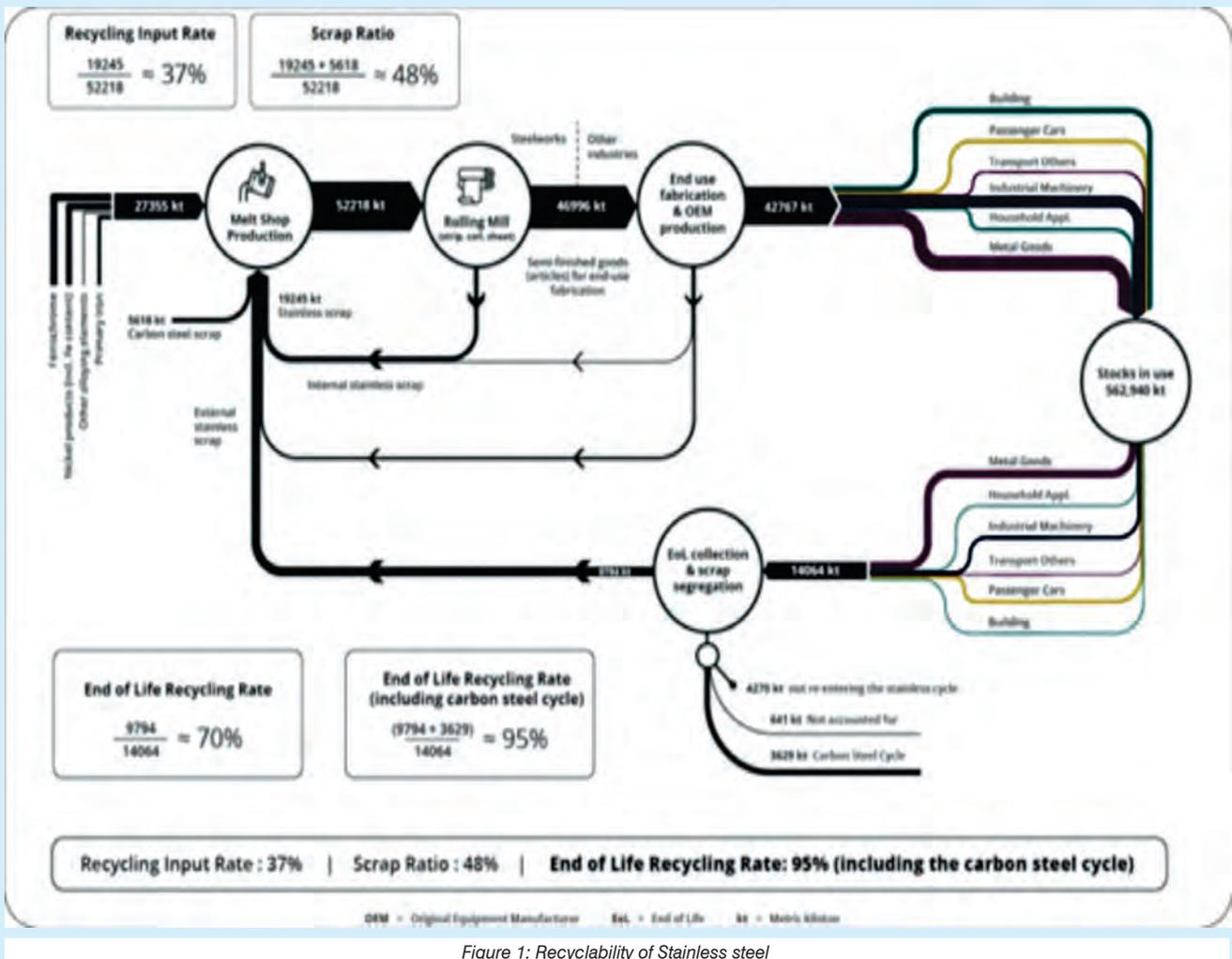


Figure 1: Recyclability of Stainless steel

energy consumption, and CO2 emissions. A 67% savings in energy usage and 33% reduction of CO2 emissions can be achieved by using recycled stainless steel [18]. Similarly, recycled POM requires 30% less energy than producing new material. Cost advantages are also notable, as remanufactured components can be 40–80% cheaper than new ones, with shorter production times due to reuse of non-defective parts. Looking at the automotive industry, like Volvo’s engine remanufacturing, show that there is up to 85% less energy, 80% less raw material, and 67% less labour is needed compared to new production engines, showing suitability for marine applications. All together sustainability is improved by remanufacturing marine equipment, this reduces

waste, energy use, and costs while still maintaining performance and reliability.

Figure 1 above shows the recyclability of stainless steel, with a recovery rate of 95% of materials at its end of life. Making it adequate for use in both manufacturing and in the marine industry because it is a durable and corrosion resistant material. The use of recycled stainless steel in ship parts and offshore equipment helps reduce the environmental impact and supports a more sustainable lifecycle.

Mechanical Engineering Considerations

Mechanical engineers ensure that components that are remanufactured such as

actuators, engines, and gearboxes are safe, and meet operational requirements. Due to constant exposure to seawater (which is salty) and heavy loads, corrosion, fatigue, and wear are crucial factors which must be meticulously evaluated during inspection, and remanufacturing process. Obsolete parts are often updated or improved with the use of CAD redesign, this ensures compatibility, and extension of service life. The reliability of components is normally maintained while being restored to like new when they are machined, surface treated (e.g., coating, heat treatment), and precision tested. Marine engine cylinder blocks, and gearbox shafts offer a good example, they are remanufactured using precision machining and finishing to meet OEM standards.



Additionally, to safely handle chemicals, lubricants, and other materials during remanufacturing, it is essential to follow COSHH regulations and conduct thorough risk assessment, this ensures personnel and the environment are protected. The initial part can also be designed to be modular from the beginning so that they are easier to remanufacture.

Benefits of remanufacturing

They are environmental and economic benefits related to remanufacturing in the maritime sector. By extending the life of existing equipment, material demand and pollution reduce, reducing the necessity for production of new equipment, while enabling the use of sustainable fuels with minimal investment. For ship workers, remanufactured components can reduce the amount of time required to dock, make equipment readily available, and reduce maintenance, operational, and the cost associated with building new components. OEMs and third-party providers can profit from remanufactured products through service agreements or one-time sales, with quality that matches that of new equipment. Remanufacturing also lets older vessels be upgraded, including converting engines to low-emission fuels, extending their life while meeting future regulations. Beyond engines, equipment like thrusters, propellers, stabilisers, winches, and hydraulics can also be upgraded, offering a sustainable and cost-effective way to modernise fleets.

Challenges of remanufacturing

They are challenges the maritime sector faces with the implementation of remanufacturing. A very significant one being policy and regulatory hinderances which are significant, since

they is a lack of clear policies that support remanufacturing or circular economy practices in shipping, and the existing decarbonisation regulations mainly focus on emissions instead of manufacturing or the end-of-life phase of ships and equipment. Furthermore, there is a lack of standardised certification processes for components that are remanufactured, and the differences of non-standardised products make both remanufacturing and certification difficult. Skilled workforce and process limitations are also obstacles, as shipyards need to train workers on how to implement remanufacturing processes, and knowledge gaps exist in supply chain logistics and part tracking. Furthermore, despite their potential to be remanufactured, some parts are discarded leading to unwanted waste [28], [25]. The lack of adoption of remanufacturing practices slows its development, its standardisation, and its implementation in industry.

Future Outlook

Digitalisation is especially important in the future of maritime sector remanufacturing, this can enhance tracking, monitoring, and management of the lifecycle of components through Internet of Things, and Artificial intelligence technologies. These tools can improve the efficiency of supply chain, ensure parts can be traced, and offer support predictive maintenance, which in turn increases the reliability and public perception of remanufactured equipment. To add the growth of renewable energy, like offshore wind and hybrid marine propulsion systems create opportunities for remanufacturing of important components like turbine, gearboxes, bearings, batteries, and electric drivetrains, which will

lead to the further reduction of environmental impact. Extending lifecycles of equipment, less resources are used, this makes remanufacturing contribute directly to the UN Sustainable Development Goals (SDG), in particular SDG 12 (Responsible Consumption and Production) and SDG 14 (Life below water), supporting both ecological and economic sustainability in the Blue economy. Additionally, the implementation of digital twins will be beneficial as It will enable the creation of a virtual replication of physical assets which can enable testing, asset monitoring, simulations, and performance analysis, and helps in predictive maintenance.

Conclusion

Remanufacturing offers practical supports sustainability in the maritime sector. It restores and upgrades equipment such as engines, propulsion systems, and other marine equipment, it makes the need for new materials less, reduces energy use significantly, and increases the lifespan of vessels and offshore components, Mechanical engineers' expertise ensures these components meets the required performance and safety standards. Regulations remain a challenge, also lack of certification, shortage of skills, and the cost of infrastructure must be looked at before it can be adopted. At the same time, opportunities for remanufacturing are created from the advancement in digital technology and the growth of renewable energy. With stronger policies, investment, and industry collaboration, remanufacturing can become a vital strategy for a cleaner Blue Economy.



From Global Frameworks to National Implementation: Engineering Solutions for a Sustainable Blue Economy in Nigeria



Engr. Mohammed Abdullahi Mu'azu, MNICE, MNIGE, EMBA, PhD, FNSE.

*Department of Civil Engineering, University of Hafr Al-Batin
P.O. Box 1803, Al Jamiah District 39524, Hafr Al Batin,
Kingdom of Saudi Arabia*

According to FOA, it was hypothesized that the ocean covers more than two-thirds of the planet and is vital to human well-being because it controls the climate, absorbs about 30% of carbon dioxide emissions from human activity, and supplies more than a billion people with food and seafood. For the 38 percent (and growing) of the world's population that lives within one hundred kilometers of the sea, the ocean also serves as a bridge between nations and cities, promoting trade and economic activity. Ninety percent of the electronic traffic that communications depend on is carried by submarine cables that span the ocean floor. While mangroves, seagrass beds, and salt marshes are important natural carbon sinks as a form of bioengineering, coastal ecosystems like coral reefs also shield towns and populations from storm surge and wave damage. Due to significant technological advancements that make untapped

resources accessible and a growing population looking for new sources of growth, the ocean may also be a new economic frontier. A crucial connection connecting all parts of the world is provided by oceans and marine, and coastal resources. They have an impact on everyone's life on earth in a variety of ways. The crucial role that oceans will play in all our futures was amply expressed by coastal and island developing nations in the run-up to and during Rio+20. It was a conversation that sparked an investigation into how the principles and goals of a Green Economy might be applied to the special and indispensable function of coastal and marine ecosystems, also known as the "Blue Economy." Accordingly, the World Bank defines the "blue economy" as the sustainable use of ocean resources to support economic growth and employment creation while preserving ocean ecosystems. The World Bank-based blue economy cluster and concept are depicted in

Figure 1.

The EU goes on to say that it includes all business operations involving seas, coastlines, and oceans. The blue economy seeks to properly produce resources like food and energy while protecting maritime environments. Notably, the green economy addresses sectors like energy, transportation, and agriculture, whereas the blue economy concentrates on fisheries and marine resources. The goal of the Blue Economy strategy, which is a marine and coastal counterpart of the Green Economy, is "improved wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities." The development of a low-carbon, resource-efficient, and socially inclusive society is thereby aided by Blue Economy activities. Local goals are fueled by the accomplishment of global sustainability goals, while global triumphs are based on successful local implementation. As a result, the services, advantages, and ideals

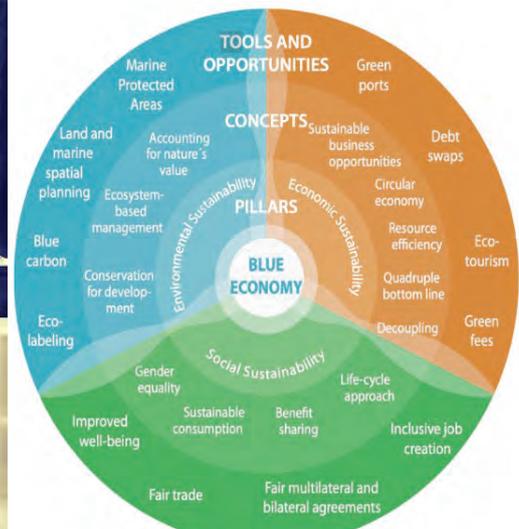
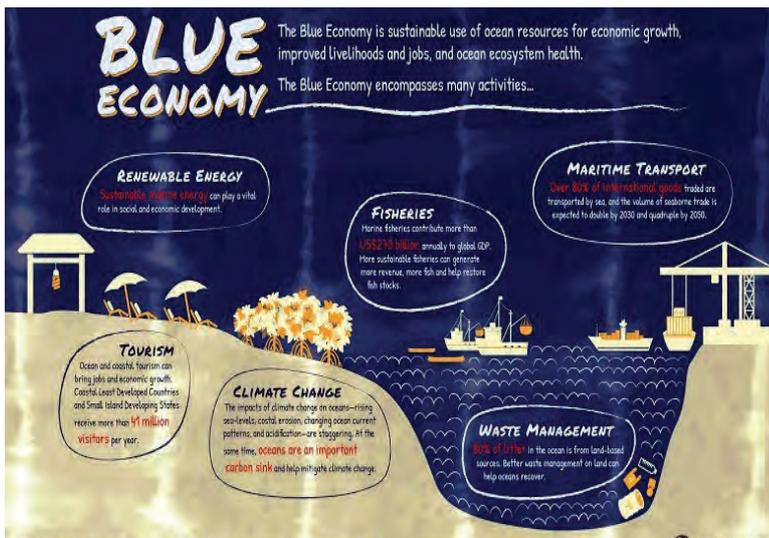


Fig. 1: blue economy cluster, tools, concepts, and pillars of the Blue Economy

outlined by early Blue Economy initiatives were and are regarded as essential not only for coastal states and local communities but also for the entire world, and the framework is shown in Fig. 2.

The uses and focus of the Blue Economy vary as much as the nations and areas that adopt it. Although this variance is typical of Green Economy syntheses, countries and projects may exhibit even more variation in the precise definition of Blue Economy, given that “Blue Economy” is the latest version of the “Green Economy” concept. Nevertheless, there are significant general similarities: the Blue Economy advocates actions to expand the definition of ocean resources to recognize the essential, life-sustaining advantages and

services that marine and coastal ecosystems offer. The cultural uses of coastal and marine environments are supported, regulated, and enhanced by these environmental services. The sustainability and success of the Blue Economy’s major sectors, fisheries and aquaculture, water resources, shipping and transportation, tourism, marine energy and minerals, genetic resources and biotechnology, and pollution control technologies and applications, are closely tied to these ecosystem services. Therefore, addressing key issues that impact the sustainability of marine ecosystem services and benefits, such as overfishing, climate change, ocean acidification, habitat and biodiversity loss, invasive species, pollution, and

waste, is essential to the Blue Economy approach. There are difficulties with the Blue Economy strategy. Among these, the idea that the seas are “limitless,” a place for unrestricted resource extraction, a “garbage dump,” a lawless “no-man’s” land, and a place where the costs to marine ecosystems are never measured or taken into consideration, must be challenged. It is necessary to acknowledge the advantages and how they are valued by implementing a new accounting system that takes social and environmental factors into consideration. The need to address equity and management challenges beyond traditionally defined boundaries and beyond the conventional conceptualization of value, assets, and resources is especially relevant for tiny island developing states and coastal developing nations.

However, typical economic metrics like GDP often neglect indicators intended to track progress towards social and ecological sustainability. Based on the understanding that a range of economic, social, cultural, and environmental resources and processes support wellbeing, the investigation of alternative economic indicators has thus been a crucial step in the development of a Blue Economy in many nations around the

THE BLUE ECONOMY SECTOR FRAMEWORK

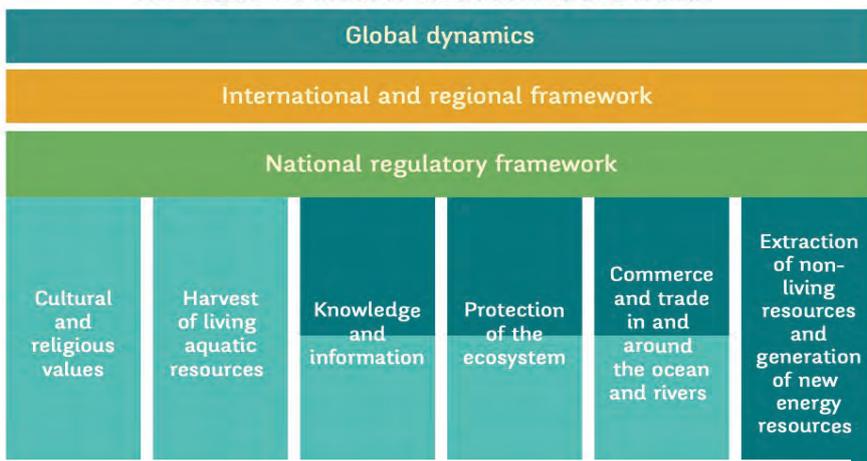


Fig. 2. The prevailing Blue Economy framework



world. The development of more varied, nation-specific objectives and progress metrics depends on such activities. These, in turn, are essential for developing policies that can stop ecological losses and, as a result, offer more defined routes to long-term, sustained Blue Economy development. Ensuring access to the advantages of marine resources and finding novel ways to stimulate local economies remains a considerable concern for many countries, particularly in coastal communities where overexploitation is frequent. The sequence and steps of the Blue Economy policy development process are shown in Fig. 3

Numerous nations have created short and long-term national Green Economy assessments, policies, and pledges. Although there are still many policy tools to be developed, regional forums and consortia provide a means of sharing successes, lessons gained, and experiences. For instance, the Abu Dhabi Declaration in 2014 promotes the employment of a Blue Economy strategy as a means of advancing climate change mitigation, poverty reduction, and sustainable development. In addition to emphasizing the importance of blue carbon, it advocates for sound high seas governance and an integrated ecosystem strategy to preserve balanced, healthy, and productive marine ecosystems.

This write-up uses six case studies to show the Blue Economy's implementation successes at four distinct levels: i) community-level initiatives, ii) national Blue Economy plans, iii) integrated governance, and iv) regional Blue Economy plans. The goal of each case study was to determine the possible socioeconomic advantages of the specific strategy used in relation to the sustainable management of marine and coastal resources, as well as additional (ecological, equitable, and efficient) benefits. These six case studies demonstrated a range of practice and scope. It is crucial to remember

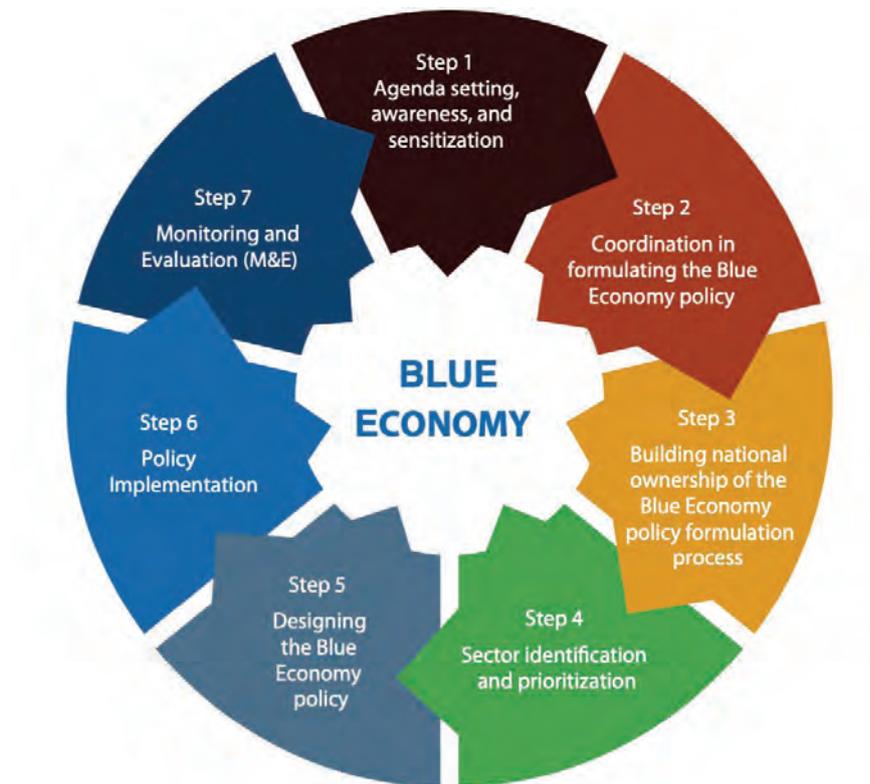


Fig. 3. Sequencing and steps of the Blue Economy policy development process

that these examples are but a small sample of the many projects that are currently being developed in the sector and are not meant to serve as an exhaustive review.

The Blue Economy's ongoing development and the noteworthy experience it has offer a priceless chance for introspection. These case studies are intended to help nations, communities, and practitioners better understand the conditions that have facilitated change, the factors that have sparked it, the primary obstacles still standing, and the possible paths for future innovation. A healthy Blue Economy depends on inspiration, diversification, innovation, and active, inclusive involvement.

The following highlights an overview of the results derived from the case studies:

- As the Blue Economy transforms from an idea to tried-and-true realities, it is fast developing and diversifying. The efforts taken in each of these situations

have promoted and enhanced social well-being through inclusive, equitable, and ecologically sustainable economic development. As demonstrated, marine and coastal communities are now able to apply an increasing amount of local and national implementation and experience.

- Developments in the blue economy are frequently very strategic in their conception, strategy, and implementation, as well as very opportunistic. They all started for distinct reasons and have a variety of supporters, illustrating the complexity of the reasons behind pursuing Blue Economy projects, policies, and implementation.
- Initiatives for the blue economy can support widespread collaborative efforts and offer a framework for addressing a recurring deficiency in marine ecosystems and economies that are sustainably maintained. Ministries, businesses, and non-governmental groups



from all sectors are brought together by blue economy procedures. Just as crucial as vertical integration across the several levels of policy and decision-making is horizontal integration across sectors.

- Wide-ranging and durable collaborations are necessary for the coordination and cooperation of Blue Economy projects and initiatives. The situation requires frequently bringing together a facilitating body that assists a wide range of stakeholders in generating ideas, cooperating to achieve common goals, and determining ways to reward success.
- The long-term success of these situations emphasizes the value of a solid body of knowledge, especially engineering solutions, as well as laws and regulations that facilitate the shift to a blue economy. This facilitates coordination and implementation and offers a helpful place to start for partner agreement.
- The greatest benefits of the Blue Economy come from utilizing current institutional ties to close strategic gaps that impact many industries and participants and eventually produce observable advantages for them. The creation of marine protected areas, marine spatial planning, and ecosystem-based management are all proven components that can be incorporated into the transition process. The transition to a Blue Economy necessitates focused short-term initiatives that can take advantage of current opportunities to unite stakeholders.
- The creation of inclusive procedures and measurable outcomes for individuals who might be significantly impacted by policies but lack the resources to participate in participatory processes

is essential to the growth of the Blue Economy. A solid basis for creating more sustainable futures in marine ecosystems can be established by the objective, diligent identification of marginalized groups, in conjunction with technical analysis and advice.

- Positive changes in perception about the “worth” of upfront investment were reported in several case studies, particularly when these led to longer-term, measurable, and obvious benefits. This frequently entails allaying stakeholder fears by giving them accurate information about the upfront expenses, unforeseen repercussions, and opportunities and spin-off benefits.

For the Blue Economy to thrive, effective engineering solutions are essential, particularly for offshore wind and wave systems, which include the design of floating turbines and integration of subsea cables into the renewable energy grid. Additionally, coastal protection and management are critical in combating erosion caused by climate change and human activities, which threaten ecosystems and local livelihoods. Engineering solutions include hard structures like seawalls and breakwaters to mitigate erosion, along with nature-based solutions that incorporate features like mangroves and wetlands are essential. For inland flooding, innovative engineering is necessary to develop effective coastal defenses and reclamation projects. A typical expanded cluster of the blue economy launched in Scotland is shown on Fig. 4.

Engineering solutions require a skilled local workforce, making skills development essential for a thriving blue economy. For a flourishing blue economy to be actualized, the key areas, including marine engineering training, technical training, research and innovation, energy technologies, sustainable material innovation,

and closed-loop system design to be established. As coastal areas urbanize, the focus should be on building infrastructure that supports marine ecosystems through eco-engineering, habitat creation, nature-based solutions, and climate-resilient design. The integration of advanced digital tools across maritime sectors enhances efficiency and decision-making for a sustainable blue economy. Utilization of technologies like digital twins, autonomous systems, AI, data analytics, and blockchain traceability is necessary.

Engineering innovations are crucial for modernizing the seafood industry to enhance sustainability and resilience. This includes developing efficient fishing gear, hybrid propulsion systems for vessels, and smart aquaculture systems. Effective solutions require strong governance and strategic partnerships, such as stakeholder collaboration and public-private partnerships. Targeted investments, including “blue bonds,” can promote promising sectors like ocean renewable energy and blue biotechnology, accelerating sustainable growth.

To establish a successful blue economy in Nigeria, it is crucial to implement best practices like life-cycle sustainability assessment (LCSA), which evaluates the environmental, economic, and social impacts of projects from design to decommissioning. Public-private partnerships and incubators can foster innovation and scale sustainable solutions. Additionally, transparency and stakeholder engagement, through open data sharing and collaboration with local communities and Indigenous peoples, are essential. These approaches build trust, ensure equitable benefits, and create a sense of ownership among stakeholders. For Nigeria to thrive in the blue economy, it needs to tap into and embrace global practices of the blue economy, which include the following:

- Innovative Solutions: Winning



Fig. 4: Blue economy cluster builder program launched in Scotland.

strategies rely on scientific and engineering innovations, with technology such as data analytics and remote sensing providing insights into ocean health and resource management.

- Entrepreneurship: Support programs for startups offering mentorship and funding stimulate local economies, create jobs, and foster the development of innovative ocean technologies.
- Research and education: Training in marine engineering and sustainable aquaculture is vital for developing a workforce equipped to engage with ocean resources sustainably.
- Integrated coastal management: This strategy considers environmental, economic, and social factors, minimizing conflicts among marine resource users while ensuring sustainable utilization.
- Marine spatial planning:

Essential for coordinating marine space use (transport, conservation, recreation), it maps out where various activities can occur sustainably.

- Sustainable resource use: Initiatives balance economic development with environmental health, including active restoration programs for ecosystems like mangroves and seagrasses, which enhance local economies.
- Investment in blue technologies: Funding for renewable marine energy and eco-friendly aquaculture practices is crucial for building sustainable maritime economies.

The above-mentioned practices collectively contribute to a sustainable blue economy that benefits both people and the planet. For a successful, thriving blue economy in Nigeria, harnessing engineering solutions is vital to all sectors.

In conclusion, it is imperative to note that the Blue Economy landscape is changing, and with new opportunities and challenges around the globe. Therefore, tackling the challenges through targeted investments, sustainable practices, exploiting engineering solutions, and robust policy reforms while adopting best global practices, is the way forward to a promising blue economic future. By actively promoting public-private partnerships and embracing technological innovations, and keying into the above-mentioned case study findings, Nigeria can effectively advance its blue economy. We must prioritize scientific research, innovative engineering solutions, community engagement, and strong policy frameworks to ensure the sustainable use of marine resources for future generations. In summary, leveraging engineering solutions is crucial for establishing a thriving blue economy in Nigeria.



YEFoN 2025: Empowering Nigeria's Young Engineers Through Innovation, Insight and Inclusion

The Young Engineers' Forum of Nigeria (YEFoN) has taken bold strides to redefine youth engagement in engineering. This progress was made possible through the visionary support of the President and Chairman-in-Council of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE, whose inclusive and empowering leadership style provided YEFoN with the platform to thrive. Her commitment to youth development and innovation has inspired a new generation of Engineers to lead with purpose and integrity.

Under the dynamic leadership of Engr. Adenike Sandra Ajayi, YEFoN delivered a year of strategic programming, digital transformation and grassroots empowerment. The forum continues to cement its role as the heartbeat of Nigeria's next generation of Engineers, championing inclusion, innovation and excellence across all its initiatives.

A special note of appreciation goes to the distinguished guest speakers and senior colleagues who graced our 2025 webinar series. Their presence, insights and mentorship added immense value and color to each session. From academia to industry, their contributions helped shape meaningful conversations and empowered participants with knowledge, clarity and confidence. YEFoN is deeply grateful for their generosity and commitment to nurturing the future of engineering in Nigeria.

Transitioning into Action: Highlights from YEFoN 2025

With this strong foundation of visionary leadership, strategic support and a vibrant community of young professionals and senior mentors, YEFoN launched into a dynamic year of impactful programming. From thought-provoking webinars to nationwide competitions and a groundbreaking digital transformation, each initiative was designed to empower, educate and elevate Nigeria's Young Engineers.

Four Webinars That Sparked a Movement

YEFoN's 2025 webinar series was more than a set of online events it was a blueprint for personal and professional growth. Each session tackled a unique challenge faced by

emerging engineers:

- **Financial Intelligence for Emerging Engineering Professionals** This session equipped young engineers with tools for budgeting, investing, and building long-term financial stability. Financial literacy is an often overlooked but critical skill in technical careers.
- **Engineering Without Borders: Innovative Technologies Shaping All Disciplines** A cross-sector dialogue explored how AI, robotics, and sustainable tech are transforming engineering practice across civil, mechanical, electrical, and chemical domains.
- **Career Path and Planning** This webinar focused on helping young professionals navigate career transitions, build networks, and align their skills with evolving industry demands.
- **Unlocking Your Potential: Navigating Master's Programmes and Scholarships with a Growth Mindset** A practical guide to postgraduate opportunities, scholarship applications, and cultivating resilience in the face of academic and professional challenges.

Each webinar drew participants from across the country and featured expert speakers from academia, industry, and global scholarship bodies. Their insights were instrumental in shaping the sessions into transformative experiences. Recordings and resource kits will be accessible on YEFoN's new website.

Digital Leap: YEFoN Website Integrated Within NSE Portal

In a landmark move, YEFoN has completed development of its official website. The platform is now integrated within the Nigerian Society of Engineers (NSE) main portal. This digital hub will serve as a centralized space for:

- Membership registration and verification
- Webinar archives and learning resources
- Innovation showcases and project galleries
- Mentorship portals and career development tools

- Chapter updates and national announcements

This digital transformation marks a new era of accessibility, collaboration, and visibility for young engineers nationwide.

Three Competitions, One National Stage

YEFoN has also played a pivotal role in organizing the 2025 NSE Youth Engineering Competitions, which are now in their final stages. The competitions are structured into three distinct categories:

- **Young Engineers and Future Leaders Competition** Targeted at secondary school students, this category promotes early interest in engineering through innovative, community-focused projects.
- **Young Engineers Innovation Challenge (Graduate Members)** Designed for graduate engineers, this challenge encourages the development of scalable, tech-driven solutions to real-world problems.
- **Creativity Digital Onsite Challenge (Kenol Creativity Challenge)** A fast-paced, digital design competition that tests participants' creativity, problem-solving, and technical agility in real time.

The finals for all three categories will take place during the NSE Annual Conference in December 2025, where top teams from across the country will compete for national recognition, mentorship opportunities, and seed funding.

Looking Ahead

With a successful webinar series, a national competition nearing its climax, and a digital platform ready to launch, YEFoN is setting the pace for youth-led engineering transformation in Nigeria. The forum continues to champion inclusion, innovation, and excellence. The future of engineering is already here and it is young, bold, and brilliant.

Engr. Adenike Sandra Ajayi, MNSE
YEFoN National Coordinator



Engineering Innovation for a Sustainable Blue Economy: Quality, Health, Safety, Security and the Environment in Mind



Engr. Francis Etafo, FNSE, FNISafetyE

INTRODUCTION

Water, which is an essential requirement for life covers, approximately 71% of the earth's surface as salt water or fresh water. The bulk of water lies in the oceans (about 96.5%), while the rest, locked up in glaciers, ice caps, surface and ground water (about 3.5%), is freshwater.

A small amount of the water actually is easily accessible for use directly (about 1.5%) and the bulk trapped in practicably unreachable areas (2.5%). Of the 3.5% freshwater in the world, only about 1% is actually drinkable and also accessible in lakes, rivers, streams, for

human consumption.

Water serves many purposes outside its direct consumption and with the world's population presently at over 8.2 billion people, the exploitation of water bodies for food and natural resources, has raised serious concerns on health, security and safety, as well as other environmental issues. Only 1% of water on the earth is actually available for consumption, but man's activities over the years interacting with the environment, have further reduced this percentage drastically to less than 0.1% safe for consumption and use.

The use of water bodies and its resources, for sustainable

economic development is what is referred to as Blue Economy. The world from the safety and health perspective has seen the dire need to preserve the environment, particularly the sea and achieve long term prosperity; by responsibly exploiting the economic resources derivable from the sea, for the benefit of both the present and future generations.

BLUE ECONOMY AND THE SAFETY PERSPECTIVE

Man's interaction with his environment has always been exploitative and oftentimes unregulated, or poorly regulated, unplanned and ill monitored; that it leads eventually to degradation and



value loss of the source over time.

The concept of blue economy is a global initiative designed to promote the application of world's best practices and regulated standard procedures in exploiting the water bodies to ensure sustainability in maintaining the quality of the water bodies and protecting the natural resources, for the present and future generations to continually benefit from it.

From the Health and Safety perspective, Blue Economy simply means therefore the conscious efforts taken to note all areas where wealth can be generated from water bodies where health and safety is compromised and then turning the tide from degradation and misuse, to optimizing the benefits and profitability accruable from all marine resources.

Blue Economy has the following as some of its components based on the economic derivatives:- Food (Fisheries, Aquaculture), Tourism, Transport/Freight, Renewable Energy Sources (tidal wave, wind, waterfall,...), Deep Sea Mining, Oil and Gas Exploration and Associated Industries (Ship building, repairs, parts manufacturing)...

BLUE ECONOMY SAFETY CHALLENGES

The challenges in Blue Economy to safety and health are primarily:-

- Pollution (Air, Water and Land)
- Climate Change impacts like seas level rise
- Coastal Erosion
- Uncontrolled Exploitation

due to weak governance and excessive maritime activities

- Water Quality Degradation
- Habitat Destruction of aquatic life
- Maritime Insecurity due to piracy and illegal fishing/mining

ENGINEERS AND THE BLUE ECONOMY

Engineers play a vital role in the quest for a better life through harnessing value with science and technology applied to water bodies particularly ocean ecosystems. As Safety Engineers, the techniques for applying innovation and creativity towards sustainable development, approach the blue economy from the safety perspective. Two considerations are always noted from the safety engineering perspective:

The first thing to note is that every engineering solution comes with the introduction of a new safety concern. Designing vehicles to run on petroleum products for example, rightly solves the problem of fast and efficient transportation, but it also creates on the long run, emissions that pollute the air and a system of exploitation natural resources underground that degrades the environment. The new safety challenge(s) that every innovation brings, should first be mitigated, before the implementation of the engineered solution; for health and safety reasons at least.

Secondly, engineers possess the capacity and technically the only positive check in ensuring (guaranteeing) failsafe and fail-proof solutions. In engineering designs, safety which is the bedrock of engineering is

always factored in projecting new ideas and solutions.

Finally, when engineers come up with innovative solutions, the focus should be on the ability of the designed systems to function, such that they can remain harmless to life and the environment, even where safety is deliberately compromised. The degradation of the water bodies as mentioned under safety challenges, come with a multiplier adverse effect that has far reaching consequences to human existence and other life forms, but in the new world of work, Artificial Intelligence could be deployed in keeping systems protected, even with deliberate acts of compromise.

Engineers in the blue economy are saddled with the silent responsibility by virtue of their competence, to create jobs, ensure environmental sustainability, introduce technological advancements and constantly introduce new and improved systems. This reveals also a need to implement regulatory frameworks to govern practices in water usage and exploitation and rightly protect the oceans. This approves reliance only on professionalism and competence, so that only best standard practices are adopted.

Engr. Francis Etafo, FNSE
MEMBER

NSE Corporate Services Board



Diversification of Energy Sources will Boost Nigeria's Economy

- Dr. Timi Austen-Peters



Dr. Timi Austen Peters is a specialist Financial services Lawyer with both local and international experience. He is the chairman of Dorman Long Engineering Limited, a leading infrastructure and supply chain services company that provides high quality solutions to oil and gas, Power, Telecommunications and Manufacturing sectors. He bares his thoughts on the theme: Harnessing Engineering Solutions for a thriving Blue Economy in Nigeria. He spoke with the Chairman of Editorial board, Dr. Felicia Nnenna Agubata in Lagos.

With your unique background as a legal and financial services expert now leading one of Nigeria's foremost engineering companies, how do you see the intersection of law, finance, and engineering contributing to the growth of Nigeria's blue economy?

My journey from law and finance into engineering leadership has underscored how interconnected these disciplines are.

For Nigeria's blue economy, the rule of law creates a predictable environment for investment, finance ensures that projects are bankable and sustainable, while engineering delivers the tangible infrastructure.

When combined, these elements drive investor confidence, accelerate project execution, and ultimately unlock value from Nigeria's maritime and coastal assets.

Dorman Long Engineering has over seventy-five (75) years of experience delivering engineering solutions to the oil, gas, power, and manufacturing sectors. How is the company leveraging this legacy to support Nigeria's maritime and coastal industries?

For over three quarters of a century, Dorman Long Engineering has been trusted to deliver complex projects across oil, gas, power, and manufacturing.

We are leveraging this heritage

of quality, reliability, and safety to extend solutions into the maritime and coastal sectors.

Our deep fabrication expertise, marine infrastructure capabilities, and longstanding client partnerships position us as a natural leader in supporting Nigeria's blue economy aspirations.

Ports, Shipyards, and Offshore facilities are critical to a thriving blue economy. How is Dorman Long positioning itself as a leader in engineering, procurement, and construction (EPC)? What solutions are there for these marine infrastructure needs?

Ports, shipyards, and offshore facilities are the backbone of a



thriving blue economy. Dorman Long is investing in capacity expansion, EPC solutions, and modular construction methods to deliver scalable and cost-efficient infrastructure.

Through technical partnerships with reputable global partners, we are transferring knowledge, enhancing execution capacity, and aligning with international best practices.

From jetty and dock construction to offshore platforms and pipeline integration, our engineering capabilities are being adapted to meet the specific requirements of the marine sector.

Dorman Long Engineering has a good track record of respecting local content requirements. How can local content policies be harnessed more effectively to build indigenous engineering capacity for Nigeria's blue economy?

Nigeria's local content policies have transformed indigenous participation in oil and gas. Extending this framework into the blue economy can deepen capacity building for marine engineering.

By partnering with global players while prioritizing local knowledge transfer, Nigeria can build a strong base of homegrown expertise that will sustain jobs, create value, and ensure inclusivity in the sector.

Your company operates state-of-the-art facilities with global certifications. What role do technology, innovation, and strategic partnerships play in ensuring Nigeria can compete in offshore and marine engineering on a global scale?

Our facilities are globally certified and operate to international standards.

Technology and innovation are central to our competitiveness, whether in advanced fabrication techniques, digital project management, or precision engineering.

Strategic partnerships with OEMs and international contractors enable us to deliver world-class solutions locally, ensuring Nigeria is not left behind in the global marine

and offshore engineering landscape.

How does Dorman anLong Engineering integrate environmental responsibility and sustainable practices in its engineering and project execution, especially within the blue economy sector?

The blue economy is intrinsically linked to the environment.

At Dorman Long Engineering, we integrate HSE standards, waste management protocols, and environmentally friendly fabrication methods into all our operations.

We are committed to ensuring that our projects not only deliver value but also safeguard marine ecosystems for future generations.

Given Nigeria's reliance on oil and gas, how is Dorman Long Engineering diversifying its services to capture opportunities in renewable marine energy, shipping, and coastal infrastructure aligned with the blue economy?

While oil and gas remain important, we are deliberately diversifying into renewable marine energy, shipping, and coastal infrastructure.

We see opportunities in offshore wind, LNG terminals, and port modernization.

By applying our engineering pedigree to these emerging areas, Dorman Long Engineering is aligning with Nigeria's diversification agenda and the global transition to cleaner energy sources.

With your legal expertise, what regulatory or policy reforms do you think Nigeria needs to fast-track the growth of its blue economy and attract more investments in engineering-driven projects?

A thriving blue economy requires coherent regulation. Nigeria requires clear frameworks for maritime security, coastal infrastructure development, and investment in renewable marine energy.

Streamlining approvals, incentivizing private capital, and strengthening Private Public Partnerships (PPP) models will fast-track growth and attract long-term

investment into engineering-driven projects.

How is Dorman Long Engineering investing in training Nigerian engineers and technicians to handle complex marine and offshore projects to strengthen the human capital base within the blue economy sector?

People are at the heart of engineering. We invest heavily in training Nigerian engineers and technicians, equipping them with the skills to deliver complex marine and offshore projects. We work closely with professional bodies, universities, and technical institutes to bridge skills gaps and build the next generation of Nigerian engineering leaders. Most recently, we signed a landmark MoU with the Nigerian Society of Engineers (NSE) to deepen engineering capacity in Nigeria. The agreement covers structured training programs for student members of NSE, internship placements, and a one-year graduate training scheme with stipends for fresh engineering graduates. This is both an investment in the future of Nigerian engineering and a continuation of its nearly century-long commitment to national development.

Looking ahead, where do you see the biggest opportunities for engineering-led transformation in Nigeria's blue economy, and how is Dorman Long preparing to lead in that space?

Looking ahead, the biggest opportunities lie in port modernization, offshore energy, subsea pipeline infrastructure, and renewable marine energy.

Dorman Long is preparing by scaling our facilities, strengthening strategic partnerships, and investing in innovation and people. It is no accident that Dorman Long is based in the coastal city of Lagos with 3 yards, 1 of which is located in a secure dockyard.

Our goal is to lead the engineering led transformation of Nigeria's blue economy, ensuring that local capacity meets global demand.



Nigeria Must Establish Comprehensive National Blue Economy Framework

- Engr. Dr. Eferebo I. Sylvanus, FNSE.



Engr. Dr. Eferebo is the Chairman of Nigerian Institution of Marine Engineers and Naval Architects (NIMENA) and CEO/Founder of Somatrix Marine Ltd, an indigenous marine consulting, ship design and construction management firm. He spoke to Prof. Lasisi Lawal on Nigeria's Blue Economy in Port Harcourt.

How do you see engineering solutions shaping Nigeria's blue economy in the next decade?

Engineering will form the backbone of Nigeria's blue economy transformation. Over the next decade, the

integration of marine systems engineering, digital ship design, hydrodynamic simulations, and renewable ocean energy systems will redefine the way Nigeria extracts value from its maritime domain. Through localized ship design

optimization, modular offshore infrastructure, and data-driven port operations, we can bridge technical gaps and drastically reduce foreign dependence. The key is to align engineering practice with policy instruments that



promote indigenous innovation, classification, and certification; ensuring that every vessel, port, or offshore unit operating within our waters adheres to standards developed and governed in Nigeria.

As a former Principal Technical Consultant to the House Committee on Nigerian Content Development, what specific policies or frameworks must Nigeria prioritize?

Nigeria must establish a comprehensive **National Blue Economy Framework (NBEF)**—anchored on:

- Legislative alignment between NIWA, NIMASA, and NCDMB to define local content in shipbuilding, repairs, and offshore construction.
- Legislative support for the research, development and commercialization of the Nigerian Registry of Shipping (NRS) as the country's indigenous classification and certification body.
- A Maritime Innovation and Technology Fund (MITF) to support R&D, local shipyards, and startups in marine automation, green shipping, and dredging technology.
- Blue Economy Data Management and Mapping Act, which mandates periodic hydrographic surveys, bathymetric mapping, and vessel traffic data analytics to improve navigational safety and investment planning.

These policies must be backed by strong enforcement mechanisms and fiscal incentives that reward compliance with Nigerian content provisions.

Nigeria faces challenges in shipbuilding, repairs, and offshore infrastructure. What engineering strategies can strengthen indigenous capacity?

We must industrialize ship repair and fabrication through three pillars:

- Standardization – Ensure the Support and implementation of indigenous classification Standard initiatives.
- Cluster-based industrialization – Develop Shipbuilding and Marine Engineering Industrial Parks (SMEIPs) near Onne, Warri, and Brass, integrating dry docks, training centres, and component fabrication yards.
- Technology transfer through joint ventures – Incentivize structured technical partnerships between local firms and established global yards under a “Build–Operate–Transfer–Localize” model.

With these, Nigeria can create a value chain from design to steel cutting to sea trials, ensuring local participation in every phase.

How do COREN's regulations and the Nigerian Registry of Shipping position Nigeria to compete globally?

The COREN Marine Engineering Regulations and the NRS classification framework, when fully operational, will provide the first indigenous mechanism for professional accountability, maritime safety regulation, and technical certification in Nigeria's maritime sector. They:

- Define competency thresholds for marine engineers and naval architects.
- Establish a unified national technical code for ship design, construction, and survey.
- Provide a foundation for IMO-recognized classification and statutory certification, reducing the over \$400 million annual capital flight currently paid to foreign class societies.
- Further strengthen and enhance NIMASA's Maritime

safety regulatory role. In essence, these initiatives elevate Nigeria from a consumer of maritime standards to a producer of globally benchmarked marine technical systems.

How can advanced tools like CFD, FEA, and Data Analytics solve challenges in offshore and marine operations?

Computational Fluid Dynamics (CFD) and Finite Element Analysis (FEA) enable us to simulate vessel behaviour, stress loads, and fatigue life under Nigerian coastal conditions—before construction begins. When combined with AI-driven big data analytics, these tools support:

- Predictive maintenance of offshore assets.
- Optimal hull form design for low-draft barges on the Niger and Benue rivers.
- Enhanced safety management for offshore patrol vessels (OPVs) in the Gulf of Guinea.

Integrating these technologies through local R&D centres, such as the Centre for Marine and Offshore Technology Development (CMOTD), ensures that solutions are context-specific, cost-effective, and Nigerian-led.

How do you see academia and industry collaborating to produce the next generation of marine engineers?

There must be functional symbiosis between universities, COREN, and industry.

- All Nigerian Universities offering Marine Engineering, Naval Architecture, offshore engineering and related allied engineering Programmes should adopt COREN Outcome-Based Education (OBE) linked to NIMASA, NIMENA and NCDMB competency frameworks.



- Marine Technology Incubation Hubs within campuses can be co-managed by private firms for real-time project exposure.
- Establishment of an interdisciplinary department for computational sciences and engineering within the Marine technology Hubs.
- Industry attachments should evolve from mere internships to credit-bearing, project-based residencies supervised jointly by academia and professionals. This ensures graduates are industry-ready with a practical understanding of CAD, CFD, and offshore systems—not just theoretical knowledge.

What engineering-driven approaches can ensure environmental sustainability in Nigeria’s blue economy?

Nigeria must integrate **eco-engineering** principles at every design and operational level:

- Green ship design using energy-efficient hulls, hybrid propulsion, and waste heat recovery systems.
- Coastal resilience engineering through sediment management, mangrove restoration, smart solutions for marine, port and dredging operations.
- Environmental impact modeling using CFD to simulate pollutant dispersion and wave-structure interaction. Adopting an “Environmental Class Notation” under the Nigerian Registry will institutionalize eco-compliance in all ship surveys and certifications.

How important is indigenous R&D, and what models can accelerate progress?

Indigenous R&D is the lifeblood of national marine sovereignty. Nigeria must move from importing

designs to owning hydrodynamic and structural research data. Models to accelerate this include:

- Public-Private Research Consortia (PPRCs) linking NCDMB, COREN, and Universities.
- Blue Tech Innovation Labs to commercialize academic research.
- Regional CFD/FEA Simulation Centers of excellence under NIMENA supervision. These initiatives will expedite the development of rules, vessel optimisation, and innovation in low-draft barge design for inland waterways.

As National Chairman of NIMENA, how is the institution advancing engineering solutions for the blue economy?

NIMENA is currently repositioning as a national think-tank and technical backbone for Nigeria’s maritime transformation through:

- Direct support for the Indigenous Classification standard, Development.
- Establishment of the NIMENA-CMOTD Professional development Scheme for continuous competency development.
- Collaboration with centres of Excellence for marine and offshore engineering technology to develop an innovation lab where Smart Marine unicorns from the university can be scaled up to attract global financing,
- NIMENA annual Awards, the best students of Marine Engineering/Naval Architecture across higher institutions.
- Establishment of NIMENA International Marine and Offshore Technology Journal
- Policy dialogues with NIWA, NIMASA, and NCDMB to

harmonize local content in marine research, manufacturing and operations.

- Advocacy for the Nigerian Registry of Shipping to gain provisional IMO and IACS recognition by 2028 when fully operational.

Our vision is to export Nigerian engineering excellence globally and ensure that every vessel operating within Nigerian waters bears the mark of this excellence.

Looking ahead, what bold steps must Nigeria take to transform its maritime resources into a thriving blue economy?

Nigeria must pursue a Five-Pillar Transformation Agenda:

1. **Policy Reform:** Enact a National Blue Economy Act with clear institutional roles.
2. **Technical Sovereignty:** Establish full operational status for the Nigerian Registry of Shipping classification Society.
3. **Industrial Base:** Revitalize port feeder barge and shipyard clusters using NCDMB’s local content fund.
4. **Human Capacity:** Implement a 10-year national training roadmap for 20,000 marine professionals.
5. **Sustainability:** Embed circular economy and environmental class compliance in all maritime infrastructure.



Leveraging the Blue Economy for Sustainable Development



As Nigeria intensifies efforts to diversify its economy and harness new pathways for sustainable growth, the concept of the Blue Economy has taken centre stage in national development conversations. At the forefront of this emerging frontier is **Mr. Gegele Olushola, Founder of the Premium Blue Economy Innovation and Investment Initiative**, an organisation committed to unlocking the vast economic, environmental and social opportunities embedded in Nigeria's marine and aquatic resources.

In this insightful interview with our **Assistant Director of Media, Henry Terseer Iortim**, Mr. Olushola breaks down the meaning of the Blue Economy in simple, practical terms. He also discusses the challenges currently limiting the country's ability to fully tap into this multi-trillion-dollar global sector and outlines the innovative solutions his Initiative is championing to transform Nigeria into a competitive Blue Economy hub.

Could you give us a brief of yourself

My name is Gegele Olushola, and I am the Founder of the Premium Blue Economy Innovation and Investment Initiative. I work closely with Prof. Gunter Pauli, the global pioneer who coined the concept of the *Blue Economy*. His

definition goes beyond oceans; it focuses on creating a *regenerative economy* by using locally available resources to drive sustainable development.

I have been collaborating with Prof. Pauli for the past eight (8) years in Nigeria, my work in the Blue Economy space

involves partnerships with key institutions. Notably, we have established a **Centre for Blue and Regenerative Economy at the University of Ilorin**, an institution with about **42,000 students**. The Centre has been fully approved by the University Senate, and we maintain close collaboration with



the **Federal Ministry of Marine and Blue Economy** as well.

Prof. Pauli visited Nigeria shortly after President **Bola Ahmed Tinubu, GCFR**, created the Ministry of Marine and Blue Economy. Together, we engaged with the Ministry to explore emerging opportunities and identify how Nigeria can maximise the vast potential of the Blue Economy. This is a brief overview of my work and contributions. Thank you.

What does the concept of the Blue Economy entail and how extensive is its scope globally and nationally?

- To be frank, we currently do not have reliable or comprehensive data on the true value of Nigeria's Blue Economy. As Prof. Gunter Pauli has emphasised, **70% of the world is covered by water, yet humanity has achieved only about 1% innovation from water resources**. This means we must develop new technologies that enable us to innovate on water and unlock its full potential.

For example, many people cannot even differentiate between a male and female fish. This shows a major knowledge gap. To change this, we need **advanced technologies such as underwater light communication (LIFI) systems** that allow us to explore, communicate and gather accurate information beneath our waters.

Nigeria has **865 kilometres of coastal waterways**, yet if you ask anyone what specific marine creature and mineral resources we have or what biodiversity exists within our waters, there is no reliable data. When divers go in and come out, nothing is documented in a way that tells us the true value of our aquatic resources. Without data, we cannot meaningfully measure or maximise the Blue Economy's potential.

Some reports say the Blue Economy is worth about **\$296 billion**, but this figure mostly focuses on fisheries, maritime transport and aquaculture. The



Blue Economy, however, is far more extensive. To achieve a sustainable Blue Economy in Nigeria, we must understand *systemic dynamics*, which means foundation of blue Economy and also collaborations across industries, acquiring new knowledge and embracing nonlinear thinking.

Nonlinear thinking involves studying how nature works and using that understanding to derive multiple streams of value from our water resources (Economic of Scope). This approach will allow Nigeria to unlock the true, far greater potential of the Blue Economy.

In what ways has Premium Blue Economy Innovation and Investment Limited positioned itself as a key player within Nigeria's Blue Economy?

-That is an excellent question. At the Premium Blue Economy Innovation and Investment Limited, our focus is not on the theoretical aspect of the Blue Economy. We are fully involved in practical, real-world solutions. Converting unrecyclable plastic waste into valuable products. Recently, we have been addressing pollution, especially plastics that end up in our oceans. We design pyrolysis systems that

convert plastic waste into ultra-low-sulphur diesel, hydrogen and nano carbon. Just last Tuesday, in partnership with the **Federal Ministry of Environment**, we demonstrated how plastic waste can be transformed into clean fuel.

Our system also powers our own facility and the remaining by-product often considered toxic is further converted into nanocarbon tube which is useful for battery production and bitumen manufacturing. This is the kind of practical Blue Economy work we are doing: where others see waste, we see opportunity.

With this initiative, we are projecting the creation of **120,000 new jobs by year 2026 to 2027**, as we roll out modular refineries and pyrolysis units across all **36 states** of Nigeria. We will work directly with waste pickers, purchasing collected plastic waste from them. Nigeria generates about **2.5 million metric tonnes of waste annually**, but only **9-10%** is recycled. The remaining **90%** ends up in landfills and waterways. To build a sustainable Blue Economy, our oceans must be clean so our approach is to remove plastic and convert it into value. Zero-emission vessels and renewable marine technology. We are also collaborating with the



Porrima Foundation, a Taiwan-based company that designs zero-emission ships. One of their vessels a ferry that carries 250 passengers operates entirely without fossil fuel. It is powered by hydrogen, solar panels, and kite technology, and has been running successfully for more than eleven years. Kite technology is based on airborne renewable energy. A German company, SkySails, has shown that the strongest, most abundant renewable energy source is found at higher altitudes. Just like a child flying a kite, once a kite rises to about 200 meters, it encounters

harness them.

What major challenges are currently confronting stakeholders in Nigeria's Blue Economy sector and what practical measures can be adopted to encourage and sustain industry participation?

One major challenge is that, much of our water especially, in the Niger Delta is no longer "blue." Due to frequent oil spills caused by pipeline vandalism, the water is heavily polluted. When water is not clean, biodiversity

investment operate independently. Investors must obtain multiple approvals from different agencies, which slows down investment and discourages serious partners. What is needed is a one-stop digital platform where all marine-related approvals, information and processes can be accessed in real time. This transparency will make Nigeria more attractive to global investors.

Foreign exchange (FX) and financial policy constraints, Investors are concerned about repatriating their funds. Before investing, they want assurance that Nigeria's FX system is stable and that their capital can return home without difficulty. Although the federal government is working to stabilise the exchange rate, policy consistency remains critical to attracting large-scale Blue Economy investment.

Again, Limited knowledge and misconceptions about the Blue Economy making many Nigerians still believe the Blue Economy is only about the ocean, fisheries and marine transport. However, the true definition is broader, it is about using locally available resources to create multiple streams of value. For example, in the Niger Delta, we pay little attention to seaweed. Yet biotechnology can convert seaweed into inputs for rice cultivation, industrial applications, livestock feed, or gas production. Each of these creates new value chains and millions of potential jobs.

We must also explore 3D ocean farming, especially as land availability becomes limited. The ocean can host fish, seaweed, shellfish and other high-value organisms stacked vertically in multiple layers unlocking a new frontier for agriculture and marine biotechnology.

Nigeria hosts marine species with extremely high economic value, such as Horse shoe crabs (blue-blooded crabs) One example is the "horse shoe crab," reportedly found in the EPZ waterways. Blue crab blood is globally valuable



powerful, consistent wind far stronger than conventional wind turbines or solar systems. This airborne energy is especially useful in coastal regions with low sunlight.

We have adopted and partnered to develop this technology. Working closely with the Ministry of Marine and Blue Economy, we are arranging for Nigerian Engineers to train in Taiwan on zero-emission shipbuilding. The goal is for Nigeria to build its own vessels using local materials and expertise. These ships will not only serve as transportation; they will function as floating learning laboratories, providing hands-on knowledge about new Blue Economy opportunities and how to

disappears, marine resources migrate to cleaner environments and we cannot fully tap into the Blue Economy's potential.

To solve this, we must create new economic opportunities for communities in the Niger Delta, so they are encouraged to shift away from dependency on crude oil vandalism and begin to explore sustainable water-based economic opportunities. Cleaner waters will also attract more investors.

Fragmented governance and bureaucratic processes, another major challenge is the lack of a coordinated governance framework. Agencies involved in marine, fisheries, environmental regulation and maritime



for medical and biotechnology applications selling for up to \$65,000 per gallon .This shows that Nigeria’s Blue Economy is not just about fish; it includes high-impact biodiversity with trillion-dollar potential, which is essential as we work toward building a \$1 trillion Nigerian economy. Fishing alone cannot achieve this goal.

Also, the lack of collaboration among tertiary institutions, Universities and private institutions often work in silos. For the Blue Economy to thrive, we need multidisciplinary collaboration, engineering, biotechnology, public administration , agricultural performing Art ,economics, environmental science and marine technology must work together to create new innovations, talent pipelines and research breakthroughs. To move from challenges to solutions, we need to clean and restore our waterways, especially in the Niger Delta.

Establish a one-stop digital marine investment platform for transparent, unified regulation. Raise marine awareness across coastal communities.

Build capacity in marine biotechnology, ocean farming, and high-value biodiversity exploration. Promote collaboration among universities and research institutions, create alternative livelihoods that reduce vandalism and environmental damage. These practical measures will unlock Nigeria’s enormous Blue Economy potential and drive sustainable economic growth.

What strategic actions should the Nigerian government take to enhance investment, sustainability and profitability within the Blue Economy sector?

One major area we must focus on is identifying new portfolios of opportunities within the Blue Economy. As Prof. Gunter Pauli emphasises in his book 10 Years, 100 Innovations, 100 Million Jobs, innovation and practical solutions

can lift people out of poverty when we understand our resources and use them effectively.

To do this, data is critical. We must be able to translate data into real offtake opportunities. For example, if Nigeria decides to focus on the renewable energy dimension of the Blue Economy, the first question should be, where do we have abundant natural resources to support it? Once we identify such locations especially, remote areas with available land and access to water we can establish



renewable energy plants there.

When you have abundant renewable energy in any location, industries naturally follow. For instance, using the kite-based airborne energy model I mentioned earlier, a single 5MW installation in Andoni, Rivers State, could attract multiple companies because consistent power supply is guaranteed. When industries have reliable electricity, production begins. Small ferries can move finished goods from the production points to larger ships at deeper waters. This creates multiple jobs, improves livelihoods, and increases government revenue. This is what it means to create value “from nothing to multiples” a core principle of the Blue Economy.

The federal government has recently released a blue economy policy document, but it largely

captures only the marine aspect. The true-Blue Economy is much bigger. Nigeria must look inward, paying attention to opportunities within different communities and across our diverse coastal and inland waters.

A sustainable and regenerative Blue Economy requires:

- Local resource utilisation
- Community-driven innovation
- Renewable energy clusters
- New value chains beyond fisheries and maritime

transport

At Premium Blue Economy Innovation and Investment, one of our key achievements is our partnership with the National Bureau of Statistics (NBS). Through our MoU, we are working together to develop data frameworks and opportunity models that reflect the real Blue Economy as practiced globally. We also have an MoU with the Ministry of Marine Affairs and Fisheries (Kementerian Kelautan dan Perikanan - KKP) Indonesia has successfully converted water hyacinth, a major nuisance in Nigeria into several value-added products, including:

- Crafts and handwoven materials
- Biodigesters that generate livestock feed and
- Organic fertilizers



Engr. Dr. Eferibo Ibietela Sylvanus, FNSE

MD/CEO, Somatrix Marine Limited

Engr. Dr. Eferibo Ibietela Sylvanus is a distinguished marine engineering professional with over two decades of experience in technical, consulting, and leadership roles within Nigeria and the global maritime sector. He holds a B.Eng. in Marine Engineering, an M.Tech. in Naval Architecture and Ship Construction, and a PhD in Naval Architecture—all from Rivers State University, Port Harcourt.

A registered engineer with COREN, he is a Fellow of the Nigerian Society of Engineers (NSE), a Member of the Nigerian Institution of Marine Engineers and Naval Architects (NIMENA), and a Fellow of the Institute of Management Consultants (IMC). As Co-Founder and Managing Director of **Somatrix Marine Ltd**, he leads a multidisciplinary firm specializing in marine consulting, ship design, surveys, construction management, and R&D, with operations extending to South Africa.

His technical expertise spans computational fluid dynamics (CFD), finite element analysis (FEA), quality systems, and large-scale engineering data analytics. At the national policy level, he served as **Principal Technical Consultant** to the House Committee on Nigerian Content Development (10th National Assembly), **Chairman** of the COREN Sector Committee on Engineering Regulation, Monitoring & Enforcement (ERM&E) for Maritime, and **National Chairman** of NIMENA. He also chairs the **Management Board of the Centre for Marine and Offshore Technology Development (CMOTD)** at Rivers State University and contributes to COREN's Outcome-Based Education initiatives.

Engr. Dr Eferibo continues to drive innovation, regulatory reforms, and capacity development within Nigeria's maritime and offshore engineering ecosystem.



Engr. Dany Boutros Abboud, FNSE

MD/CEO, Hitech African Construction Limited

Dany Abboud is a proficient civil engineer with a wealth of experience in construction and infrastructure projects. He excels in designing and analyzing structures, preparing comprehensive engineering plans and specifications, and conducting thorough site inspections. Dany possesses a deep understanding of engineering principles, construction materials, and industry standards, allowing him to ensure that projects are executed safely, efficiently, and in full compliance with local regulations. He works closely with the project team, offering valuable insights and expertise to achieve successful project outcomes.

He is the current Managing Director/CEO of Hitech Construction Africa Limited. Established in 1988, Hitech is currently one of the leading Building & Civil Engineering Contractors in Nigeria. In addition to headquarters offices in Lagos, we have regional offices located in Abuja, Ibadan and Benin City.

The combination of on-site professional management and office-based engineering, design and planning staff, equipped with advanced computerised facilities, has enabled Hitech to maintain itself at the forefront of Construction and Engineering Technology in Nigeria. Hitech is always ready to innovate and introduce proven international developments in design and material technology, Hitech is able to undertake a multitude of Civil Engineering/Building Projects and have adequate facilities for the construction of:

- Roadworks, Bridges, Drainage & Concrete Structures
- Land Reclamation, River Canalization & Dredging
- Dams, Water Supply, Irrigation Schemes & Marine Installations

- Airport runways and infrastructure

In order to provide logistical support to ongoing projects, Hitech maintains a substantial fleet of heavy-duty construction plant and equipment in addition to numerous haulage vehicles sufficient to supply the material requirements of sites regardless of distance or location. In addition, our operational granite quarry produces aggregates for concrete, asphalt production and stone-base.

Strategically located in South-West (Ibadan) and South-South (Calabar) geo-political zones, these facilities provide the basic bulk material requirements of most engineering projects; and we intend to establish more of these facilities at (close proximity to) all operational areas. Asphalt plants are located on each operational zone for all road surface requirements. In the pursuit of delivering a quality product, Hitech completed in 1998 the installation of a pre-tensioned, pre-stressed beam factory in Abuja and Ibadan utilizing state of the art equipment supplied by Pourtreilles-Precontraine-Beton of France.

These factories commenced production in September 1998 and are capable of producing bridge beams, piles, structural elements, lighting poles and similar products for construction and allied industries. Our Ibadan Factory complements this capability with a pre-tensioned slab production facility. Over the last decade, Hitech brought to Nigeria innovation construction and road building techniques such as:

- Mechanically reinforced earth walls, (MSE)
- Foam Bitumen stabilised materials
- Recycling of existing road layers
- Continuously reinforced Concrete Pavements, (CRCP)

By means of structured expansion of equipment, assets and resources in addition to the timely adoption of innovative technology Hitech intends to maintain its prominent position in the Nigerian Construction Industry and to expand operations internationally.



Engr. Tamunominini Olufunke Makinde, FNSE

First Lady, Oyo State

Tamunominini Olufunke Makinde was born to the family of Songo Batubo of Buguma in Asari Touri Local Government Area of Rivers State, Nigeria.

She is a graduate of Rivers State University of Science and Technology, where she obtained a Bachelor of Engineering in Chemical/Petrochemical Engineering.

She is an alumna of St. Thomas University in Houston, Texas, USA where she bagged a Bachelors of Business Administration (BBA) degree with double majors (Finance and General Business). She also earned a Master in Business Administration (MBA) degree from the same institution in 2017.

She doubles as an Engineer and businesswoman who has contributed greatly to the success of Makon Group of Companies, owned by her husband, the Governor of Oyo State, His Excellency, Engr. Oluseyi Makinde, FNSE.

Tamunominini Makinde has shown tremendous commitment to the wellbeing of residents of Oyo State,

having led several humanitarian initiatives in support of widows, girls, women and children. She has also hosted various welfare outreaches and empowerment programmes for under-privileged children, physically-challenged children, orphans and women in general.

During her tenure as the Chairperson of the Oyo State Agency for the Control of AIDS (OYSACA), she proved herself to be an advocate of people living with HIV/AIDS, by supporting them and hosting them in the State during the yearly World AIDS Day. She is also the Vice Chairperson of the Nigerian Governor's Spouses Forum through which the forum supports Nigerian children, youths and women.

Tamunominini is happily married to the current governor of Oyo State, His Excellency, Governor Oluseyi Makinde, also an Engineer. They are blessed with three children. She is a devoted wife and a nurturing mother who has continued to be a strong pillar of support to her husband.



Engr. Dr. Habiba Babagana Umara Zulum, FNSE

First Lady of Borno State

In 2008, Engr. Dr. Habiba Danjuma Mohammed earned her Bachelor's Degree in Chemical Engineering (Second Class Upper Division) from the University of Maiduguri. This milestone marked the start of her illustrious career in engineering. Thereafter, she pursued a Master's Degree in Environmental Technology and Management at the Institute of Petroleum Studies, University of Port Harcourt, in 2012. This achievement birthed in her a thirst for further career and professional excellence, leading to her earning a Ph.D. in Chemical Engineering (Renewable Energy) from the prestigious University of Maiduguri in 2023.

She is a **recognized and registered member** of the *Council for the Regulation of Engineering in Nigeria (COREN)*, the *Nigerian Society of Engineers (NSE)*, and the *National Registry of Environmental Practitioners (NREP-USA)*. In addition, she actively participates in professional conferences both locally and internationally, including the **NSE Annual Conference**, **COREN Annual Conference**, and the **APWEN Annual International Conference**.

The titles “researcher,” “lecturer,” “mentor,” and “leader” perfectly encapsulate the professional profile of **Engr. Dr. Habiba Danjuma Mohammed**. She has taught and mentored undergraduate and postgraduate students in Chemical Engineering. Some core courses she teaches include **Chemical Engineering Materials, Transport Phenomena, Chemical Process Technology, and Sugar Technology**. Her research niche lies in **renewable energy, waste management, and environmental sustainability**. Her leadership skills are evident in her various academic and administrative roles, such as:

- **200 Level Coordinator (2013)**

- **Faculty Board Member (2013-present)**
- **Member, Organizing Committee (2023)**
- **Contributor to the Arid Zone Journal of Engineering, Technology and Environment (AZOJETE) (2022-present)**

Her industrial experience began at **Kaduna Refining and Petrochemical Company**, where she served as a **Trainee Laboratory Assistant**, performing fuel and water analyses on routine samples. She later undertook a **postgraduate internship at DEL Waste Management Company, FLT Onne Oil and Gas Free Zone, Rivers State**, where she was involved in the analysis and recycling of drilling waste. Her strong passion for mentorship and dedication to her community motivated her to accept a **Lecturer position at the University of Maiduguri** in 2013.

Engr. Dr. Habiba Danjuma Mohammed has authored and co-authored over twenty scholarly publications in reputable academic journals. Her research cuts across **renewable energy, biomass conversion, waste valorization, adsorption technologies, and environmental pollution control**. Among her noteworthy contributions are studies on **ethanol production from lignocellulosic materials, optimization of flue gas removal processes, and biogas generation from food waste**, which stand out for their **scientific depth, practical relevance, and alignment with global sustainability goals**.

Engr. Dr. Habiba Danjuma Mohammed is also a dedicated humanitarian, actively engaged in **advocacy, social mobilization, and community development initiatives**. Her initiatives include **guidance and counselling programs, efforts to support out-of-school children, and advocacy for women and girls in STEM**. She serves as an **adviser and member of the FGGC Monguno Alumni Association** and frequently speaks at **professional platforms championing sustainability, leadership, and women's empowerment**. Notably, she presented a paper titled “*The Role of Mentorship in Encouraging Girls to Pursue Engineering Careers in Nigeria*” at the **inauguration of the 4th APWEN Chairperson, Maiduguri Chapter**



Prof. Nentawe Goshwe Yilwatda, born on August 8, 1968, in DUNGUM, Kanke Local Government Area, he hails from the esteemed lineage of the late Reverend and Mrs. Toma Yilwatda.

His educational journey began at LGED Primary School, Dungum, culminating in the acquisition of the First School Leaving Certificate in 1981. Subsequently, he achieved the General Certificate of Education (O/Level) in 1986 from the Boys' Secondary School, Gindiri.

Prof. Yilwatda earned his First Degree in Electrical/Electronic Engineering in 1992 from the Federal University of Agriculture, Makurdi. His insatiable thirst for knowledge led him to pursue a Master of Engineering and a PhD in Digital Systems Engineering from ATBU Bauchi and the University of Nigeria, Nsukka, respectively. He further honed his expertise through specialized training by renowned institutions such as the United Nations University International Institute for Software Tech., Macau, China, and the Association of African Universities (AAU).

Embarking on a career in academia, Dr. Yilwatda commenced as an Assistant Lecturer in 1995 at the Plateau State Polytechnic, Barkinladi. He later transitioned to the Federal University of Agriculture, Makurdi in 1996, where he devoted over 25 years to teaching, research, and project implementation. Notably, he served as the pioneer Director of Information and Communication Technology for 12 years, leaving an indelible mark on the

Prof. Yilwatda actively contributed to ICT reforms, notably as a consultant between 2003 and 2005, working on the Integrated Financial Management Information System for key government institutions. His expertise extended to projects with the World Bank, UNICEF, and other international organizations, focusing on alternative energy solutions and infrastructure development in health and education sectors.

A seasoned negotiator and advocate for technology

Engr. Professor Nentawe Goshwe Yilwatda, FNSE

National Chairman

All Progressive Congress (APC)

transfer, Prof. Yilwatda represented Nigeria in energy research delegations to the USA and Canada. His contributions to the Cuban Government/ECN program underscore his commitment to promoting energy efficiency. As the lead consultant for the Energy Commission of Nigeria/UNDP, he conducted crucial energy and economic audits.

In 2017, Prof. Yilwatda assumed the role of Commissioner with the Independent National Electoral Commission (INEC). His tenure witnessed groundbreaking initiatives, including championing the voting rights of Internally Displaced Persons (IDPs), promoting peace through town hall meetings, and empowering women in IDP camps.

Professor Nentawe's distinguished career is continuously marked by a series of esteemed accomplishments and appointments. In 2023, Professor Nentawe was APC Governorship candidate for Plateau State. Though the election result was not in his favor Professor Nentawe was not deterred but continued to rise to prominence as he was soon appointed by President Bola Ahmed Tinubu in October 2024 as the Honorable Minister of Humanitarian Affairs and Poverty Reduction, serving as a member of the Federal Executive Council (FEC). His exceptional leadership in this role earned him recognition, building on his efforts to reposition and enhance the ministry's effectiveness. His expertise in humanitarian affairs led to his nomination as Chair of the RABAT PROCESS, a prominent Euro-African Dialogue on Migration and Development, uniting 60 countries from Africa and the European Union.

In July 2025, Professor Nentawe's stature and influence expanded further as he assumed the role of National Chairman of the All-Progressives Congress (APC), one of Africa's largest and Nigeria's ruling political parties. Through these roles, he continues to make profound contributions to Nigerian society, leaving an indelible mark on the nation's development landscape.

Beyond his professional accomplishments, Prof. Yilwatda remains deeply committed to community development. He actively supports academic development, providing scholarships, covering JAMB fees, and offering training opportunities for young minds. His initiatives in animal husbandry, laptop distribution, and cooperative founding exemplify his dedication to uplifting the youth and rural communities.

As a registered Engineer with COREN, and a member of esteemed organizations such as the Institute of Electrical and Electronic Engineers and the Nigeria Society of Engineers, Prof. Yilwatda has earned numerous awards and accolades for his contributions to ICT and electronic engineering.

Prof. Nentawe Goshwe Yilwatda is not only a dedicated professional but also a devoted Christian and family man. Married to Dr. Mrs. Martina Yilwatda, their union is blessed with a son. His life's journey epitomizes a harmonious blend of academic prowess, professional excellence, and unwavering commitment to community upliftment.



Engr. Gagare Nadungu hails from Gora, Awon Ward in Kachia Local Government Area of Kaduna State. Engr. Gagare was born on 12th June, 1969 into the agrarian family of Mr. & Mrs. Nadungu Dillah of blessed memory.

Engr. Gagare attended LEA Primary School, Gora from 1976-1982 and obtained the First School Leaving Certificate in 1982. The young Gagare, upon passing his Common Entrance Examination, secured admission into Government Secondary School Kachia in 1982/83. Engr. Gagare obtained his General Certificate of Education (GCE)/West African School Certificate from Government Secondary School, Kachia in 1987.

Upon completion of his secondary education, he proceeded to the College of Advanced Studies (CAS), Zaria in 1987 where he obtained IJMB A/Level Certificate with which he gained a direct entry admission into the Ahmadu Bello University, Zaria where he studied Agricultural Engineering and obtained a Bachelor of Engineering Degree in Agricultural Engineering in 1995. He then proceeded for his mandatory one-year National Youth Service Corps (NYSC) in Ila-Orangun, Osun State in 1995/1996.

Engr. Nadungu Gagare, a seasoned and Registered Agricultural Engineer, joined the Federal Civil Service as a Senior Agricultural Engineer and was deployed to the Federal Ministry of Agriculture and Rural Development — now Federal Ministry of Agriculture and Food Security. He rose to the position of Director, Agricultural Engineering in January 2022 and served as Director II in the Department of Rural Development from January 2022 to June 2023, from where he was then deployed to the Department of Agribusiness and Market Development of the Ministry. He was appointed Permanent Secretary by the President and Commander in Chief of the Armed Forces of the Federal Republic of Nigeria, President Ahmed Bola Tinubu, GCFR, on 3rd February, 2025. Engr. Gagare was deployed to the Office of the Secretary to the Government of the Federation as the

Engr. Gagare Nadungu, MNIAE, MNSE, COREN Reg., FNIAE

Permanent Secretary, Ministry of Agriculture

Permanent Secretary, Political and Economic Affairs Office, which is in charge of formulating and executing government policies, projects, and programmes.

Engr. Nadungu Gagare participated in the execution of many projects during his career at the Federal Ministry of Agriculture and Food Security. These projects include among others: the Improvement and Development of Rapid Steam and Rectangular Tank Rice Parboiling Equipment (2008); Establishment of Pilot Dry Chip and Cassava Grit Centres in some selected cassava producing States of the Federation (2012-2013); Establishment of Agro Processing Centres for Edible and Animal Feeds Production along Silo Complexes and Establishment of Agro Processing Estates for Processing Agricultural Produce at Bakura and Maradun in Zamfara State; Design and Supervision of the Construction of 10 Nos Integrated Large Scale Rice Processing Plants in selected locations across Nigeria (2016-2019); Design and Supervision of the Construction of Rural Roads, Installation of Street Lights, Rural Water Supply and Sanitation (2018-2021).

He is a recipient of the Honourable Minister's of Agriculture Award for Excellence 2022, Nigerian Society of Engineers Excellent Leadership and Sustainable Innovation Award 2023, Merit Award for Excellence by the Nigerian Institution of Agricultural Engineers, Abuja. He also received several other awards comprising Youth Coalition for Education in Nigeria Noble Prize of Excellence Award, Nigerian Patriotic Youth Against Corruption & Transparency Initiative Integrity Ambassadorial Award, National Association of Nigerian Students Icon of Nation Building Award, International Soil Tillage Research Organization-Nigeria Distinguished Promoter of Food Security Award, and Adara Youth Congress Award of Excellence, St. Monica Middle Belt/Northern Community Award of Excellence.

Engr. Nadungu Gagare has attended many local and international training courses and programmes, among which are: One Month Training Course/Workshop on Corn and Starch Deep Processing Technology at Jilin Province Light Industries Design and Research Institute, Changchun, China (23rd August to 22nd September, 2004); 2 months Group Training Course on Post Harvest Rice Processing II at Ministry of Agriculture, Forestry and Fisheries, Japan (6th September – 7th November, 2007); 2 short training workshops on Financial Analysis of Investment Project Scenarios with application of Comfar Expert Software for Beginner Level and III Stage at Vienna, Austria (2nd – 6th September, 2015) and (25th – 29th July, 2016).

Engr. Nadungu Gagare is a Corporate Member of the Nigerian Institution of Agricultural Engineers (NIAE), a Corporate Member of the Nigerian Society of Engineers (NSE), a Fellow of the Nigerian Institution of Agricultural Engineers (FNIAE), and Engr. Gagare is also registered with the Council for the Regulation of Engineering in Nigeria (COREN).



Rt. Hon. (Barr.) Bello Muhammad Goronyo
Dip. Law, LLB (Hons), BL, MSc MESM, MPhil LSS, PhD (in view)

Honourable Minister of State, Federal Ministry of Works

Professional Experience

Honourable Minister of State, Federal Ministry of Works (October 2024–Present)

Advocates for infrastructure development and public-private partnerships to address Nigeria's road network challenges, aligning with the Renewed Hope Agenda. Supervises FERMA, ensuring effective coordination of road maintenance projects, stakeholder engagement, and accountability for contractors' performance

Honourable Minister of State, FMWR&S (August 2023–October 2024)

Led initiatives to enhance water access, sanitation, and hygiene, collaborating with private sector partners to advance national WASH goals.

National Director (Youth Mobilization, North West Zone), Asiwaju/Shettima Campaign Council

2023 General Election Spearheaded youth engagement for the successful APC presidential campaign in the North West Zone.

Zonal Secretary (North West), All Progressives Congress (APC)

March 2022– Present Coordinates party operations, strengthening APC's presence in the North West Zone.

Commissioner, Sokoto State Government

2015–January 2019 Served in the Ministries of Solid Minerals and Natural Resources, Energy Development, and Information, driving policy implementation until voluntary resignation.

Deputy Speaker, Sokoto State House of Assembly

January 2015–May 2015 provided legislative leadership for Goronyo Constituency.

Deputy House Leader, Sokoto State House of Assembly

June 2011–January 2015 Chaired the House Committee on Rural Development, advancing community development.

Minority Leader, Sokoto State House of Assembly

June 2007–June 2011 Represented Goronyo Constituency and chaired the House Committee on Judiciary.

Lecturer, State College of Legal and Islamic Studies, Sokoto

2001–2006 Taught law and mentored students, contributing to legal education.

Professional Summary

Born on January 1, 1966, in Sabon Garin Dole, Goronyo Local Government Area, Sokoto State, Rt. Hon. (Barr.) Bello Muhammad Goronyo is a distinguished Nigerian lawyer, legislator, and public servant, happily married with children. Currently serving as the Honourable Minister of State for Works (October 2024–present), he brings over two decades of leadership in law, governance, and infrastructure development. Previously, he served as Minister of State for Water Resources and Sanitation (August 2023–October 2024) and held key roles in the Sokoto State House of Assembly, including Deputy Speaker, Deputy Major and Minority Leader. A dedicated advocate for youth mobilization, environmental sustainability, and rural development, Barr. Goronyo's academic excellence and public service drive transformative change in Nigeria's North West region and beyond.

Education

- PhD (in view), Leadership and Security Studies, Nigerian Defence Academy, Kaduna
- MPhil, Leadership and Security Studies (2020–2022), Nigerian Defence Academy, Kaduna
- Master Class Certificate in Business Management & Leadership London Graduate School, London, UK. (2019)
- MSc, Energy Security Management (2016–2018), Nigerian Defence Academy, Kaduna
- Barrister-at-Law (BL, 2001), Nigerian Law School, Bwari, Abuja
- LLB (Hons), Usmanu Danfodiyo University, Sokoto (1997)
- Diploma in Law, College of Arts and Science, Sokoto (1990)



Mrs. Olubukola Adubi (FNSE)

CEO, Miccom Cables & Wires Ltd

Mrs. Olubukola Adubi began her career as a Pharmacist in the United Kingdom 25 years ago. Over the past two decades, she has gained experience across industries, including pharmaceuticals, consulting, hospitality, and manufacturing. She has established a reputation as a transformational leader who consistently delivers impact in complex and competitive environments.

She holds a Master's Degree in Pharmacy, a Master's in International Business Administration and is currently pursuing a Doctorate in Business Administration. She is a member of the Royal Pharmaceutical Society of Great Britain, the Pharmaceutical Society of Nigeria, and the Institute of Directors.

Mrs Adubi is currently the Chief Executive Officer of MicCom Cables & Wires Limited, one of Nigeria's leading cable manufacturers, where she oversees strategic growth, operational excellence, and industry innovation, ensuring full compliance with ISO 9001, ISO 14001, and ISO 45001 standards. This positions

MicCom as a leader in quality, environmental, and occupational health standards. MicCom remains the only cable manufacturer in Nigeria with all three certifications.

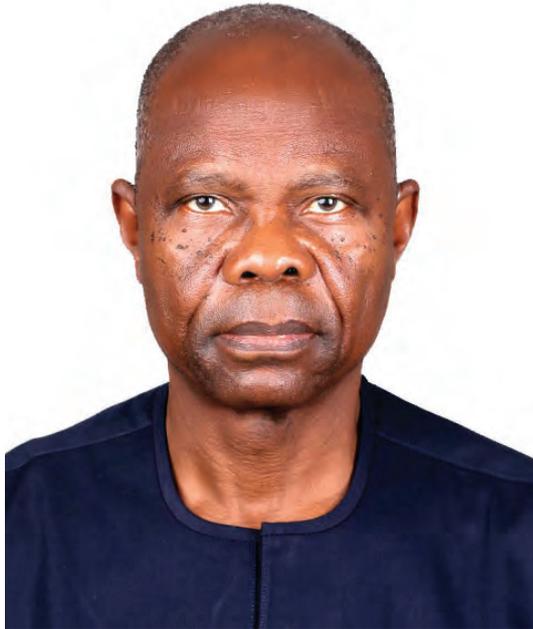
She is currently leading the design, installation, and commissioning of MicCom's new, state-of-the-art Smart Cable Factory, which incorporates automation, IoT-based monitoring, and advanced testing infrastructure, making it one of the most technologically advanced cable plants in sub-Saharan Africa.

Under her leadership, MicCom has become a

training ground for emerging Nigerian engineers, offering real-world industrial exposure and practical skill development, and has established a strategic partnership with Nigerian universities to strengthen the link between academia and industry, providing a valuable training environment for students and graduate engineers.

A committed advocate for Nigeria's industrial development, she serves as President of the Cable Manufacturers Association of Nigeria (CAMAN) – coincidentally the 2nd female to hold this position, the first being her late mother, Engr. Olufunke Ponnle, FNSE, where she leads efforts to strengthen industry standards, promote local capacity, and engage stakeholders on critical policy and infrastructure issues. She has been recognised for her values-driven leadership rooted in loyalty, integrity, and excellence. From guiding operational teams to influencing national manufacturing policies, she exemplifies a leadership style that is both people-focused and results-oriented.

She is passionate about innovation, collaboration, and sustainable growth. She continues to make significant contributions to Nigeria's manufacturing sector and broader economic development. Her leadership at MicCom and within CAMAN demonstrates a deep commitment to advancing industrial excellence, human capital development, and inclusive growth, aligning with Nigeria's strategic objective of achieving sustainable industrial transformation and global competitiveness.



Engr. Adeniyi Kemi Ogunsanya, FNSE

MD/ CEO Ako-Konstrukt and Associates

Engr Adeniyi Kemi Ogunsanya started his Engineering career at the Lagos State College of Science and Technology, Lagos (which was later renamed Lagos State Polytechnic and now upgraded to Lagos State University of science and Technology) where he graduated with a Higher National Diploma (Upper Credit) in 1983. He obtained the Post Graduate Diploma in Civil Engineering from Federal University of Technology, Akure in 2010.

COREN registered Engineer. He is a member of the following professional bodies:

- Nigerian Society of Engineers (NSE)
- Nigerian Institution of Civil Engineers (NICE)
- Nigerian Institution of Highway and Transportation Engineers (NIHTE)

He is a committed and experienced Civil Engineer with over 40 years in Civil and Building Engineering design and construction.

He worked with Lodigiani (Nig) Ltd, a multinational Italian Civil Engineering company where he was involved in the construction of some landmark projects, amongst which are:

- Abuja National Mosque, Abuja
- 69 km Onitsha – Oji River Highway
- Agip Head Office Complex, Engineering Close, Victoria Island, Lagos

He designed and constructed the Pile Foundations for the 2000 MT AGO vertical tank for National Oil and Chemical Co. Ltd (now Con Oil) at Onne, Port Harcourt in joint venture with Nigerian Soil Engineering Ltd in 1989

His company, Ako-Konstrukt and Associates, has executed the design and construction of over 10 nos. composite concrete bridges spanning 30-40m over

Rivers for JB farms Ltd at their oil palm plantations at Calabar in Cross River State and Ore in Ondo State.

He supervised the construction of the 400 TPH Vegetable Oil Refinery with 31 nos. Vertical Tanks and a total storage capacity of 41,000 MT for Tosett Agro Industries at Odogbolu in Ogun State.

He is currently supervising the 30TPH Palm Oil Processing Mill for JB Farms Ltd at Ore, Ondo State. The Mill was designed and manufactured in Malaysia.

He has served the NSE under several capacities both at National and branch levels amongst which include:

- Member, Finance and General Purpose Board (2013)
- Member, Corporate Resource and Media Board (2014)

He was a member of the Ikeja Branch Business Luncheon Planning Committee in 2007.

He served on the NASENI Governing Board (2018-2023), during which he advocated for the commercialization of prototype manufacturing equipment developed by the Agency to promote local production of light machinery for SMEs in the manufacturing sector.

To enhance his managerial competence as an entrepreneur in Engineering practice, he obtained a master's degree in business administration from Olabisi Onabanjo University, Ago-Loroye, Ogun State in 2007.

NSE President Attends National Conference on Public Accounts and Fiscal Governance

The 2025 National Conference on Public Accounts and Fiscal Governance kicked off on July 7, 2025, with Engr Margret Oguntala, President of the Nigerian Society of Engineers (NSE), attending the event as a Distinguished Guest. The conference, held at the Congress Hall of Transcorp Hotels in Abuja, saw key stakeholders, including government officials, thought leaders, policymakers, and academics, convene to discuss strategies for improving public accountability and fiscal governance in Nigeria.

During the opening ceremony, the NSE President was acknowledged for her crucial role in the country's fiscal governance landscape. The conference, which is part of the 10th National Assembly's Legislative Agenda, aims to chart a new course for fiscal transparency, integrity, and sustainable development.

The event continued next day, July 8, 2025, when NSE President delivered a technical workshop



President of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE

as a facilitator. The workshop, titled “Public Procurement Integrity: Tackling Ghost Projects and Overpricing,” provided a platform for deep discussions on improving public procurement processes and ensuring integrity in public spending. Her extensive experience with leadership and in the Engineering brought valuable insights into addressing pressing

issues.

The workshop was a key session in the conference, equipping participants with the necessary tools and strategies to navigate ongoing reforms and contributed to Nigeria's path toward greater fiscal accountability and transparency.



3rd from left: President of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE in a group photograph with the National Assembly Members and other dignitaries at the event.

NSE, BPP Forge Strategic Alliance to Elevate Nigeria's Procurement Standards

Abuja, July 8, 2025

In a landmark move aimed at reforming and professionalising Nigeria's procurement landscape, the Nigerian Society of Engineers (NSE) and the Bureau of Public Procurement (BPP) have agreed to a strategic partnership focused on capacity building, innovation, and institutional collaboration.

The agreement was reached during a high-level courtesy visit by the President of NSE, Engr. Margaret Aina Oguntala, FNSE, and members of the Executive Committee to the Director General of the BPP, Dr. Adebowale Adedokun, at the Bureau's headquarters in Abuja.

Dr. Adebowale Adedokun, in his remarks, welcomed the NSE delegation and applauded the initiative, describing it as timely and necessary. He proposed the creation of a Joint Working Committee as a dedicated mechanism to drive the partnership and track its outcomes across the procurement value chain. He also stressed the importance



Right: President of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE and the Director General of Bureau Public Procurement, Dr. Adebowale Adedokun

of continuous professional development, particularly in mastering BPP's online Standard Bidding Documents now accessible to the public. Dr. Adedokun further encouraged Engineers to take a proactive role in accurate project costing and to uphold the highest standards of professionalism and integrity in procurement practices.

In response, NSE President, Engr. Margaret Aina Oguntala,

expressed her full support for the initiative, highlighting the alignment between the missions of the NSE and BPP. She noted the shared goals in harmonising procurement policies, setting professional standards, and promoting transparency and competitiveness across procurement systems in both the public and private sectors.



Group photograph

NEGG 2025 Kicks Off with Habu Gumel Olympic Marathon in Abuja

The 2025 edition of the National Engineering Games (NEGG) flagged off on Saturday 12th July 2025 with the Habu Gumel NSE Olympic Marathon in Abuja, officially marking the beginning of this year's Games.

The marathon, which started at 7:00 a.m., was flagged off by the President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, who also unveiled the official mascot for the Games.

Speaking at the event, NSE President described the Games as a strategic platform to promote wellness, social bonding, and professional networking among Engineers, government officials, private sector stakeholders, and the diplomatic corps.

"This year's Games are dedicated to Engr. Habu Ahmed Gumel, FNSE, FAEng, OON, a respected past President of NSE and current President of the Nigerian Olympic Committee," she said. "We're proud to introduce the Habu Gumel NSE Olympic Marathon



2nd from left: President of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE, 3rd from left: Deputy President of the NSE, Engr. Ali A. Rabi, FNSE, FAEng, 1st from right: President of NSE 2000-2001, Engr. Abu Gumel and 1st from left: Hon. Minister of Sports, Mallam Shehu Dikko, FNIS.

as a tribute to his remarkable contributions to both Engineering and sports development."

The Chairman of the National Sports Commission, Malam Shehu Dikko, FNIS, also attended the event. He commended the NSE and advocated for more inter-professional sporting collaborations.

Engr. Gumel, visibly moved by the recognition, thanked the Society and praised its leadership. He also pledged support for future collaborations between the engineering profession and

Nigerian sports institutions.

Chairman of the NEGG Games Committee, Engr. Olaolu Ogunduyile, FNSE, thanked the honouree and expressed confidence in a successful rollout of the remaining activities.

With the marathon concluded, NEGG 2025 continued in full gear, featuring various athletic and recreational events aimed at strengthening unity and well-being among Nigeria's Engineering professionals.



Group photograph

NSE Confers Fellowship Award on 261 Distinguished Engineers

Abuja, Nigeria – July 14, 2025

The Nigerian Society of Engineers (NSE) has conferred its prestigious Fellowship Award on 261 accomplished Engineers in recognition of their outstanding contributions to the Engineering profession and national development.

The conferment ceremony, held at the Los Angeles Event Center, Jahi, Abuja, was presided over by the President and Chairman-in-Council of the NSE, Engr. Margaret Aina Oguntala, FNSE. The event drew a distinguished gathering of Engineering professionals, government officials, industry leaders, and well-wishers who came together to celebrate the elevation of deserving members to the highest professional rank in the Society.

In her welcome address, the Chairman of the Board of Fellows, Engr. Kamila Wopa Maliki, FNSE, mni, lauded the commitment and professional integrity of the newly



Engr. Oguntala



President of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE and other Officials in a group picture with Conferees

conferred Fellows, commending their dedication to engineering excellence.

Delivering her address, the NSE President, Engr. Margaret Aina Oguntala, FNSE, congratulated and charged the new Fellows to uphold the highest standards of professionalism, integrity, and ethics, reminding them that the NSE reserves the right to withdraw the Fellowship from any member whose conduct brings disrepute to the profession.

She described the conferment as a celebration of distinction, achievement, and responsibility,

emphasizing that the honour was not only a reward but a call to higher service.

“Their elevation is a recognition of their outstanding professional accomplishments and commitment to the advancement of engineering and, by implication, the technological development of our dear country, Nigeria,” she stated.

Speaking on the role of Engineering in national development, NSE President stressed the critical place of Engineers in shaping Nigeria’s future, especially in addressing

persistent infrastructure challenges in energy, transportation, housing, and public services. She highlighted the Society’s ongoing partnerships with stakeholders across both public and private sectors to foster innovation in areas such as agricultural entrepreneurship, vocational training, and digital technologies.

The event marked a significant milestone in the NSE’s ongoing efforts to build engineering capacity and inspire leadership within the profession, reinforcing its role as a key partner in national development.



Minister of State for works applauds NSE's Excellence at Commissioning of the Remodelled NEC Phase II Reception

Abuja, July 17, 2025

The Nigerian Society of Engineers (NSE) has officially commissioned the remodelled reception area of the National Engineering Centre (NEC) Phase 2 Headquarters in Abuja, marking another milestone in the Society's ongoing institutional development.

The commissioning, which took place during the 462nd Council meeting of the NSE, was performed by the Honourable Minister of State for Works, Barr. Bello Muhammed Goronyo. The Minister commended the Society for its foresight, innovation, and the high standard of execution demonstrated in the newly upgraded facility. "I am proud to commission this project for the benefit of mankind," he said, describing the design as world-class and reflective of a progressive professional body.

The decision to remodel the NEC reception area was ratified during the 461st Council session of the Society on May 25, 2025. The project aims to improve visitors experience and project the NSE as a modern, efficient



Right: Engr. Oguntala and Barr. Gornyo as he commissions the NEC Phase 2 Reception

institution committed to excellence in Engineering practice and governance.

Speaking at the event, the President of NSE, Engr. Margaret Aina Oguntala, FNSE, expressed satisfaction with the timely completion of the project. In her words - "I am indeed pleased to inform you that work on the remodelling of the reception area of NEC Phase 2 has been completed. In line with our service ideals, we have also recruited a trained professional to man the front

desk, ensuring that all guests and members are received with courtesy and professionalism,".

The commissioning ceremony was attended by members of the NSE Council, senior Engineers, and invited dignitaries. The upgraded reception area now offers a more functional, welcoming, and aesthetically pleasing space, aligning with the Society's mission to foster Engineering excellence and enhance operational effectiveness at its national headquarters.



Group photograph

Madam President Inaugurates Investiture Committee for the 35th President

The Nigerian Society of Engineers (NSE) has officially inaugurated the Investiture Committee for its 35th President. In a significant step towards a seamless transition and celebration of leadership, the inauguration was performed by the President and Chairman-in-Council, Engr. Margaret Aina Oguntala, FNSE.

The Committee was tasked with planning and executing the investiture ceremony of Engr. Ali A. Rabiou, FNSE, F.ASCE, FAEng, MFR, who is set to become the 35th President of the prestigious professional body.

The Committee is to be chaired by Engr. W. Kamila Maliki, FNSE, FAEng, mni, with Engr. George Chukwulewa Okoroma, FNSE, FAEng, serving as Vice Chairman. A diverse and distinguished group of Engineers from across the country and the diaspora have also been appointed as members, reflecting the national spread and professional depth of the Society.

Other members of the Investiture Committee are Engr. M. Kabir Wanori, FNSE; Engr. Prof. O.A.U. Uche, FNSE; Engr. Ademola Agoro, FNSE; Engr.



From right: Engr. Oguntala, Chairman of Investiture Committee, Engr. W. Kamila Maliki, FNSE, FAEng, mni and the Vice Chairman, Engr. George Okoroma, FNSE, FAEng.

Rose Madaki, FNSE; Engr. Hon. Solomon B. Maren, FNSE; Engr. Hon. Mohammed Haruna, FNSE; Engr. Jacob Adeyemo, FNSE; Engr. Benjamin Osita Okoh, FNSE; Engr. Nnoli Akpedeye, FNSE, FAEng; Engr. Nurudeen M. Musa, FNSE; Engr. Rabiou Said, FNSE; Engr. Aisha Umara, FNSE; Engr. Ojegba Evukowhiroro, FNSE; Engr. Muhammed Dauda, FNSE (Sarkin Kudun Lafia); Engr. Dr. Bola Mudashir, FNSE; Engr. Uwem Akpan, FNSE; Engr. Prof. Abdulrahman Asipita, FNSE; Engr. Ismaila Amodu, FNSE, FAEng; Engr. Dr. Felicia Agubata, FNSE; Engr. V. C. Igiri, FNSE; Engr. Mohammed Baba Shehu, MNSE

while Engr. Olumoh Sharafadeen, FNSE, will serve as the Committee Secretary, and Engr. Muhammed B. Shettima, FNSE, the Assistant Secretary.

In addition, representatives from the NSE Diaspora community were included, underscoring the global footprint of the Society.

Speaking during the inauguration, the President of NSE charged the committee to ensure a befitting and inclusive ceremony that reflects the values, vision, and unity of the Nigerian Engineering community. She emphasized the importance of excellence, decorum, and innovation in the planning and execution of the event.

In his remarks, Deputy President, Engr. Ali A. Rabiou, FNSE, F.ASCE, FAEng, MFR, expressed appreciation to the committee for their readiness to serve. *“I deeply appreciate your willingness to take on this important assignment and I have absolute confidence in your ability to deliver an exceptional and memorable investiture ceremony,”* he stated.

The inauguration of the committee signals the Society’s continued commitment to excellence, orderliness, and purposeful leadership transition.



Group picture

NSE Trans-Amadi Branch Lauded for Maiden Engineering Week

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has commended the NSE Trans-Amadi Branch for the successful organization of its maiden Engineering Week. She made this known while attending and chairing the opening ceremony of the 2025 Engineering Week, held on Monday, July 21, 2025, in Rivers State.

The event marked the formal commencement of a week-long celebration of engineering excellence, innovation, and professional development, drawing participation from Engineering professionals, industry leaders, students, and government representatives from across Nigeria.

In her remarks, the NSE President expressed delight at being part of the historic event and praised the Branch for its professionalism, energy, and consistent impact since its establishment. “Despite its relatively short existence, the NSE Trans-Amadi Branch has rapidly distinguished itself by executing numerous impactful activities that



align with the mission and vision of the Nigerian Society of Engineers,” she noted.

She encouraged all attendees to take full advantage of the week’s events, saying, “This is your opportunity to learn, to network, to challenge ideas, and to explore new frontiers in Engineering practice.”

Delivering the keynote address, Mr. Matthieu Bouyer, Managing Director and Country Chair of TotalEnergies Companies in Nigeria, underscored the vital role of Engineering in tackling

global challenges such as climate change, energy transition, and infrastructure development. He reiterated TotalEnergies’ commitment to sustainability through emission reduction, investments in renewable energy, and support for education and technical capacity building. He also urged young engineers to be bold, innovative, and proactive in shaping solutions aligned with national priorities and global development goals.

Welcoming guests to the event, the Chairman of NSE Trans-Amadi

Branch, Engr. Jonathan Francis, FNSE, expressed appreciation to the NSE President for her unwavering support. He also highlighted the rich lineup of activities planned for the week, including technical paper presentations, exhibitions, school outreach programmes, mentorship sessions, and industry visits.

The opening ceremony set a vibrant tone for a week dedicated to growth, collaboration, and innovation in the Engineering profession.



APC National Chairman Receives NSE President, Reaffirms Commitment to Engineering Excellence

The National Chairman of the All Progressives Congress (APC), Engr. Prof. Nentawe Goshwe Yilwatda, received the President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, during a courtesy visit to his residence in Abuja, where he reaffirmed his lifelong commitment to Engineering excellence and national development.

The visit, which took place on Monday 28th July, 2025 was part of NSE’s ongoing engagement with national leaders to strengthen partnerships that promote innovation, infrastructure development, and STEM education across Nigeria.

The first female President of the NSE, congratulated Professor Yilwatda on his historic emergence as APC National Chairman saying *“Your election is a win not just for the APC, but for the entire Engineering community. It is a powerful reminder that professionalism, innovation, and visionary leadership still matter in shaping our nation’s future,”* she praised the party’s recognition



Engr. Oguntala in a handshake with the new APC Chairman, Engr. Prof. Nentawe Goshwe Yilwatda, MNSE.

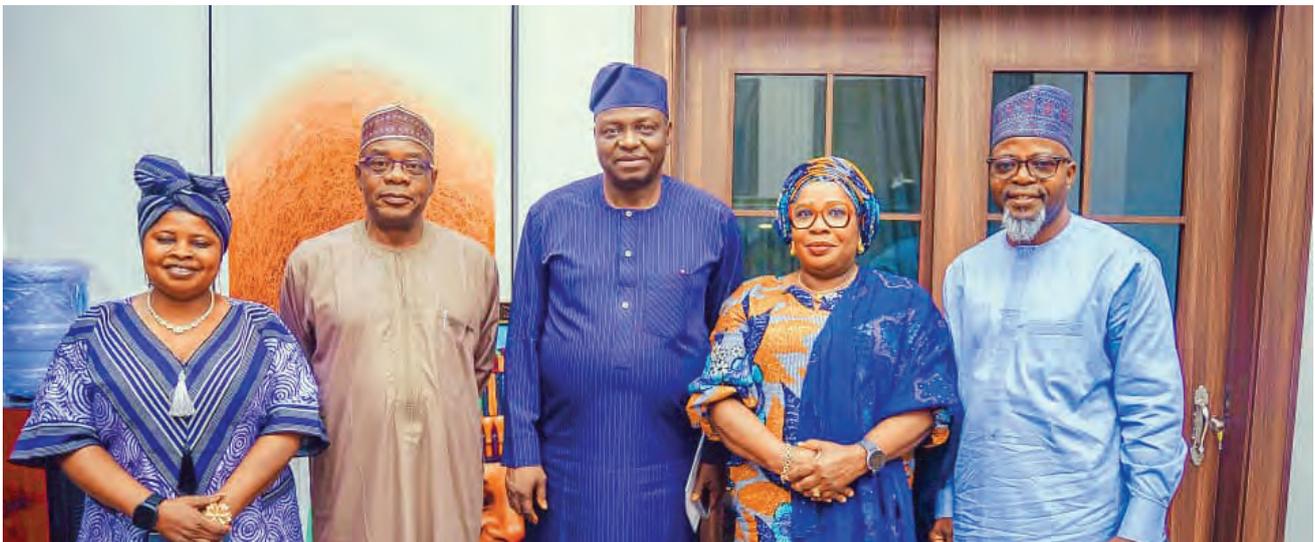
of professional competence and integrity in leadership selection.

She also highlighted the NSE’s flagship initiatives and its ongoing advocacy to integrate Engineering expertise into national policymaking and developmental planning.

In his response, Professor Yilwatda, a renowned Engineer and academic, thanked the NSE delegation and expressed strong support for closer collaboration between the Engineering profession and political leadership.

“As engineers, we must be central to national planning and execution. I remain committed to using every platform I occupy to promote Engineering excellence and open doors for future Engineers,” he said.

The NSE delegation included Past President, Engr. Kashim A. Ali, FNSE, mni; Vice President (Assets Management), Engr. Rachel Serumun Ugye, FNSE; and Executive Committee Member (Corporate Services), Engr. Dauda Musa, FNSE.



2nd from right: President of NSE, Engr. Margaret Aina Oguntala, FNSE, 1st from left: Vice President (Asset Management), Engr. Rachel Serumun Ugye, 2nd from left: Past President of NSE, Engr. Kashim Ali, FNSE, FAEng, mni, 1st from right: Executive Committee Member (Corporate Services), Engr. Dauda Musa, FNSE and third from right: APC Chairman, Engr. Prof. Nentawe Goshwe Yilwatda, MNSE in a group photograph

NSE Visits NCC Boss, Proposes Strategic Alliance for National Digital Transformation

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, on paid a courtesy visit to the Executive Vice Chairman and CEO of the Nigerian Communications Commission (NCC), Dr. Aminu Maida, at the Commission's headquarters in Abuja. The visit focused on strengthening institutional collaboration aimed at accelerating Nigeria's digital transformation through Engineering-driven innovation, professional body synergy, and nationwide capacity development.

During the meeting, the NSE President presented a comprehensive proposal highlighting six strategic areas, including broadband expansion and digital inclusion. She reiterated NSE's commitment to supporting the NCC in achieving the national 70% broadband penetration target by leveraging its widespread presence across 91 Branches and 25 divisions. She also proposed Engineering-led solutions to tackle infrastructure challenges such as Right-of-Way issues, multiple taxation, and vandalism.

One of the innovative proposals was the introduction of telecom-enabled marine technology projects, including IoT-powered smart ports and satellite-linked aquaculture monitoring systems, designed to boost Nigeria's blue economy. The President suggested that these projects be implemented through



Engr. Oguntala presents a plaque to the EVC/CEO of NCC, Dr. Aminu Mahida

a joint working team comprising Engineers from both institutions, to ensure technical coordination and impact.

The NSE President further called for collaboration in Artificial Intelligence (AI) and data analytics to improve telecom network quality and enable predictive maintenance. She sought NCC's support in upskilling engineers in AI, big data, cybersecurity, and telecom automation—skills she emphasized as critical to the future of Nigeria's digital infrastructure.

To complement these efforts, the NSE President requested access to capacity-building programmes through the NCC's Digital Bridge Institute (DBI), focusing on fibre deployment, spectrum management,

and other emerging technologies. She also invited the NCC to play a key role in the upcoming 2025 NSE International Conference, particularly in the area of the blue economy, to which Dr. Maida responded by pledging that 80% of NCC's engineers would be in attendance.

Dr. Aminu Maida commended the NSE for its visionary leadership and proactive engagement. He reaffirmed NCC's readiness to partner with NSE on shared goals that support digital transformation, youth empowerment, and sustainable innovation. The proposed partnership is expected to catalyse cross-sector development and reinforce the vital role of engineering in shaping Nigeria's digital future.



Group photograph

NSE President Advocates Innovative, Inclusive Housing Solutions at 2025 Africa International Housing Show

Abuja, Nigeria – July 29, 2025

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has called for a collective, innovative, and locally driven approach to addressing Africa’s housing challenges. She made the call while delivering a goodwill address as Guest of Honour at the opening ceremony of the 2025 Africa International Housing Show (AIHS), held at the Transcorp Hilton Hotel, Abuja.

In her remarks, the NSE President described this year’s theme, “Re-imagining Housing – Overcoming Challenges to Opportunities through Innovation, Collaboration and Policy,” as both timely and visionary, especially in the context of the continent’s growing housing deficit and rapid urbanisation trends.

“Access to adequate housing is not only a fundamental human right but also a key driver of sustainable development,” she noted. “To achieve this, governments at all levels must confront the housing crisis head-on through increased investment, policy reform, and enabling partnerships.”



She reaffirmed the Nigerian Society of Engineers’ commitment to promoting the use of cost-effective, environmentally friendly, and locally adaptable housing technologies. She strongly advocated for the increased use of local content in construction, explaining that such an approach would reduce costs, stimulate local economies, and generate employment opportunities.

The NSE President also called for stronger collaboration among government agencies, developers,

policymakers, financiers, and international partners, stating that real transformation in the housing sector would only be possible through sustained synergy, innovation, and shared responsibility.

The event attracted leading stakeholders from across Africa’s housing, construction, finance, and policy sectors, reaffirming the Show’s role as a strategic platform for reshaping the future of housing on the continent.



Group photograph

NSE President Chairs 3rd Mbanefo Memorial Lecture, Reaffirms Engineers' Role in National Governance

Abuja, Nigeria – July 30, 2025

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, served as Chairman of the Occasion at the 3rd Engr. Charles Mbanefo Memorial Lecture, held in Abuja with the theme: “Fixing Nigeria Through Strategic Leadership, Rule of Law and Effective Governance: The Engineer in the Policy Space.”

The high-profile lecture, organised by the NSE Abuja Branch, was held in honour of Engr. Charles Aniweta Mbanefo, FNSE — a distinguished statesman, pioneer Chairman of the Abuja Branch and 21st President of the Nigerian Society of Engineers. The event brought together notable figures from Engineering, academia, public service, and policy to reflect on how engineers can meaningfully engage in national transformation through leadership and governance.

In his welcome address, the Host and Chairman of NSE Abuja Branch, Engr. Ahmed A.S.Y. Kutigi, highlighted the legacy of Engr. Mbanefo as a beacon of excellence, dedication, and service to the engineering profession. He emphasized the importance of memorializing past



Engr. Oguntala

heroes of the Society to inspire younger professionals to embrace leadership with integrity.

In her remarks, NSE President described the memorial lecture as a worthy tradition that upholds the values of mentorship, patriotism, and civic engagement. She reaffirmed the call for Engineers to move beyond technical roles and participate actively in governance, public policy, and nation-building efforts.

The Guest Speaker, Dame Dr. Sally Nkem Adukwu-Bolujoko, OON, FNIM, CNIM,

delivered an inspiring keynote that underscored the relevance of strategic leadership and the rule of law in nation-building. She encouraged Engineers to leverage their problem-solving mindset and ethical discipline in shaping Nigeria’s policy landscape.

The event featured goodwill messages, reflections on Engr. Mbanefo’s impact, and a passionate call to action for emerging Engineers to uphold professional excellence while contributing to sustainable governance.



Group photograph

NSE President Urges Stronger Nigeria-Japan Partnership for Infrastructure Development

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has called on the Federal Government to strengthen its strategic partnership with the Government of Japan to boost infrastructure development in Nigeria. She made this call during the commissioning of state-of-the-art road construction and maintenance equipment donated by the Japanese government in Abuja.

She emphasized that sustained collaboration between Nigeria and Japan could unlock valuable opportunities in technology transfer, capacity building, and enhanced infrastructure delivery. She noted that such partnerships are crucial in achieving long-term national development goals, particularly in Engineering-driven sectors. “It is vital that we work together toward shared objectives that benefit both countries,” she said.

The NSE President also commended President Bola Ahmed Tinubu, GCFR, for adopting strategic collaborations as a pathway to infrastructure renewal. She urged his administration to



The President of NSE in a handshake with the Ambassador of Japan to Nigeria

further deepen such alliances, especially in sectors where innovation and Engineering expertise are needed most. “President Tinubu’s approach to development through global partnerships is commendable, and I encourage even deeper engagements for broader national impact,” she added.

Speaking on the importance of road infrastructure, NSE President described it as the backbone of economic growth, enabling connectivity, trade, and access to essential services. She noted that the newly commissioned equipment is not just machinery

but a symbol of progress and a commitment to excellence in Nigeria’s infrastructure delivery.

In her closing remarks, the NSE President expressed appreciation to the Japanese government for its continued support and charged the Federal Roads Maintenance Agency (FERMA) with the responsibility of ensuring proper use and maintenance of the equipment. “FERMA must ensure that the assets are put to optimal use and maintained in accordance with international standards to maximise their impact,” she concluded.



Group photograph

NSE and NIBRRI Partner to Establish Regulatory Authority to Establish Body for Quality Assurance of Construction Materials

In a significant development for Nigeria's construction industry, the Nigerian Society of Engineers (NSE) and the Nigerian Building and Road Research Institute (NIBRRI) have resolved to jointly champion the establishment of a specialized regulatory agency aimed at ensuring the quality of local construction materials. This landmark decision was reached following a strategic meeting held on Wednesday, August 6, 2025, at the National Engineering Centre (NEC) Headquarters in Abuja. The meeting was hosted by Engr. Margaret Aina Oguntala, FNSE, President of NSE, and attended by Engr. Prof. Samson Duna, FNSE, Director General/CEO of NIBRRI.

During the meeting, Engr. Prof. Duna raised concerns about the increasing infiltration of substandard and inferior construction materials into the Nigerian market. He noted that these materials are often used in critical infrastructure projects, contributing to recurring incidents of structural failures and building collapses across the country. Prof. Duna called on NSE to lend its support in addressing this growing menace, which he described as a serious threat to public safety and the country's engineering integrity.

In response, NSE President expressed full support for the proposal and stressed the urgent need for a regulatory body with the authority to vet, validate, and certify building materials before they are deployed in construction projects. She pointed



Engr. Oguntala

Engr. Duna

out that despite existing regulations, the persistent use of low-quality materials continues to pose significant challenges, threatening not only public safety but also the national economy. The NSE President emphasized that establishing a dedicated agency would ensure that only materials meeting rigorous standards are used in infrastructure development.

The proposed regulatory agency would act as a gatekeeper for construction materials, ensuring that only certified and approved products are used in both public and private sector projects. This initiative aligns with global best practices in quality assurance and aims to significantly reduce the incidence of building collapses and infrastructure failures in Nigeria. NSE and NIBRRI have committed to refining the proposal, engaging relevant government

authorities, and advocating for the establishment of this critical agency.

The meeting also saw the participation of key stakeholders, including Rt. Hon. Tgst. Dominic Asuquo Udoatan, FNATE, President of the Nigerian Association of Technologists in Engineering (NATE), and Hon. Umar Usman Maikunkele, President of the Nigerian Association of Engineering Craftsmen (NAEC). Their presence underscored the broad support for the initiative across the Engineering community. This collaboration marks a significant step toward improving the quality and safety of construction materials in Nigeria, ensuring that the country's infrastructure is built on a foundation of excellence and sustainability.



Group photograph

NSE President pays Condolence visit to Emir of Daura

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, visited Katsina State on an official and condolence mission.

She first toured Fresh Organic and Natural Farm, Katsina Ltd, where she was received by the Managing Director, Mr. Umar Lawal. The Chief Executive Officer of Katsina Farm Ltd, Ambassador Ahmed Rufai Abubakar, CFR, commended the President for the visit, describing it as a testament to her commitment to supporting homegrown initiatives and fostering collaboration between Engineering and agricultural development. The visit underscored the NSE's interest in promoting sustainable agricultural Engineering and innovation in agribusiness.

The delegation later proceeded to Daura, where NSE President paid a condolence visit to His Royal Highness, Alhaji (Dr.) Umar Farouk Umar, CON, Emir of Daura, over the passing of former President Muhammadu Buhari, GCFR.

Delivering a condolence letter on behalf of the Council and Members of the NSE, she described President Buhari as “a true patriot and statesman whose service to



The Emir of Daura, Alh. (Dr) Umar Farouk Umar, CON, warmly receives Engr. Oguntala



Nigeria was marked by integrity, wisdom, and commitment to national development,” adding that his “impeccable record and steadfast dedication to the country stand as a legacy that will continue to inspire generations.”

The President reaffirmed the NSE's commitment to national development through professionalism, unity, and service to humanity.



Group photograph with Members of NSE, Katsina Branch

NSE President Visits Katsina Governor, Commissions NSE Katsina Branch Secretariat

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has officially commissioned the newly constructed Secretariat Complex of the NSE Katsina Branch, marking a historic milestone for the engineering community in the state.

The event, held in Katsina, was preceded by an official visit to the Executive Governor of Katsina State, His Excellency Dikko Umaru Radda, who was represented by the Deputy Governor, His Excellency Faruk Lawal. During the visit, the NSE President commended the State Government for its unwavering support to the Engineering profession, particularly for allocating the land and facilitating the construction of the Secretariat.

In her commissioning address, NSE President described the edifice as more than just a building, noting that it symbolizes “a future where Engineers will have the necessary facilities to innovate, collaborate, and advance the frontiers of



President of NSE, Engr. Margaret Aina Oguntala, FNSE presents a plaque to the Deputy Governor of Katsina State, His Excellency, Farouk Lawal.

knowledge and technology.” She applauded the dedication of past and present Branch leaders, urging members to safeguard the structure as a lasting legacy for future generations.

In his goodwill message, Deputy Governor Faruk Lawal hailed the Secretariat as a product of vision, resilience, and partnership between government and professional bodies. He reaffirmed the administration’s commitment

to infrastructure development, citing the construction of over 160 kilometres of roads, the upgrading of 260 healthcare facilities, and significant investments in education and health.

The newly commissioned Secretariat is expected to serve as a hub for professional collaboration, innovation, and policy engagement, reinforcing the NSE’s role in driving sustainable development in Katsina State and beyond.



Group photograph

NSE President Urges Professionals to Leverage Modern Tools in Road Design



Engr. Oguntala

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has charged professionals to adopt global best practices and leverage modern tools in road design, construction, and maintenance to ensure value for money and safety for all road users.

She made this call while delivering her speech at the International Training Workshop on Managing Road Infrastructure Assets for Sustainability, organized by the Nigerian Institution of Highway and Transportation Engineers (NIHTE) — a division of the NSE — in collaboration with the International Road Federation (IRF Global).

The four-day workshop, expected to produce actionable recommendations that will

strengthen road asset management practices in Nigeria and contribute to long-term infrastructure sustainability.

held from August 11–14, 2025 at the NSE Auditorium, Labour House Road, Central Business District, Abuja, brought together road sector professionals, policymakers, and infrastructure managers to explore strategies for the effective management and sustainability of road infrastructure assets.

In her address, the NSE President also commended NIHTE for organizing the capacity-building programme, noting that road infrastructure is a critical driver of national development, trade facilitation, and economic growth. She emphasized that sustainable road asset management requires not only engineering expertise but

also policy consistency, adequate funding, innovative technologies, and a culture of maintenance.

“This workshop is a call to action for engineers, contractors, and government agencies to work in synergy for resilient, efficient, and sustainable road networks across Nigeria,” she said.

The event, hosted by Engr. Francis Oriakhi, FNSE, National Chairman of NIHTE, featured technical sessions, case studies, and presentations from local and international experts. Supporting organizations included the Nigerian Building and Road Research Institute (NBRI), Federal Roads Maintenance Agency (FERMA), Council for the Regulation of Engineering in Nigeria (COREN), and others.

Federal Ministry of Works to Deepen Collaboration on Engineers' Welfare and Infrastructure Development

The Nigerian Society of Engineers (NSE) and the Federal Ministry of Works have pledged to strengthen their collaboration in key areas aimed at advancing the welfare of Engineers and driving infrastructural development across the country. This commitment was reaffirmed during a courtesy visit by the President of the NSE, Engr. Margaret Aina Oguntala, FNSE, to the Honourable Minister of Works, Engr. David Nweze Umahi, CON, FNSE, and the Permanent Secretary of the Ministry, Engr. Olufunso Adebisi, FNSE, in Abuja on Tuesday, August 12, 2025.

During the meeting, the NSE President underscored the importance of a more strategic partnership between the Society and the Ministry, particularly in building the capacity of Engineers within the Ministry's workforce. She called for the expansion of NSE's ongoing training programmes — targeted at both young and experienced Engineers — which have been running consistently since 2024. She also sought the Ministry's support in providing industrial training opportunities for Engineering students and NYSC placements for Engineering graduates to help bridge the gap



Middle: President of NSE, Engr. Margaret Aina Oguntala, FNSE flanked by Minister of Works, Engr. David Nweze Umahi, FNSE, CON (right) and Permanent Secretary, Federal Ministry of Works, Engr. Olufunso Adebisi, FNSE (left).

between academic knowledge and practical field experience.

Highlighting NSE's readiness to design and deliver customised training modules to meet the Ministry's specific needs, NSE President proposed joint initiatives on community-based Engineering projects aimed at using Engineering solutions to improve local livelihoods. She further assured the Honourable Minister and the Permanent Secretary of the Society's unwavering commitment to advocacy initiatives that promote the welfare of Engineers serving in the Ministry.

In his remarks, Engr. David Umahi commended the NSE President for her vision and pledged the Ministry's full cooperation in implementing the discussed initiatives. He reaffirmed his commitment to enhancing Engineers' welfare, strengthening technical capacity, and accelerating infrastructure development nationwide. The Permanent Secretary, Engr. Adebisi also welcomed the proposals, reiterating the Ministry's readiness to partner with the NSE across all agreed areas of collaboration.



NSE and the Federal Ministry of Works Officials in a group photograph

NSE Secretariat Makes History with Staff Bonding Day

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has made history by becoming the first sitting President of the Society to spend a full day in a fun-filled bonding session with Secretariat staff, underscoring her commitment to staff welfare and the promotion of a healthy work-life balance.

The event, themed “Bonding Beyond the Desk – A Day of Fun, Fitness and Fellowship,” began at Turf Arena Football Pitch, Abuja, with a warm reception, photo session, and a friendly football match between senior and junior staff. It continued with exciting games such as sack race, egg race, chess, scrabble, and Ayo, which created an atmosphere of laughter, camaraderie, and teamwork among staff and leadership.

Afterwards, the President and her team moved to the Game Lounge at Turf Arena, where the activities shifted to modern digital competitions, including Virtual



Engr. Oguntala presents the Winner's Trophy to the Captain of the Senior Staff Team, Head of Finance and Account, Mr. Bashir Musa Abdulkadir, while the Team's Technical Adviser, Deputy Director, Head of Legal Department, Mr. Thomas Egbele, (ESQ) watches with smiles.

Reality experiences and PlayStation 5 challenges, giving staff and the President an opportunity to connect in a relaxed, playful environment. The informal sit-out provided a platform for closer interactions, reflections, and toasts, with many staff describing the experience as refreshing, morale-boosting, and unprecedented in the history of the NSE.

In her remarks, NSE President noted that the strength

of the Society lies not only in its professional achievements but also in the unity and motivation of its Secretariat. She emphasized that initiatives such as this outing demonstrate a leadership style rooted in inclusivity, wellness, and appreciation. The outing, which staff hailed as historic, is expected to set a new standard for staff engagement and organizational culture within the NSE.



The Referee, Procurement Officer, Mr. Robert Alu, briefing the Senior Staff Team Members, before the commencement of the match.



Sack Race Event



The Junior Staff Team Members.



Engr. Oguntala cruising during the indoors event session

NSE Partners NIMASA on Blue Economy

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, on Monday paid a courtesy visit to the Director General of the Nigerian Maritime Administration and Safety Agency (NIMASA), Dr. Dayo Mobereola, in Lagos. The visit underscored the NSE's resolve to strengthen collaboration with key government agencies in advancing Engineering innovation, safety, and sustainable national development.

In her remarks, She commended NIMASA for the “steady and visible progress” achieved under Dr. Mobereola’s leadership, particularly in enhancing transparency, reawakening work ethics, and ensuring value for money in maritime administration. She applauded the agency’s focus on effective service delivery and encouraged the DG to sustain the positive transformation being recorded in the sector.

Highlighting areas of synergy, the NSE President pointed to specialized divisions within the Society as valuable partners for NIMASA in technical projects, policy advisory, and joint capacity

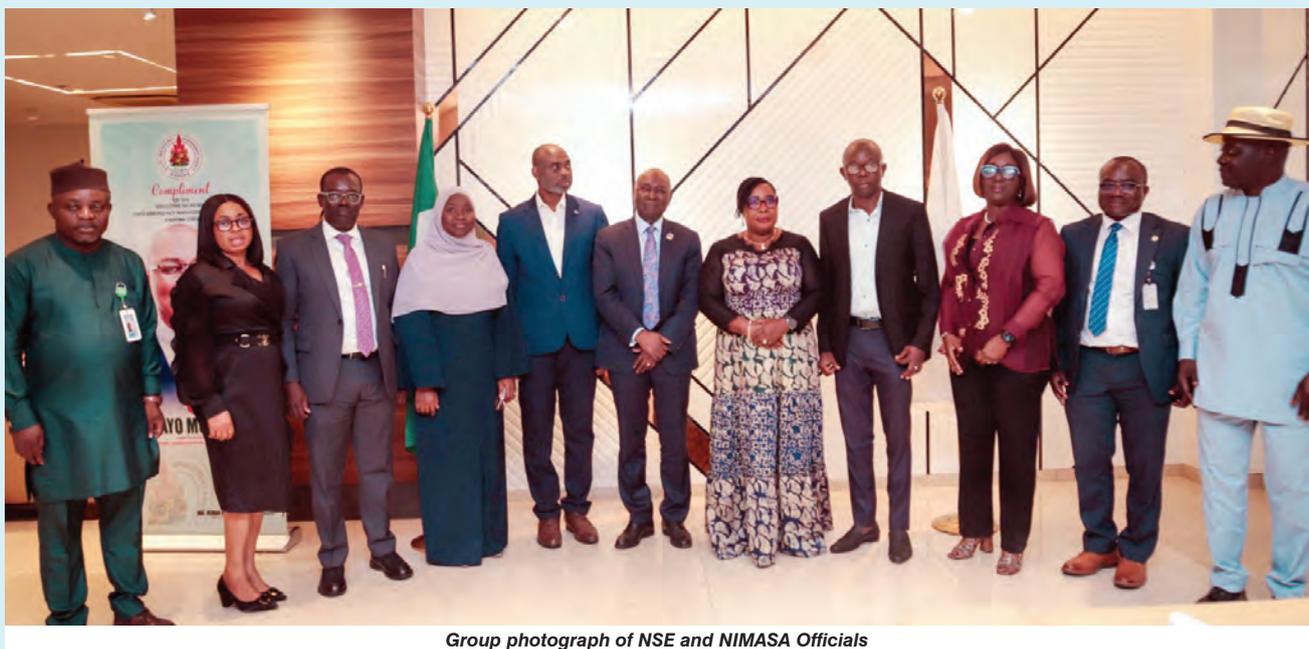


Right: President of NSE, Engr. Margaret Aina Oguntala, FNSE and the DG of NIMASA, Dr. Dayo Mobereola

development initiatives.

She also seized the opportunity to extend a formal invitation to the NIMASA Director General to the 2025 International Engineering Conference, Exhibition and Annual General Meeting, scheduled to hold in Ibadan from December 1–5, with the theme “Engineering Innovation for a Sustainable Blue Economy.” According to her, the theme reflects the global emphasis on responsible use of aquatic resources to drive economic growth while preserving the environment.

The President emphasized that the NSE’s agenda aligns with the Federal Government’s Blue Economy initiative and the Renewed Hope vision of President Bola Ahmed Tinubu, GCFR. She concluded by expressing optimism that strengthened NSE–NIMASA collaboration would drive innovation, infrastructure development, and sustainable economic growth for Nigeria.



Group photograph of NSE and NIMASA Officials

Obasanjo Reaffirms Support for Engineering

Former President of Nigeria, Engr. Chief Olusegun Obasanjo, PhD, GCFR, FNSE, has reiterated his unwavering support for the Engineering profession at both the Branch and National levels. He made this known while receiving the President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, during her historic one-day official visit to the Abeokuta Branch of the Society on 19th August 2025.

During the courtesy visit to his residence in Abeokuta, the NSE President highlighted the modest achievements of her administration and used the opportunity to formally invite the former Head of State to the upcoming International NSE Conference in Ibadan. In response, Engr Chief Obasanjo expressed appreciation for the visit, assured the President of his attendance at the Conference and Society of his continued support in strengthening the Engineering profession as a driver of national development.

Earlier in that day, the President was warmly received at the Abeokuta Branch Secretariat by the Branch Chairman, Engr. Olumayowa Ayodeji Idowu, FNSE, who described the occasion as



President of NSE, Engr. Margaret Aina Oguntala, FNSE presents a plaque to former President of the Federal Republic of Nigeria, Engr. Chief Olusegun Obasanjo, FNSE

both a privilege and a blessing. He emphasized that the visit was highly symbolic as it reaffirmed the strong bond between the National Secretariat and the Branch, while reflecting the President's commitment to engaging directly with members across the country. He praised NSE President's visionary, inclusive, and innovative leadership, which he noted continues to inspire Engineers nationwide.

The Branch Chairman also celebrated the NSE President,

describing her trailblazing achievements as an inspiration for generations to come. He reaffirmed the Branch's loyalty to her administration and commitment to advancing Engineering excellence, supporting national development, and improving member welfare.

The visit concluded with renewed assurances of collaboration and unity, leaving members inspired and proud of the growing impact of the NSE under the leadership of Engr. Margaret Aina Oguntala, FNSE.



NSE Members in a group photograph with NSE Present and President Obasanjo.

NSE Ibeju-Lekki Branch Inaugurated to Foster Professional Growth and Industrial Development

The Nigerian Society of Engineers (NSE) inaugurated its 91st Branch in Ibeju-Lekki, Lagos, on Saturday, September 6, 2025. This milestone marks a significant step in strengthening the professional development of Engineers and supporting Nigeria's rapidly growing industrial corridor. The event highlights the NSE's commitment to addressing the rising demand for Engineering expertise in the region.

In her opening address, Engr. Margaret Aina Oguntala, FNSE, President and Chairman-in-Council of NSE, emphasized that the establishment of the Ibeju-Lekki branch is part of the Society's strategic expansion. She highlighted the Branch's role in offering local Engineers opportunities for professional development, technical seminars, and collaborative projects vital for the growth of the Engineering profession.

During the launch, a landmark N500 million was announced for the construction of the Branch's secretariat and the purchase of a bus to facilitate movement for members. Several individuals were also honored with awards for their outstanding contributions to the Engineering field. The President



Engr. Oguntala

assured the Branch of the NSE headquarters' full support to achieve its goals through continued collaboration.

Engr. Olufemi Dare, FNSE, the pioneer Chairman of the Ibeju-Lekki branch, spoke passionately about the region's transformation into an industrial hub. He discussed the Branch's first-year accomplishments and emphasized the need for Engineers to lead in key sectors such as energy, housing, transportation, and environmental sustainability.

Guest speaker Engr. Kunle Adebajo, FNSE, Chairman of Ovie Arup and Partners Nigeria Ltd., described Engineers as "architects of possibility" and

stressed the importance of leveraging technology, including the Internet of Things (IoT), to tackle infrastructure challenges like traffic management, flood resilience, and emissions control. He also called for Lagos to adopt sustainable design practices and a circular approach to development.

The inauguration of the Ibeju-Lekki Branch marks the beginning of a new chapter in Engineering excellence and community development. With the full support of the NSE headquarters and local industry leaders, the Branch is set to play a pivotal role in driving the region's industrialization and technological growth.



FAEO Honours NSE President at 2025 UNESCO-AEW in Kampala, Uganda

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has been honoured by the Women in Engineering (WIE) Committee of the Federation of African Engineering Organisations (FAEO) at the 11th UNESCO – Africa Engineering Week and 9th African Engineering Conference held at the Speke Resort Convention Centre, Munyonyo, Kampala, Uganda. The theme of the conference was “Leveraging Engineering Innovations and Technology to Accelerate Africa’s Socio-Economic Transformation.”

NSE President was recognized for her exceptional leadership as the first female President of the Nigerian Society of Engineers, a remarkable achievement that

positions her as a trailblazer in the Engineering profession. The WIE Committee expressed immense pride in her accomplishments, celebrating her as a role model for women Engineers across Africa.

As part of the sidelines of the conference, NSE President participated in a high-level meeting with the Presidents of Professional Engineering Institutions (PEI) from across Africa, alongside the President of the World Federation of Engineering Organizations (WFEO), Engr. M.B. Shehu, FNSE. This significant meeting provided a platform for African Engineering leaders to engage in meaningful discussions about the future of the profession on the continent, regional cooperation, and advancing technological innovation within the Engineering sector.

The meeting focused on global Engineering challenges and opportunities, with a particular emphasis on the Sustainable Development Goals (SDGs) and the integration of African Engineers into global Engineering projects. It served as a key opportunity for collaboration and knowledge exchange, with the goal of shaping a sustainable and impactful future for Engineering in Africa and globally.

In addition, NSE was also honoured with the FAEO Institution Award for her unwavering commitment to advancing the organization’s growth and impact in Africa’s Engineering sector under the leadership of Engr. Margaret Aina Oguntala, FNSE.



Presentation of Award to Engr. Oguntala by FAEO President, Engr. Refilwe Buthelezi being assisted by WFEO President, Engr. Mustafa Balarabe Shehu, FNSE, FAEng.

NSE Signs Key MoUs to Boost Capacity Development, STEM Education Across Nigeria

The Nigerian Society of Engineers (NSE) has today marked a significant step in its mission to enhance capacity development and promote excellence in STEM (Science, Technology, Engineering, and Mathematics) education by signing two critical Memoranda of Understanding (MoUs). These partnerships are aimed at bridging the skills gap in the Engineering profession and nurturing the next generation of Engineering leaders.

The first MoU was signed between NSE and Citadel for Technological & Engineering Development Limited (CITED). This collaboration aligns with one of NSE's core objectives to improve both the Young and Senior Engineers' professional capabilities. The partnership will focus on providing needs-based, specialized training and creating opportunities for industry internships and apprenticeship programmes for NSE members. These initiatives are expected to enhance the skills and industry readiness of engineers, contributing significantly to national development.

The second MoU was signed with Stemechatron Limited, an organization dedicated to fostering creativity and innovation in STEM education. This collaboration is particularly geared towards



President of NSE, Engr. Margaret Aina Oguntala, FNSE and the MD of CITED, Engr. Bola Akinribido, FNSE in a historic MoU signing.

advancing education in Robotics and Artificial Intelligence (AI), with a focus on students in tertiary institutions. The partnership will ensure that students are equipped with practical problem-solving skills and are better prepared to meet the technological demands of the future.

During the signing ceremony, the President of NSE, Engr. Margaret Aina Oguntala, FNSE, emphasized that these partnerships were vital components of the Society's vision for professional growth and Engineering excellence. "These MoUs are part of our ongoing efforts to strengthen the NSE's capacity development initiatives," she stated. "At the heart of the NSE Strategic Agenda, hitherto known as the Margaret Oguntala Presidential Strategic Agenda

(MOPSA), is a bold vision: to equip our members with the knowledge, skills, and exposure required to thrive in the fast-evolving 21st-century Engineering system."

The President further noted that the overarching policy focus of the NSE Strategic Agenda is to address the growing skills gap within the Engineering profession. She highlighted that the collaboration with CITED would facilitate industry-specific training, while the partnership with Stemechatron would nurture a new generation of Engineers well-versed in advanced technologies such as robotics and AI. These collaborations are set to play a crucial role in ensuring a future-ready workforce, contributing to the sustainable growth of the nation.

In conclusion, the MoUs with CITED and Stemechatron Limited represent a key milestone in NSE's strategic drive to cultivate a sustainable pool of innovative, competent, and highly skilled engineering professionals. These initiatives are expected to foster a culture of excellence and innovation, further driving the advancement of Engineering practices in Nigeria and ensuring that the country remains competitive in the global Engineering landscape.



NSE President Highlights Importance of Global Collaboration on Sustainable Development at 2025 Global Engineering Congress

Shanghai, China — October 13th, 2025

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has once again emphasized the importance of global collaboration in advancing Engineering practices, particularly in areas of sustainable development and climate change mitigation. She made this statement in a sideline interview at the opening ceremony of the 2025 Global Engineering Congress and World Federation of Engineering Organizations (WFEO) General Assembly, held at the Shanghai Expo Centre in China.

The NSE President highlighted the pivotal role Nigerian Engineers are playing on the global stage, noting that the country's active participation in such a high-profile event underscores Nigeria's commitment to innovation and Engineering excellence. She also stressed the need for Engineering professionals worldwide to come together to tackle critical issues like climate change, sustainable development, and the



Engr. Oguntala

challenges posed by technological advancements.

The event, chaired by the President of WFEO, Engr. Mustafa Shehu, FNSE, brought together Engineering leaders from around the world to engage in discussions on global Engineering challenges and solutions. His Highness, Khalifa Muhammadu Sanusi II, Emir of Kano, attended as a special guest and shared his views on the

essential role Engineers play in shaping the future of infrastructure and technological advancement both in Africa and globally.

The 2025 Global Engineering Congress had series of panel discussions, technical sessions, and networking opportunities, further solidifying its importance as a platform for driving global Engineering development and collaboration.



NSE Partners WGDO on Green Design in China

...Becomes Recommending Partner on Green Design Engineers Initiative

Shanghai, China – October 14th, 2025

The Nigerian Society of Engineers (NSE) has officially partnered with the World Green Design Organisation (WGDO) in a momentous collaboration at the World Green Design Conference, held at the China University of Science and Technology in Shanghai. The conference, themed “A New Path to Build Sustainable Engineering,” brought together engineers, innovators, and thought leaders from around the world to chart a course toward more sustainable, resilient, and green infrastructure solutions globally. This partnership is part of the sideline participation of the NSE delegation at the 2025 Global Engineering Congress and General Assembly of the World Federation of Engineering Organizations (WFEO) held in China.

In her speech at the event, the President of the Nigerian Society of Engineers, Engr. Margaret Aina Oguntala, FNSE, highlighted the importance of sustainability in Engineering practices. She called for collaboration on projects that address low-carbon buildings, resilient infrastructure, sustainable transport, and climate-smart water systems in Nigeria’s rapidly urbanizing regions. “I pledge that the Nigerian Society of Engineers in collaboration with the Council for the Regulation of Engineering in Nigeria (COREN) will establish a Green Design Task Force,” she said, committing to updating professional standards, training Engineers, and collaborating on demonstrator projects.



During the conference, NSE signed a Memorandum of Understanding (MoU) with WGDO, solidifying both parties’ commitment to advancing green design principles. NSE was also named a recommending partner for the Green Design Engineers initiative, enhancing its role in promoting sustainable Engineering on the global stage.

The conference’s highlight was the Shanghai Declaration on Green Design Development, followed by the release of a white paper on creating global sustainable and healthy living environments, and updates on progress in developing international green design standards. The event also featured presentations from prominent figures, including the President of WGDO, Mr. Wang Jinnan, and served as a platform for sharing knowledge and global collaboration on sustainable design.

A key moment of the conference was the presentation of the Green Leaf Mark and Green Design International Award, recognizing

leaders in green design Engineering. In a notable achievement, 18 distinguished members of the Nigerian Society of Engineers were awarded the prestigious Senior Green Design Engineer certification for their exceptional contributions to sustainable Engineering. These members, who were rigorously evaluated based on their area of expertise, received the recognition for their outstanding work in various Engineering disciplines. Their applications, which were submitted through NSE’s recommendation, were carefully scrutinized and endorsed for their commitment to sustainable and green design practices.

The Nigerian Society of Engineers is committed to advancing sustainable development and green design practices in collaboration with the World Green Design Organisation. This partnership marks a significant step in driving the future of sustainable Engineering globally.



NSE President Joins World Engineering Leaders to Elect WFEO President-Elect

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, joined global Engineering leaders at the 2025 World Federation of Engineering Organizations (WFEO) General Assembly held at the Shanghai Expo Centre in China, where a President-Elect was elected.

The contest was between Engr. Kancheepuram Gunalan from America and Engr. Martin Manhuwa from Zimbabwe. Engr. Gunalan emerged victorious with 51 votes, while Engr. Manhuwa secured 27 votes. Engr. Gunalan's election marks a new chapter for the WFEO, bringing fresh leadership to support the new WFEO President, Seng Chuan Tan.

The event also saw the official transmission of leadership from Engr. Mustafa Balarabe Shehu, FNSE of Nigeria, who recently completed his tenure, to the new WFEO President, Seng Chuan Tan of Singapore.

In addition to the election, representatives from various national and international engineering organizations were elected to form the new executives and board of the WFEO, with discussions on key matters affecting the global Engineering community.



President of NSE, Engr. Margaret Aina Oguntala, FNSE rejoices with the new WFEO President, Kancheepuram Gunalan upon his investiture.

During the General Assembly, the WFEO leadership presented a series of reports for deliberations and approvals. Strategic decisions were also made regarding amendments to the WFEO Constitution, the hosting of committees, ongoing education projects, and updates from the chairs of various board of committees.

One of the key highlights of the assembly was the discussion on the WFEO Code of Practice, which focuses on principles of climate

adaptation and resilience—an issue that remains at the forefront of global Engineering practices.

The NSE President's participation in the WFEO General Assembly underscores the growing role of Nigerian Engineers in shaping global Engineering standards and fostering international collaboration to address the world's most pressing challenges.





NSE and Defence Headquarters Inaugurate Standards and Evaluation Expert Working Group

On Monday, October 27, 2025, the Nigerian Society of Engineers (NSE) officially inaugurated its Standards and Evaluation Expert Working Group in collaboration with the Defence Headquarters (DHQ) at the National Engineering Centre (NEC) headquarters in Abuja. The initiative was aimed at enhancing military infrastructure projects by ensuring they adhere to the highest Engineering standards, marking a significant step in the collaboration between NSE and DHQ.

During the ceremony, NSE President Engr. Margaret Aina Oguntala, FNSE emphasized the importance of the working group as a technical think-tank that will collaborate with the Armed Forces on national infrastructure projects. She highlighted that this collaboration would ensure the military's Engineering standards are maintained at the highest level, reinforcing the growing partnership between the two institutions.

The partnership between NSE and DHQ was first discussed in December 2024, when Major General A. A. Ariyibi, Chief of Defence Standards and Evaluation, visited the NSE headquarters. During that visit, NSE President assured the DHQ of NSE's commitment to collaborating on military infrastructure projects,



Middle: President of NSE, Engr. Margaret Aina Oguntala, FNSE flanked by the Chairman of NSE Standard and Evaluation Expert Working Group Committee, Engr. Dr. Isa Emeabino, FNSE (left) and Air Commodore B. Aliyu (right).

a collaboration which has since evolved into the formation of the Expert Working Group.

Immediately following the inauguration, the Expert Working Group embarked on their first tour inspection of key military facilities including Armed Forces hospital, Defence Headquarters Annex, Multipurpose Armed Forces Event Centre, Senior Officers Transit Quarters among others. The tour allowed the group to evaluate ongoing infrastructure projects and familiarize themselves with the scope of their responsibilities, marking the beginning of their direct involvement in military Engineering projects across the country.

The group led by Engr Isa Usman Emoabino, FNSE,

selected for their professional pedigree and proven excellence, is tasked with supporting DHQ in the development, evaluation, and execution of critical military infrastructure. The President expressed her confidence in their ability to uphold the high standards expected of them and urged them to approach their duties with professionalism and dedication, ensuring their contributions help drive national development. The inauguration of the NSE-DHQ Standards & Evaluation Expert Working Group represents a monumental step towards strengthening the Engineering profession in Nigeria, ensuring that military infrastructure development aligns with the highest Engineering standards.



Driving Sustainable Industrial Growth: NSE Ikeja Hosts 4th Ademola Olorunfemi Colloquium

The Nigerian Society of Engineers (NSE), Ikeja Branch, on Tuesday, August 19, 2025, hosted the 4th Ademola Olorunfemi Colloquium at its Secretariat in Oba Ogunji Road, Lagos. Themed “Strategic Cadence and Engineering Capacity Development: A Pathway to Sustainable Industrial Growth in Nigeria,” the event brought together industry leaders, policymakers, and engineers to explore practical strategies for revitalizing Nigeria’s industrial and manufacturing sectors. Setting the Tone for Industrial Renewal.

In her welcome address, the Branch Chairman, Engr. Nimot Muili, FNSE, PMP, reaffirmed the Branch’s commitment to fostering a viable engineering culture built on knowledge, innovation, and strategic collaboration. She emphasized that sustainable growth requires “engineers who can transform idle capacity into productive outcomes through discipline, rhythm, and teamwork.”

The colloquium was held in honour of Engr. Ademola Isaac Olorunfemi, FNSE, FAEng, a past president of NSE and a visionary advocate of engineering excellence. In his goodwill message, Engr. Olorunfemi urged young engineers to see industrial transformation as both a technical and moral duty, requiring consistency and shared purpose.

Keynote Presentation: Finding Nigeria’s Industrial Rhythm

Delivering the keynote lecture, Engr. Akintunde Atanda, FNSE, highlighted “Strategic Cadence” as the missing link in Nigeria’s industrial value chain. He described cadence as “the heartbeat of industrial success the reliable rhythm that turns potential into performance.”

Drawing from national statistics, he noted that while Nigeria’s manufacturing output reached ₦33.43 trillion in 2024, real growth remained marginal at 1.7%, largely due to underutilized



capacity. He cited factors such as forex instability, energy costs, and inconsistent operational structures as major bottlenecks.

Engr. Atanda proposed a structured operational framework plan, execute, measure, adjust — as a model for improving productivity. He showcased global and local case studies demonstrating how consistent production cycles, predictive maintenance, and data-driven processes have reduced waste and improved output in comparable economies.

Panel Discussion: Building Capacity for the Future

The session featured insightful contributions from industry experts including Engr. Kunle Adebajo, FNSE, Engr. Olayinka Abdullahi, FNSE, Engr. Bukola Adubi, and Engr. Michael Owofoluwa, FNSE. The discussants stressed the need for:

- Deepening technical training through ITF and the 3 Million

Technical Talent (3MTT) initiative

- Strengthening collaboration between academia and industry
- Promoting local content in manufacturing and engineering design
- Encouraging the adoption of smart manufacturing and digital monitoring tools

They agreed that Nigeria’s industrial ecosystem can achieve global competitiveness only through skill development, innovation, and structured operational discipline.

Charting the Path Forward

In conclusion, participants echoed a unified call for engineers to embrace cadence as a philosophy for national development. The colloquium ended with a resounding message: Nigeria’s idle capacity is not a liability, it is latent success waiting to be unlocked through rhythm, strategy, and skill.

NSE President Urges ACEN on Resource Efficiency, Transparency in Project Execution

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has urged the Association for Consulting Engineering in Nigeria (ACEN) to maintain its focus on resource efficiency, transparency, and good governance in project execution. She gave this advice during the 47th Annual General Meeting (AGM) of the Association, held today at the Abuja Continental Hotel.

Themed “Closing the National Infrastructure Deficit and the Strategic Role of Consulting Engineers,” the NSE President highlighted the importance of continuing infrastructure projects despite economic constraints, as these remain essential for national development, job creation, and economic stability. She expressed admiration for ACEN’s dedication to advancing Engineering excellence and sustainability in Nigeria.



The event brought together key stakeholders, experts, and professionals in the Engineering sector to deliberate on innovative solutions to Nigeria’s infrastructure challenges. In her remarks, the NSE President emphasized the vital role of consulting Engineers in driving sustainable development

and improving infrastructure in the country.

The event was a significant platform for professionals to engage in critical discussions and exchange ideas that will contribute to the development of the Engineering profession and the country’s infrastructure.



NSE Donates \$17.4M MIDAS Engineering Software to Nigerian Universities

ABUJA – November 5, 2025

In a landmark move to strengthen Engineering education in Nigeria, the Nigerian Society of Engineers (NSE) yesterday officially donated state-of-the-art Engineering training software from MIDAS IT, India's leading Engineering software company, to Nigerian universities. The symbolic event, held at the NSE Auditorium in Abuja, marked the beginning of a transformative partnership designed to enhance academic capability, research, and professional training across the nation's tertiary institutions.

Speaking at the ceremony, the President of the NSE, Engr. Margaret Aina Oguntala, FNSE, described the donation as a critical step toward equipping Nigerian Engineering students with world-class tools for innovation and excellence. "It is our collective duty to guide, support, and inspire our young ones. Through structured mentorship and active knowledge-sharing, we can equip the next generation to lead the Engineering profession with competence and excellence," She said, emphasizing the Society's unwavering commitment to advancing Engineering education nationwide.

The partnership provides each of the 15 beneficiary universities with 25 licenses each of MIDAS Civil, MIDAS Gen, and MIDAS GTS NX—cutting-edge software suites for



civil, structural, and geotechnical Engineering. The initiative, valued at over USD 17.4 million, will empower students and lecturers to conduct design, simulation, and analysis using industry-standard digital tools, thereby bridging the gap between theoretical learning and practical application.

The high point of the occasion was the formal handover of the software packages and the signing of a tripartite Memorandum of Understanding (MoU) between NSE, the beneficiary universities, and MIDAS IT—a pact reinforcing their shared vision for sustainable academic and industrial collaboration.

Delivering his message, Mr. Naga Ravi Kiran Anne, Managing

Director for Africa and UAE Region, MIDAS IT Co., said: "We are thrilled to partner with NSE in enhancing the quality of Engineering education in Nigeria. This donation is not just about providing software, but about creating a lasting impact on the future of Engineering in this country, bridging the gap between academia and industry, empowering students with tools that will shape the future of Engineering in Nigeria."

The collaboration between NSE and MIDAS IT is expected to significantly boost Nigeria's Engineering education ecosystem, stimulate innovation, and position Nigerian universities as competitive centers of excellence in global Engineering research and practice.



NSE President Commends Federal Government on Shaping the Future of Nigeria through Digital Empowerment

The President of the Nigerian Society of Engineers (NSE), Engr. Margaret Aina Oguntala, FNSE, has commended the Federal Government for its remarkable efforts in shaping the future of Nigeria through digital empowerment. Speaking at the NITDA 2025 Digital Nigeria International Conference held on 11th November 2025, in Abuja, she praised the government's ongoing commitment to advancing digital inclusivity and fostering growth within Nigeria's digital ecosystem.

The NSE President specifically appreciated President Bola Ahmed Tinubu, GCFR, under his "Renewed Hope Agenda," for prioritizing digital transformation as a key pillar of national development. She noted that this initiative is essential in bridging the gap between technology and everyday life, ensuring that every sector, from education to healthcare, benefits from digital innovation. She emphasized that the government's efforts in this direction would stimulate economic growth and create new opportunities for Nigerians, especially the youth.

In his keynote address, the Honorable Minister of



Communications and Digital Economy, Dr. Bosun Tijani, reiterated the government's commitment to advancing Nigeria's digital economy. He stressed the importance of building robust digital infrastructure and ensuring that all Nigerians have access to digital tools, which are crucial for national development. Dr. Tijani also highlighted the government's plans to further develop policies that foster a more inclusive digital future for the country.

The Vice President of the Federal Republic of Nigeria, Kashim Shettimah, GCON, who earlier recognized the NSE President before his speech, stated that the

government is focused on fostering collaboration between the public and private sectors to ensure that digital initiatives are impactful and sustainable.

The NSE President concluded by stressing the importance of continued collaboration, investment in digital infrastructure, and fostering a culture of innovation to achieve the government's vision for a more inclusive and prosperous Nigeria. She urged all sectors to work together to leverage digital tools for national growth, education, and development, ensuring that no Nigerian is left behind in the digital transformation journey.



NSE and Others Launch the Nigerian Engineering Olympiad (NEO) to Foster Creativity and Entrepreneurship

Abuja - Thursday, November 20, 2025

The Nigerian Society of Engineers (NSE), in collaboration with the Nigerian Content Development and Management Board (NCDMB), First E&P, Renaissance Energy Africa, and Enactus, today officially launched the Nigerian Engineering Olympiad (NEO) at the Abuja Continental Hotel. The unveiling was done by Engr. Margaret Aina Oguntala, FNSE, the President of NSE, on behalf of the partnering organizations. This initiative represents a significant step in strengthening engineering excellence and fostering innovation in Nigeria.



In her keynote address, NSE President emphasized that the NEO is not just about challenging the youth to dream big but also empowering them to achieve those dreams. “We are intent on creating deliberate pathways for our young innovators to move from classroom concepts to real-world applications in this era of the Fourth Industrial Revolution,” she stated. The President promised that NSE would offer technical mentorship and intensive boot camps for business development throughout the Olympiad, further reiterating NSE’s renewed commitment to the growth, empowerment, and advancement of Engineering in Nigeria.

The NEO is designed to target final-year undergraduate and postgraduate engineering students from universities across the country. The program’s goal is to strengthen national capacity in creativity and entrepreneurship

by promoting the development of innovative solutions. These solutions aim to transform academic ideas and prototypes into functional devices that can address real-world challenges, with a focus on fostering collaboration between academia and industry. For more information on how to participate, students and faculty are encouraged to visit the official NEO website at www.neo.org.ng

As part of Pillar Two of the NSE Strategic Agenda, NEO will help strengthen engagements with the government and facilitate long-term synergies between industry and academia. The program’s ultimate aim is to transform research outcomes into commercially viable products, contributing to local content development and driving economic growth for Nigeria. By supporting these innovations, NEO hopes to become a catalyst for technological advancement

and sustainable development in the country.

The NEO program provides young engineers a platform for problem-solving, innovative design, technical development, and entrepreneurial growth. Participants will gain access to mentorship, capacity-building opportunities, and competitive challenges that showcase their creativity, technical expertise, and leadership potential. The Nigerian Engineering Olympiad is set to be a transformative force in Nigeria’s Engineering landscape, offering invaluable opportunities to young Engineers and contributing meaningfully to national growth.

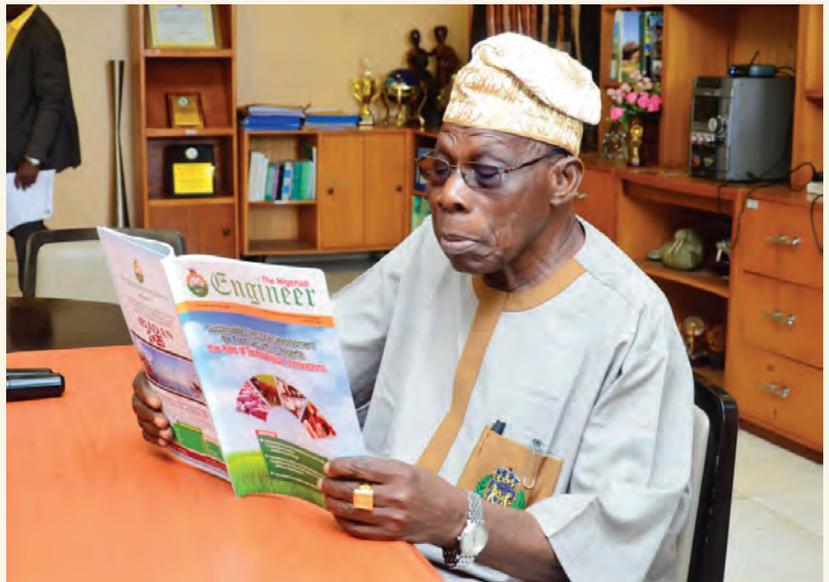
Rebirthing the NSE for the growth, empowerment, and advancement of Engineering in Nigeria continues.





Guess who is reading *The Nigerian Engineer* magazine?

*His Excellency,
Engr. Chief Olusegun Aremu Obasanjo, GCFR, FNSE,
Former President & Commander-in-Chief, Federal
Republic of Nigeria*



*His Imperial Majesty,
Oba Engr. Rashidi Ladoja, FNSE,
Olubadan of Ibadanland and Former Executive
Governor of Oyo State*

*His Imperial Majesty,
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Fax: +234 (0)1 450 25 78

www.lee-engineering.net

Email: info@lee-engineering.net

Operational Base

Km 7 NPA Express way, Ekpan
Warri-Delta State

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