Preparing our Academia for the Digital Economy

In the present-day economy, the adoption of digital technology cannot be over-emphasized, In this discussion, let us look into the following questions such as what is Digital Economy? Why Digital Economy? Who are the critical stakeholders in Digital Economy? How can Digital Economy be established? Digital economy can be referred to as on economy that is based on Digital Computing technologies. Thomas Messenbourg noted in his work, there are three main components of the digital economy which can be identified for proper implementation, 1, E-Business Infrastructure (hardware, software, telecommunications, networks, human capital etc);2. E-business (How business is conducted, any process that an organization conducts over computer-mediated networks), and 3. E-Commerce (buying and selling of goods and services on the internet such transaction like Jumia, Amazon, Ali Baba etc). Meanwhile, why do we need a digital economy in Nigeria?. Digitization of the economy creates benefits and efficiencies, as digital technologies drive innovation and fuel job opportunities and economic growth. Recently, the Federal Government of Nigeria announced the lifting 100 Million Nigerians out of poverty in the next Ten (10) years, diversifying economy from mono-economy of Petroleum, making more citizens be digitally literate and digitally skilled. Advancing into Digital economy has already received a nod by the Federal Government of Nigeria by changing the name of Communications ministry to Ministry of Communications and Digital Economy. This shows a positive test case for us in IT industry. For the government to have supported and believe in the idea of Digital Economy. Other countries of the world are also supporting Digital Economy such Singapore, Kenya and others. Developing economies are fast-tracking their economy with this lofty innovation, with each country coming up with their templates or pillars of implementation. In 2019, Federal Government of Nigeria through the Honourable Minister of Communications, and digital economy Dr. Isa Pantami the presence of President Mohammadu Buhari launched National Digital Economy Policy and Strategy 2020-2030 in Abuja. In the Nigeria Digital economy policy document, eight (8) pillars for the acceleration of Digital economy were identified. The pillars are 1. Developmental regulation- regulation of all digital technologies involved; 2. Digital Literacy and skills- sensitization of digital economy among the citizens, 3. Solid Infrastructure- Broadband penetration, 4. Service Infrastructure- Government to citizen (G2C), Citizen to Citizen (C2C); 5. Digital Services Department and Promotion (provision of digital jobs and techno-, digital natives; 6. Soft Infrastructure (feel safe and Avoidance of cyber threats), 7. Digital Society and digital Society & Emerging Technologies (gains of the digital economy on citizens) and 8. Indigenous content development and adoption-for government to support or fund the project and improve on the policy framework. However, to make the pillar solid and achievable our academia and other stakeholders must be well prepared. In order to have a comprehensive all-inclusiveness in the adoption of Digital Economy, the triple helix model of innovation has to be adopted. The Triple Helix Model of Innovation is referred to as a set of interaction between academia (the universities), industry and government to foster economic and social development. As government provide critical infrastructures' for the establishment of the digital economy and industry support the area of services, academia must be ready to support in digital literacy and capacity building on digital skills. An in-depth contribution is inevitable base on tripod mandate of teaching, research and community engagements. The curriculum must be developed on digital economy literacy and skills in all tiers of academics, more research and findings should be tailored towards a digital economy, research hubs can be introduced in each state in Nigeria to support the acceleration of Digital economy and to build capacity of digital skilled citizens. Recently, Ogun state Bureau of Information Technology organized a 2-day virtual conference on digital economy where experts were invited to brainstorm on preparing our academia for the digital economy. A paper was presented by Professor Olusegun Folorunso, Head Department of Computer Science, Federal University of Agriculture, Abeokuta as contribution to the development of Ogun state and our dear nation Nigeria.

Prof. Olusegun Folorunso,
Head, Department of Computer Science
FUNAAB

RE-ENGINEERING AGRICULTURAL PRACTICES USING EMBEDDED ARTIFICIAL INTELLIGENCE TECHNIQUES

Technology inclusion in agriculture is promoting a wide range of research and improvement in agriculture ranging from smart farming, green computing, weed detection, soil fertility test, irrigation control, animal and plant selection, disease detection and control, fertilizer application, weather tracking and forecasting, agricultural products distribution and e-financing. The worldwide market value of Artificial intelligence (AI) in agriculture though estimated at six hundred dollars in 2018 is also growing, with a well calculated projection of about 2.6 billion by 2025. This has shown evidence that major countries of the world are leveraging on the application of Artificial Intelligence in Agriculture as a way of sustaining and developing their economy through technology-based industries such as Microsoft (US), Gamaya (Switzerland), Precision Hawk (US), Prospera (Israel), Vine Rangers (France), ec2ce (Spain), Connecterra (Netherlands) and Vision Robotics (US). The varying level of success recorded by these technological industries is also based on the varied single or combined machine learning algorithms combined with AI techniques adopted in their research and technological gadgets. AI embedded agro-technological gadgets can learn without being explicitly programmed. Researches in agriculture are solely aimed at improving agriculture. Several agricultural practices over the years are witnessing significant setbacks as they cannot meet the challenges of the present-day Nigeria. Also, countries around the world, Nigeria inclusive are retracing steps towards agriculture as a means of sustainable development. Although, improved agricultural practices through various technologically embedded researches have been proposed by agricultural research institutes and organizations including the United Nation (UN) and the Food and Agricultural Organization (FAO).However no matter how good the technique or technology introduced was in agriculture, there is need for *re-engineering* the adopted technology, modes and techniques of agricultural practices to meet the present-day challenges using AI techniques. Re-engineering in agriculture can be referred to as a systematic the approach of re-inventing and performing agricultural-based activities improve already design model and systems. For an improved result in the re-engineering process, there must be a total change from the present state of mind towards a global view of understanding the trend of agriculture practices around the globe and the acquisition of appropriate AI skills needed to globally contribute and produce significant yields to aid sustainable agriculture development in Nigeria. Fig.1 depicts the branches of Agriculture requiring reengineering through innovative AI technologies.
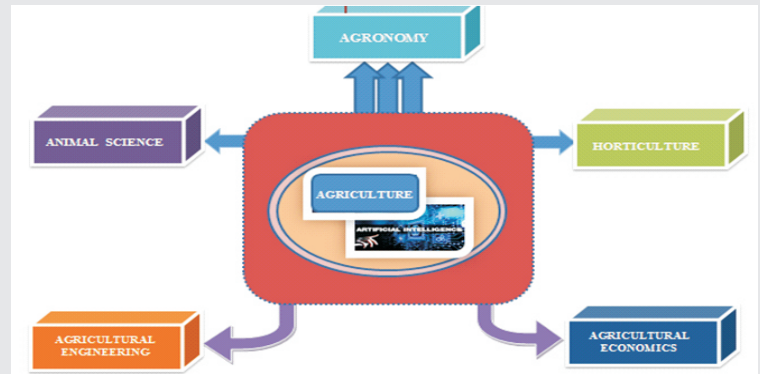

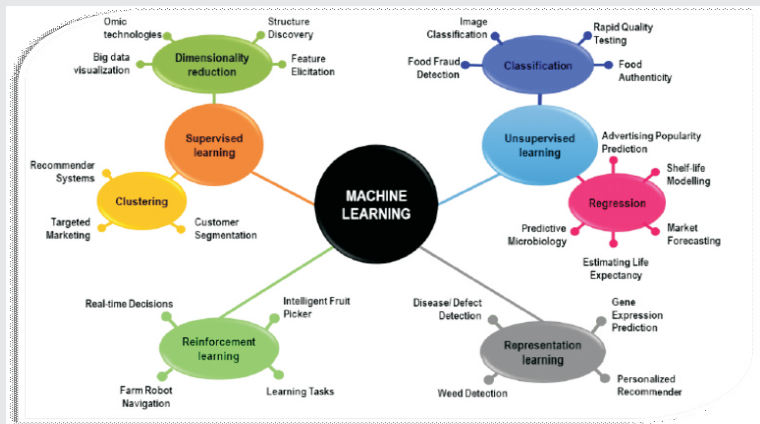**Fig.1** Branches of Agriculture with Artificial Intelligence Innovations.

Fig. 2 Application of Machine learning towards improving agriculture

The application of machine learning as depicted in the Fig.2 by Misral et al., 2020 above broadly categorized as supervised, un-supervised learning, knowledge representation and reinforcement learning involves recognition, planning, controlling, prediction and diagnosis which could be leveraged on to enhance already existing systems or the development of new agricultural systems to increase efficiency. Figure 3 shows the stages of agricultural practices re-engineering using Artificial Intelligence (A.I) techniques.

Fig. 3 Stages of Agricultural Practices Re-engineering with Artificial Intelligence

Femi Johnson- is a postgraduate Student in the department of Computer science

BLOCKCHAIN TECHNOLOGY AND AGRICULTURE

At its core, block chain is an electronic system that allows for record-keeping of transactions in real-time. When participants in a block chain system complete a transaction, the time, date, nature and cost of the exchange is recorded. Once the parties have confirmed the accuracy of the information, it is then permanently and indelibly recorded, and can be made accessible to every other participant in the system. Block chain technology therefore instantaneously creates a "consolidated record that constitutes a single and shared version of the truth."Improved informational transparency and accuracy increases trust between parties, reduces costs and boosts efficiency. **How can Block Chain Transform Agriculture? :** With roughly 40% of the global workforce, agriculture is one of the leading job providers worldwide, and the agricultural industry is now using block chain technology. According to AgFunder News, many potential distributed ledger agriculture solutions are emerging. This includes startups being used to create concepts like smartfarm and skuchain tracking food through supply chain distributed ledgers. With Filament's platform, users connect physical objects and existing networks into wider network and applications making smart farm technology into reliable infrastructure. A Smart farm is a form of sustainable agriculture that aims to enhance our environmental quality, integrate technology with natural biological cycle controls and create economic viability within farm operations. Smart farming using block chain technology can broadcast tamper resistant weather data, Sms alert, machinery protocol, GPS positioning and tether many more precision agriculture-related platforms. Monitoring the food supply chain, consumers can get a better idea of where the food is coming from, the date it was created, how it was produced more efficiently rather than depend on the inefficient labelling system which can be easily manipulated. Consumers could rely on a transparent immutable ledger of account detailing everything about the food they purchase. SkuChain technology focuses on creating direct relationships while augmenting trust and visibility into the flow of goods. The report's author from Agridigital, Emma Weston, explained that distributed ledger technology could enhance the relationship between farming business and consumers. Practical applications of block chain technology in the agriculture sector also include minimizing unfair pricing, product origins, and reducing multinational agricultural influence in favour of more localized economies. In the future, platforms could also help with remittances to rural regions as well as other rural farming finance solutions. Block chain technology is continuing to show it can transform many markets and economies in society, and agriculture will be one of them. These days, the public is embracing the need for transparency in food products and farming techniques. Distributed ledger technology that provides better solutions and is cost effective to those in the agricultural industry will be welcomed. Potential Blockchain Technology Benefits for Agriculture The block chain technology allows peer-to-peer transactions to take place transparently and without the need for an intermediary like a bank (such as for cryptocurrencies) or a middleman in the agriculture sector. By eliminating the need for a central authority, the technology changes the way that trust is granted – instead of trusting an authority, trust is placed in cryptography and peer-to-peer architecture. It thus helps restore the trust between producers and consumers, which can reduce the transaction costs in the agri-food market. The block chain technology offers a reliable approach to tracing transactions between anonymous participants. Fraud and malfunctions can thus be detected quickly. Moreover, problems can be reported in real-time by incorporating smart contracts (Haveson et al., 2017; Sylvester, 2019). This helps address the challenge of tracking products in the wide-reaching supply chain due to the complexity of the agri-food system. The technology thus provides solutions to issues of food quality and safety, which are highly concerned by consumers, government, etc.

Blockchain In Agriculture: 10 Possible Use Cases

The block chain technology provides transparency among all involved parties and facilitates the collection of reliable data. Block chain can record every step in a product's value chain, ranging a product's creation to its death. The reliable data of the farming process are highly valuable for developing data-driven facilities and insurance solutions for making farming smarter and less vulnerable. How can we apply Blockchain technology to Agriculture? There are four major classes of application in agricultural and food sectors which are: Agricultural insurance: Weather extremes threaten agricultural production, putting food security at risk (Lesk et al., 2016). Both, crop and livestock production are affected, and climate change is expected to further exacerbate weather extremes in the future (Lobell et al., 2011; Finger et al.2018). The agricultural insurance scheme is traditionally a well-recognized tool to manage weather-related risks. Here, farmers pay an insurance premium before the cropping cycle begins and receive an insurance payout whenever they experience a loss on their farm. Smart farming: Smart agriculture is featured by the utilization of ICT, Internet of Things (IoT), and various modern data collection and analysis technologies including Unmanned Aerial Vehicles (UAV), sensors and machine learning. A key issue of establishing smart agriculture is developing a comprehensive security system that facilitates the use and management of data. Traditional ways manage data in a centralized fashion and are prone to inaccurate data, data distortion and misuse as well as cyber-attack. The block chain technology serves to store data and information that various actors and stakeholders generate throughout the entire value-added process, from seed to sale, of producing an agricultural product. It ensures that the data and information are transparent to the involved actors and stakeholders and all recorded data are immutable. Food supply chain: Many solutions facilitated by block chain technology have been proposed to improve the traceability of agricultural products. Tian (2016) proposes an agricultural food supply chain traceability system using Radio Frequency Identification (RFID), a non-contact automatic identification communication technology. It can trace products with trusted information in the entire supply chain. The use of block chain guarantees that the records of production, process, store and distribution in the system are reliable and genuine. Caro et al. (2018) proposed block chain-based traceability system that is seamlessly linked with IoT devices, which provide digital data of production and consumption. The traceability is achieved using both Ethereum and Hyper ledger Sawtooth blockchain platforms. Transaction of agricultural products: The e-commerce and trade of agricultural product face some crucial problems to solve. First, as Tiago et al. (2017) have demonstrated that consumer with high overall trust is more willing to purchase online, however, the basic information of agriculture products is not easy to be confirmed and trusted by consumers. Meanwhile, Cash on delivery and Logistics service are the most crucial challenges faced by e-commerce companies, especially in developing countries (Reddy and Divekar, 2014). Besides, e-commerce retailers also need to handle time-demanding small orders with diverse items (Boysen et al., 2019), which causes high operating costs for e-commerce companies. Blockchain technology may provide proper solutions for many aspects of these problems: Information security, supply chain management, payment method, consumer confidence, and reduce the cost of farmers.

Jesufunmibi Bolarinwa

– is a postgraduate Student in the Department of Computer science

AN INTERVIEW WITH THE CEO OF LEO6 TECHNOLOGIES LIMITED-
A Postgraduate Student

Can you please introduce yourself ?

I am Olatunde Tijani, the Managing Director/CEO of the Leo6 Technologies Limited, an ICT and Renewable Energy firm that was founded in 2005 and incorporated in 2008. I hold a Bachelor of Science degree in Computer Science from Olabisi Onabanjo University, Ago-Iwoye after obtaining a National Diploma in Electrical Electronics Engineering from Moshood Abiola Polytechnic, Abeokuta. I am about to complete my M.Sc. degree in Computer Science from Federal University of Agriculture, Abeokuta.

How did you get your idea/concept for business?

Due to my dexterity in the Information Technology field, colleagues, friends and family had always sought for my assistance and advice on issues relating to ICT and what kind of products I can recommend for them. They even go ahead to entrust me with helping them to buy these gadgets or repairing faulty computers. In those days, I will travel to Computer Village in Lagos, buy the items such as PCs, mobile phones, flash drives, software, etc and then deliver to them. My passion for ICT and the increasing demand for computer and computer accessories with services from people made me set up an Information Technology business.

Additionally, when I finished secondary school, my Uncle enrolled me for computer training - desktop publishing and graphics and this equipped me with the requisite skills for Publishing, which was also an integral part of my business. I remembered attending a seminar way back organized by HP Nigeria at Eko Hotel, Victoria/Island, Lagos and the theme was Start Your Business Small and Grow. This buoyed my confidence to start this company and equipped me with business contacts where I met with various OEMs including HP, Microsoft and others.

What challenges did you encounter as an entrepreneur? Kindly share your experiences.

After I had all the needed knowledge, skills and business contacts, I was faced with the major challenge of raising capital to start my business. Since I couldn't get any support from banks or any financial institution, especially for a business that is starting up, I had to resort to taking-off with personal savings and support from family.

My experience so far has been the case of ups and downs. Most startups or businesses die after 2 years, but all thanks to God, we survived and we are still here. We have had to cope with the challenges of paying rent, staffers, taxes and other bills. We starte from a shop in a Shopping Complex owned by Abeokuta South LG in Ijaiye, Abeokuta. If you know this area very well, the complex is located right inside a Motor Park, which is always noisy due to the activities of drivers and conductors trying to call in passengers and load their cars. Aside from this, mechanics and food sellers are also present in the vicinity. Some of our clients didn't feel comfortable coming to that location while others prefer to go elsewhere as they don't want to be harassed by street urchins and other reasons. We tackled this challenge by relocating to the business' current location and giving the business a more corporate look.

After various professional training, we started website and software development and also ventured into the Renewable Energy (RE) field. This new line of business especially Renewable Energy came with new challenges such as shoring up our capital base, getting additional accommodation, employing technically competent hands and other logistics.

For us, publicity is very crucial. We employed effective publicity as a business strategy for public awareness and visibility. Our company started a radio programme – 'TechTime with Leo6' to enlighten the public on topics in ICT and RE. We also resolved to treat our customers as nobility. We always ensure the satisfaction of our customer comes first for them to have a good experience. The effect of this is that customers always give a referral to their sphere of influence for them to patronize us. Closely related to this is that the quality of our products is are top-notch. We are distributors to various OEMS and the partnership comes with a viable warranty for our clients to enjoy whatever they buy from us. Our online presence and adoption of e-commerce also helps us to spread our tentacles beyond our physical location to clients in unknown location and some of them we have never seen, yet we do business together.

There was a time we started an Asset Acquisition Programme with the Ogun State Government for workers to acquire electrical appliances such as television, washing machine etc. After going through the torrid process for approval with the then Head of Service, Princess Iyabo Odulate, signing MoUs with manufacturers, rolling out forms and other logistics. Workers were expecting their products after completing their forms and other necessary requirements, but were unable to deliver, we were disappointed by our bank. We approached various banks and one of them had agreed to bankroll the programme. We had series of meeting with the Accountant-General but the bank suddenly backed-out and frustrated the programme citing the inconsistency in the payment of deductions by the state government as the reason for doing so. This was a major blow for our image as the thousands of workers, who we still have their forms stock-piled in our office, started calling us and expecting their products. This was very disappointing as the bank after doing their risk assessment didn't want to invest their money.

Till date, state governments across the country still owe workers several months of unpaid salaries and deductions and no investors will put their money on uncertainty.

What advice do you have for upcoming techpreneurs and students?

My advice for upcoming techpreneurs is for them to first of all be knowledgeable about the kind of business they want to go into and be passionate about their dreams. They should acquire the requisite skills and be proficient in it. They should do a feasibility study of the business they want to venture into, know the strength and weaknesses using the SWOT analysis and also know their competitors. Thereafter, they should come up with good business plans which can woo investors that can help their vision.

One other key factor that can help startups is to have mentors who are more knowledgeable and experienced to guide and prevent them from sinking in the muddy waters. In our case we have learned and still learning from people such as Mr. Leo Stan Ekeh, Founder, Zinox Computers, Sir Demola Aladeokomo, Founder Chams Plc, NCS President, Prof. Adesina Sodiya, Dean, COLPHYS, Prof. A.T. Akinwale, HOD, Computer Science, Prof. Olusegun Folorunso and other academic staffs in the department.

Integrity is very key when dealing with customers. Let your words be your bond. Once you disappoint any customer, it will negatively affect your business. Lastly, don't spend your capital or live a bogus lifestyle and in the process kill your business. Be determined to succeed, believe in God and you are on your way to GREATNESS.
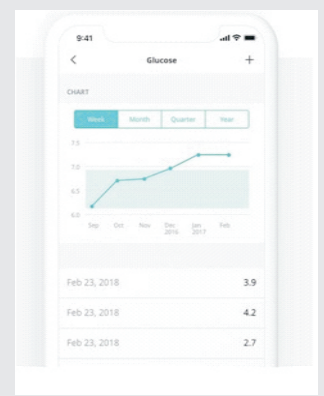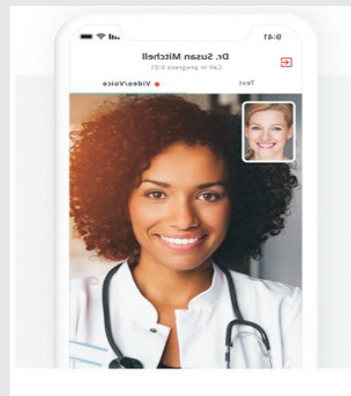
Olatunde Tijani
– is a postgraduate Student in the department of Computer science

BIG DATA IN HEALTH CARE WITH RESPECT TO SDG-3

Big Data in healthcare is the act of analyzing large quantities of healthcare data collected from four data sources within health care such as; Pharmaceutical and Research and Development data, Clinical data – collected from electronic medical records, patient behavior and sentiment data and Claims and cost data

The essence of what Big Data can achieve in the healthcare industry is to uncover profound insights and improve operational efficiency. The Big Data healthcare transformation is just evolving and this is the time when we can fully experience just how much it can achieve and how far it can still go. Therefore, it is important to have an understanding of how Big Data can further help obtain desirable output that can scale-up the health sector. Big Data is messy. It is comprised of structured and unstructured data. For instance, in healthcare, it encompasses information ranging from electronic medical records, imaging data, patient data, sensor data, to internet-connected devices; it is, therefore, necessary to break down healthcare Big Data into smaller pieces of information that can result in actionable insights. Big Data use cases in health care include predictive analytics/ quick diagnosis, finance management and medical research. However, the weak side of Big Data in the health care include lack of qualified IT specialists, low financing, security and interoperability issue. Meanwhile, one of the key products of Big Data in health care system is the introduction of Mobile Apps. Nowadays, cell phones act and feel like a Personal Assistant. By default, all the significant cell phone companies have pre-installed applications into gadgets to assist clients with their day-by-day physical exercises. For example, the number of steps strolled for the duration of the day, the pace of pulses and other indispensable signs, the quantity of calories consumed for running, strolling, or utilizing a circular coach, and that's only the tip of the iceberg. It's not so much strange to think about a not so distant future where your doctor takes a glance at your cell phone's physical measurements to all the more likely comprehend your schedules and your physical state. Healthcare mobile apps are intrinsic to devices designed to access Big Data healthcare information. These are illustrations of some of the healthcare mobile apps that are already making waves in the mobile device industry; CareAware Connect is a mobile app that manages clinical communications on a single device for teams that collaborate to improve care coordination. Users are able to view patient data such as vitals, measurements, allergies, and more. Healthtap is a website and mobile app that serves as an interactive health platform that originally began as a question-and-answer service to allow patients to send health questions to verified doctors. Now, the company offers services to include health tips, telemedicine, and physician reviews of specific medicines.

Benefits of Big Data in Health Care

Monitoring applications of vital signs to ensure a proactive approach to a person's healthy state is monumental. For example, diabetes patients can track their insulin dosages, next to medical appointments, and more. – Healthy Patients; With data being generated at breakneck speed, hospitals have the demanding role of managing the operational aspects of the facility. For example, Big Data analytics helps track staffing metrics while predictive analytics is able to enhance billing efforts. - Streamline hospital operations; Preventive care to provide services more efficiently, optimize operations, and improve the prevention of medical risks. For example, the Apple Watch is being refined to determine if the embedded sensor of the watch can help detect atrial fibrillation. If found true, this could be groundbreaking in helping users seek timely medical attention - Prevention Services; Big Data offers the ability to manage information and use it to drive cost improvements. With insights from Big Data analysis, healthcare organizations can identify areas where cost reductions can be made, whether related to admission rates, diagnostic tests, or operational procedures. - Reduction in Cost, Big Data in healthcare enables providers to deliver more accurate and personalized care treatment. By having a detailed picture of patients, it is easier to predict the response to a specific treatment. Moreover, Big Data experiences some challenges in Health Care; Size, Valuable Data, Data Security and Updating and Aggregating Data , In conclusion, Big Data in healthcare is on the verge of invaluable contributions to the future of the healthcare sector. From predicting health outcomes, curing acute or terminal diseases, to making patient care more effective, Big Data is now a familiar companion to the healthcare Sector.

Oyebola Simeon
- is an undergraduate student in the Department of Computer Science

ICT INTERVENTIONS FOR SUSTAINING SDG 15: LIFE ON LAND

In the previous editions of CSC Newsletter, we highlighted how Information Technology aligns to support Sustainable Development Goals 1,2,3, 5, 7, 9, 11, 13, 14 and 17. Efforts would now be made to discuss SDGs 15.

Life on land as included in the Sustainable Development Goals entails medium, efforts and techniques through which land, forest and terrestrial animals can be protectected, preserved and reserved. The land which is approximately aged at about 2.3 billion years old occupies an estimated value of about 30% of the earth's surface and has thus provided plants and animals numerous benefits including serving as habitat for millions of animal species, provision of clean air and water use in regulating the ecosystem.

Factual information and figures provided by the UNDP reflects the huge benefits attached toward preserving land and its inhabitants to include: feeding about 2.6 billion people who directly depend on agriculture for a living, a habitation for 80% terrestrial animals, plants and insects, reduction of carbon dioxide in the atmosphere by 33% with the adoption of cloud-based solutions. In addition, 60% of the earth's fresh water is derived from mountains and evidently by research, the ecosystem contributes about 125 trillion dollars annually to the well-being and livelihood of human.

Considerably, significant and appreciable efforts are being channelled by countries around the globe towards achieving the SDG 15- life on land through various projects. For examples, the city of **Edmonton**, Canada initiated an Urban Forest Management Plan (UNDP) to protect natural forest and tree species to improve the ecosystem. The Green City (Shiraz) project in Iran greatly contributed to preserving the land by limiting the construction of unwanted settlements through re-afforestation. Also, in South Korea, a deteriorated portion of land spanning about 10.9km was beautifully transformed into a recreational centre attracting investors from the hooks and crannies of the world. The application of green infrastructure is on-going in Melbourne, Australia to reduce the extremely hot weather temperature by $4^{\circ}C$ and lower energy consumption.

Furthermore, to avert the tonnes of carbon dioxide (CO_2) emission associated with the collection and treatment of waste in order to save human life, the city government of Buenos Aires, Argentina established a recycling centre with sophisticated ICT gadgets and technologies. The significant of insects (bees) biodiversity, food sovereignty is of great importance to a nation as seen in Slovenia with the creation of a Ljubljana's Bee path to increase professional competence of bee keepers and the country's economy. Effective collaboration among Integrated Urban Renewal Centre and Central City Planning Office in Copenhagen, Denmark is presenting a Climatic Resilient Neighbourhood (CRN) Strategy through the use of Green and Blue ICT cloud burst solutions to prevent flooding and improve the quality of life. The Edible City project launched in Germany in 2010 is also continuously helping in developing and sustaining biodiversity towards achieving the aim and objective of SDG 15. Currently, nature-based solutions are continuously being implemented with limited technologies such as the **U-REPORT** (a mobile empowerment programme connecting people around the world to government and decision-makers for showing related information) and **WIDE-LAB**.

However, for the sustenance and improvements on available projects, a speedy implementation of evidence-based knowledge is required through the application of ICT to provide inter-linkages between the set goals with their corresponding appropriate actions. These actions coupled with more innovative ideas and researches towards adopting ICT in the listed areas will help in achieving the SDG 15: Developing highly sensitive drones which can be deployed to determine species of plants and animals needed to restore the ecosystem of a particular region or area, Appropriate nature-based technology can be infused in building infrastructures which are resilience to climatic changes. Efforts can also be channelled towards developing and implementing intelligent smart and green technologies for use in agriculture, land preservation and wild life conservation, Provision of satellite-based monitoring systems for timely collection of accurate data on a global level with locally made sensors to provide real-time updated information about the local environment. Big data analysis can also be used to predict future and short term trends of the effect of pollution, weather patterns and bio-diversity to aid proper planning and taking necessary actions, Conclusively, the inclusion and appropriate application of digital technologies through collaborated efforts as a result of sound and well-documented research over time will significantly aid in achieving the SDG GOAL 15.

EDITORIAL TEAM

Editors
Oreoluwa Tinubu
Oluwatimilehin Salako

Editor-In-Chief
Prof. Olusegun Folorunso

For further correspondence cscnewletter@gmail.com