

Enabling Akwa Ibom State as an ICT-Led Growth Centre in Nigeria: A Private Sector View

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Abstract

Using available official data, the study examined the environment and conditions created to enable ICT to develop and penetrate in Akwa Ibom State, Nigeria, so as to maximally function as a key enabler or tool that facilitates wealth creation, poverty reduction and job creation through knowledge utilization and innovation. ICT enables individuals and organizations achieve strong gains in performance in all fields of economic and social activities. There is conceptual harmony between the seven sectors suggested by the private sector for application of ICT and the seven elements of the state development vision. The evidence suggests, however, a thin ICT enablement in the state. One of the policy implications identified calls for a strong government's involvement in the ICT enablement process beyond the foundational role to close the incongruous gap and deepen the ICT enablement process through the third generation industrialization prototype.

Keywords: ICT, ICT enablement process, development vision, innovation.

Introduction

On 23rd September 2017, Akwa Ibom State (AKS), celebrated its 30th year of creation as a state in Nigeria. A state has a status of a subnation. The official reflection on the progress made by AKS during its three decades of existence centered on the desire to make the state an innovative centre with national and international outlook (AKS,2017). This is in accord with the vision of the state being “to transform Akwa Ibom State into a prosperous, highly educated, technologically driven, ethnically harmonious, caring and pacesetting state in Nigeria, with strategic policies and programmes to accomplish same’. Information and communication technology (ICT) has been adopted as the technological strategy for the attainment of the transformation (AKS, 2005). Nationally, and in line with the global trend, Nigeria has embraced the strategy of using ‘Science, technology and innovation to drive growth’ (FMBNP, 2017:14). Akwa Ibom state was created out of the old Cross River State in 1987 and was tagged a ‘civildservice state’ to describe its poor economic and low industrialization status. Indeed poverty, even by official statistics account, has been a feature of AKS,(AKS, 2006; Ukpong and Ikoh, 2010). With the inception of democratic governance in Nigeria in 1999, after almost 30 years of military rule, AKS sought ways of transforming itself away from being a backward, civil service state. As widely acknowledged, it was the first governor of the state in the democratic dispensation, Obong Victor B Attah (1999), in his invitation ‘Come, let us Build Together’, that laid the foundation for the transformation of the state that hitherto had its characteristics stylized as follows:

- Rich Agricultural resources
- Rich Marine resources
- A weak Industrial sector
- An active informal sector
- A mean per capital expenditure of N125 per month
- Absence of the necessary enablers (power, roads, etc.)
- Absence of a vibrant private sector
- Average provision of social services
- Growing unemployment in the urban areas
- Heavy reliance on revenue from the Federal government (Ekpo, 2001:12)

The Victor Attah's administration (1999 -2007) has been credited with the legacy of laying the foundation for the modern, creative and knowledgebased economy of AKS given that before this era, efforts at transformation 'were ad hoc, inconsistent and halfbaked; economic policies were not derived from a purposeful vision requiring conceptualization, formation and implementation' (Ekpo, 2001:2; AKS 2017:172 -173). In order to transform the state into a modern developed economy with global links, the administration adopted the public sector-led but private sector- driven approach with publicprivate sector strategic alliance to create the following enablers:

- Constant power supply
- Telecommunications
- Transportation (particularly roads)
- Job creation
- Efficient and effective government agencies to provide an appropriate policy framework.

In 2004 following the national direction in formulating a new development plan framework called National Economic and Empowerment Development Strategy (NEEDS) to engender reforms, AKS developed its own framework called Akwa Ibom State Economic and Empowerment Development Strategy (AKSEEDS), becoming the first state in the country to do so and without any technical support from the international development partners (AKS, 2005). The AK-SEEDS articulated better, the administration's vision and strategies to achieve a competitive economy and inclusive society using science, technology and innovation (STI) and with particular attention to ICT as the driver of the development agenda called Akwa Ibom Project (Ukpong, 2007). All the sectors and entities were enjoined to key into the AK-SEEDS in a coordinated manner to realize the vision of the modern AKS (Attah, 2007:19). Akwa Ibom State was confronted with a major financial crisis just as it had its development blueprint in place. AKS is the tenth largest state in the country and has remained most of the time since 2001, the largest oil producer in the country. Unfortunately, the reintroduction of the onshore/offshore dichotomy drastically reduced the revenue of the state and incapacitated its execution of the policies and programmes outlined in AK-SEEDS. However, the subsequent political solution to the problem mitigated the consequences of the sudden and drastic revenue reduction in the state. But it also triggered the search for the diversification of the economy away from dependence solely on oil revenue. As shown, oil has been unable to improve the quality of life of the citizens of Nigeria and its exports alone cannot engender economic growth. ICT has been looked upon as a natural replacement or alternative option to oil as revenue earner and wealth creator. ICT is mainly a private sector driven enterprise (Awe, 2007).

As shown in recent study (Ukpong, 2017), Nigeria and its component 36 states under the current national development framework called the Economic Recovery and Growth Plan (ERGP), 2017 -2020, have embraced and seek to leverage Science, Technology and Innovation (STI) to build a knowledge -based economy and effectively drive national competitiveness, productivity, economic activities and growth in all sectors. Attention has been focused on the potential of technology, especially ICT, to engender economic development by boosting the entrepreneurship of the young population(building skills, invention, establishing businesses and job creation).However, an earlier study which drew some of its data and insight from Akwa Ibom State, had revealed the paucity of studies in the field of technology -policy interface as well as innovation deficit in the country on account of poor funding and little R&D (Ukpong, 2017). This paper examines, from the private sector perspective, how Akwa Ibom State, a pioneer promoter of STI in Nigeria, has prepared itself in the development and application of ICT for the attainment of goals related to poverty reduction and sustainable development generally.

Data

This study is a continuation of a recent one (Ukpong, 2017) and the data are drawn from the same pool, utilizing the same method of analysis and interpretation based on World Bank's recent approach on using institution's vast troves of data and validation through a 'variety of judgment calls' (World Bank, 2017, McArthur and Rasmussen, 2017). Additional data were obtained from the proceedings of the Round Table organized by the IMFI ICT Academy, Uyo on October 6 -14, 2010 (IMFI, 2010) and its other institutional data.

The Development Vision of Akwa Ibom State

Until the advent of Victor Attah's administration in 1999, there was no common and coherent statement of the state's development vision (Ekpo, 2001:2). The Governor's campaign manifesto, 'Come Let Us Build Together' influenced the crafting of the vision and the blueprint for the development of the state that followed. The

principles which informed the initial thoughts of the vision in the manifesto are not stated. However, following the national impetus of the period, AKS had to develop the state counterpart development framework called AK-SEEDS, which was publicly presented on April 6, 2004. AK-SEEDS contains the vision, objectives, programmes and strategic actions for the implementation of the policies and programmes of the framework. A development vision is a deliberately contrived statement concerning where an entity is headed. Without it, one moves like a rudderless ship whose destination is neither certain nor defined. Since development is necessarily a complex undertaking, it has to be guided by a strategic vision.

A vision is an imaginary description of the type of development a society would aspire or want to have in the future, as well as the steps leading to the realization of that vision. In order to produce a realistic vision, it is important to take note of where one is today, where one is going in the unknown future; and how to get there. A rational way of achieving this has always been to engage in SWOT (Strength, Weakness, Opportunities and Threat) analysis.

AK-SEEDS benefited from SWOT analysis of AKS and the results as at 2004 is presented in Table 1.

Table 1: Results of SWOT Analysis of Akwa Ibom State in 2004

Strength	<ul style="list-style-type: none"> - Being the second largest oil producer among the oil producing states in Nigeria. So it has strong cash flows from the federation account - Abundant agricultural resources including farm, livestock and fisheries - Strategic location in the Niger Delta region –access to seas/ocean - International goodwill and support from donor communities - Peaceful relationship among different ethnic groups.
Weaknesses	<ul style="list-style-type: none"> - High levels of poverty and income inequality - High rate of unemployment, especially, amongst the youths - Weak private sector and dominance of the informal sector with low productivity - Presence of few entrepreneurs (creative businessmen and women) - Low and declining revenues collected from the state
Opportunities	<ul style="list-style-type: none"> - A visionary and popular leadership (Governor Attah) and his government - Good prospects of significant revenue flows to the state from Federation Account since the on-shore/off-shore controversy had been settled. - Presence of well-educated people (human capital) and skill base - Untapped enormous agricultural potentials on land and in water - Access to development resources nationally and internationally - Access to a wide national, regional and international markets
Threat	<ul style="list-style-type: none"> - Private enterprises' inability to access investment funds for development - Widespread perception of corruption which may discourage investors - Illegal trafficking in children - Spread of the deadly disease of HIV/AIDS - Negative/pessimistic attitude to work and life

Source: Adopted from AKSEEDS (AKS, 2005).

Following the outcome of the SWOT analysis was the necessity of considering four likely paths of transformation namely: the flying eagles scenario with a strong growth path generating positive benefits to the people; the moribund scenario with negative growth path leading to the failure of government and governance; the peaceful slumber suggesting a state of sleepiness with low growth and absence of visible achievement; and the ostrich scenario in which growth is almost unchanging and leaders pretend to be doing something while they are enriching themselves.

On the basis of the insights generated by the combination of the SWOT analysis and scenario/path projection, Akwa Ibom State development vision was crafted as 'Akwa Ibom State is to be transformed into a prosperous, highly educated, technologically driven, ethically harmonious, caring and pacesetting state in Nigeria, through the formulation and implementation of strategic policies and programmes for achieving those attributes and assisting individuals, institutions and communities achieve their optimum potentials'. The vision contains seven key elements or implications - a prosperous state, highly educated citizenry, a technology driven state, ethnically harmonious state, a caring state, a pacesetting state and the creation of strategic policies and programs for vision realization of the seven elements of the vision, one is the focus of the present analysis and deserves a brief

explanation, pointing out the content of the template that defines the enablement of the environment for the development and application of ICT. A technology-driven state aims to spread technological literacy to the people through setting up appropriate technological institutions, encouraging research into and application of technological ideas for solving the problems of the state/nation.

Toward 2014, about a decade since the adoption of the first harmonized development vision for the state, there were calls for a new vision of development in the light of major shifts and resistance in the state. With the significant improvement in revenue inflows of the state in particular and the persistence of some economic and social challenges facing the state, like unemployment and exclusion, there has been clamour for casting a new development vision that offers new solutions to old problems and moving the state to the next level. In particular, the new development vision expected is one to nurture a state where equity, transparency and accountability, innovation and entrepreneurship will drive economic development. Akwa Ibom State is expected to transform from the civil service state to a business and industry- oriented state with a wide application of technology for solution in every aspect of human endeavours (AKS, 2017).

Enlarging the Vision: A Theoretical Framework

There is consensus today that technology drives development and its successes. The power of technology, especially since the information and communication technology (ICT) revolution of 1970s, has dramatically impacted on virtually every sector and wealth creating activities in society. Global, national and subnational development frameworks and programmes rely on the application of ‘solutions minded technology’ for their successful implementation (Ukpong, 2017; World Bank 2017; Igoe and Edwards, 2017; Perez, 2000). How are these forces and roles related and played out?

The Spanish sociologist, Professor Manuel Castells (2010) in his trilogy of books has presented an elaborate systematic theory of the information society, paying attention to the impact of the information technology revolution on the world economy and the society. He explains with evidence the new social and economic development brought about by the internet and the ‘new economy’. Castells’ theory of network society in particular has been well received not just because of its central argument that all sectors of the society are witnessing transformation in how their ‘constitutive processes’ are organized and shifted or changed from hierarchies to networks creating values in the processes, but more importantly because it sees the power of the information technology as a strategic tool which can be harnessed to solve major challenges like poverty reduction and sustainable development.

The wide interdisciplinary connections and utility which Castells’ theory permits have added to its appeal, making it possible for local situations to be located or explained within the domain of the theory. It is in this context that the explanations of some ICT developments in Nigeria, for example by Awe(2007) and Uzonwanne (2002) and in Akwa Ibom State by Asor (2009) and Asuquo (2003; and 2009) have meaning. Castell stresses the extreme flexibility of the information technology (IT) which allows it to link up everything that is valuable according to dominant values and interests, while disconnecting everything that is not valuable. The flexibility of ICTs permits a near universal application, exerting inexorably, wider grips on the economy and society. This point is poignantly made with the assertion ‘without new ICTs none of what is changing our lives would be possible’ (Castells, 1999).

Castells (1999) calls attention to the debate on the mixed record of the information technology revolution. For the optimists, ICTs are the solution and while to those not ecstatic about it, information technology is a tool for renewed exploitation, destruction of jobs, environmental degradation and the invasion of privacy. Asor (2009) calls the debate as being about “techno-elites versus neo-luddites”, and points to the fact that the real issues of debate are about how ICTs influence development. Today, this is determined by the ability to establish a synergistic interaction between technological innovation and human values, leading to a new set of organizations and institutions that create positive feedback loops between productivity, flexibility, solidarity, safety, participation and accountability, in a new model of development that could be socially and environmentally sustainable.

It is easy to agree on these goals, but difficult to develop the policies and strategies that could lead to their attainment. However, by application of the power of information and technological innovation which is being spawned rapidly by the moment, it is possible to increase the common understanding of the process of transformation being addressed, their origins and their implications as well as fashion solutions.

Examples of such applications are given from genetic engineering to everyday living of children, business and policy, etc. Okoruwa (2007) presents early demonstration of the power of information and its impact on efficiency, productivity and growth when he called our attention to the facts that it is practically impossible to find a major street in today's Nigeria devoid of the umbrella telephone call center, that more phones in the hands of Nigerians continue to translate to more empowerment and that as at September 2006, more than 20 million Nigerians had their own telephone.

As at the end of 2015, there were more than 151 million active mobile phone lines subscription and 22 million active smart phones in Nigeria NBS (2016). The number of imported phones was 48 million at the cost of US\$3.5 billion. Software development is making possible user- friendly computing, so that millions of children, when provided with adequate education, can progress in their knowledge, and in their ability to create wealth and enjoy it wisely, much faster than any previous generation. Internet - used today by several million people, with an unprecedented doubling every year -is a channel of universal communication where interests and values of all sorts coexist, in a creative cacophony. Certainly, the diffusion or penetration of information and communication technology is extremely uneven. Most of Africa and some other regions of the world are left behind in the ICTs revolution. The situation is difficult to remedy when one third of the world's population still has to survive on the equivalent of one dollar per day.

It must be understood that technology in itself alone does not solve social problems rather its availability and use, particularly of information and communication technologies, are a pre-requisite for economic and social development. Econometric studies show the close statistical relationship between diffusion of information technology, productivity and competitiveness for countries, regions, industries and firms. They also show that an adequate level of education in general and of technical education in particular, is essential for the design and productive use of new technologies. But neither the sheer number of scientists and engineers nor the acquisition of advanced technology can be a factor of development by itself without an appropriate organizational environment (Asor, 2009). This speaks of the necessity for deepening the relationship between policy ecosystem and technology (Ukpong, 2017). The crucial role of ICTs in stimulating development is hydra-headed. Firstly, one can posit that, it allows countries and states to leapfrog stages of economic growth by being able to modernize their production system and increase their competitiveness faster than in the past. The most critical example is that of the Asian Pacific economies, and particularly the case of Hong Kong, Taiwan, Singapore, Malaysia, and South Korea. On the other hand, for those economies that are unable to adapt to the new technological system, their retardation becomes cumulative. Furthermore, the ability to move into the Information Age depends on the capacity of the whole society to be educated and to be able to assimilate and process bottom up, from the primary school to the university.

The other critical element of this network is the creation of special centers where the technology is concentrated in design, development and diffusion. It comes in many names like Silicon Valley, Bangalore, technology parks, hubs, incubator centers, etc. They are innovation centers and attract the most skilled experts. The products of such centers generate prosperity that is shared by the rest of the economy and society. Awe (2007) attempts to summarize these issues as applicable to Nigeria when he reiterated that ICT is a key enabler or tool that facilitates wealth creation, poverty reduction and job creation through knowledge utilization and innovation. ICT enables individuals and organizations to achieve strong gains in performance in all fields of economic and social activities. Such impact, though at lower range, are already being recorded in the Nigeria's software industry and varied ICT-enabled platforms like e-business, e-banking, e-payment, and lesser still, e-governance. So little is known of ICT impact on the last category, e-governance. What to do, according to Asor (2009) includes having access to the appropriate technology and revolutionizing digitalization and communication by letting people see real experiments and the results instead of reading about what other people did.

Engaging the Vision: The Innovative Pathway

Akwa Ibom State is recorded as the land of many 'first' – meaning leadership, innovativeness and entrepreneurship (AKS, 2017). AK-SEEDS, which represent another 'first' for Akwa Ibom State, contains the first holistic development vision policy and programmes of the state since its creation in 1987.

It is the appropriate baseline reference on the state's commitment towards an ICT-enabled environment. The architect of AK-SEEDS, the then Governor of Akwa Ibom State, Obong V. Attah chose to summarize its contents by way of exemplifying on its implementation on the occasion of the visit of President Olusegun Obasanjo to Akwa Ibom State on August 12, 2006. The title of his address 'We are setting Standards' conveyed the message which is summarized in his conclusion that 'the full appreciation of the possession of the capacities (by Akwa Ibom State) to create abundant opportunities make it urgent for us not only to share but to enlarge this vision to attain the highest level of development for the state' (Attah 2006:10). In his valedictory Summit address titled 'Sustaining the Akwa Ibom Project,' Attah gave a report card of the accomplishments of his administration which he asserted were "foundational" in the promotion of reforms and innovations, being the global ferment of the era of his administration (Attah, 2007). The objective of Akwa Ibom Project remained establishing a complete paradigm shift from being a civil service dominated to an industrial State (Attah, 2007:6).

The efforts of focusing on 'harnessing the gains of technology' translated into the following broad categories of endeavours:

- i. The foundational science pillars – Establishment of nine special science centres, seven model science secondary schools with laboratories and equipment including computers. The aim was to increase the number of students passing with at least five credits at a sitting including science subjects and English and Mathematics in preparation for admission into the university. The progress indicated a growth in this category from 1% in 1999 to 30% in 2003.
- ii. Core STI Programmes – Establishment of specialized AKS University of Technology (AKUTECH), Ikot Akpaden and overseas training of 150 first class graduates from AKS to form the nucleus faculty of the University; the building of the science park with a free zone status. The Park was to enable citizens to master scientific methods and processes as well as generate technological innovation relevant to the state's present and future requirements.
- iii. Direct ICT Application Domains – Establishment of Victor Attah Digital Opportunities Centre (VADOC), conceptualized as a regional digital hub; the training of 70 young graduates in Canada in various ICT programmes and setting up of a central Research and Development (R&D) laboratory with the initial output of cloning and distributing MST computers. To this is added the strategic investment of USD 67.5million in the Econet (now Airtel network) following the introduction of GSM in the country in 2001.
- iv. Institutional and Policy Measures – AKS was perhaps the first state in Nigeria to establish the Bureau of Science and Technology which was subsequently upgraded to the status of a full Ministry of Science and Technology with the responsibility to promote and sustain the development and coordination of STI in the state and to respond to the technological needs of the state as well as national and global imperatives. A State Science & Technology Policy was formulated and adopted.
- v. Industrial and Related Enterprises – Industrial development was selectively pursued with planned links to the promoted technological base and potentials of the state. At the flagship was the Ibom Airport Project with special attention to the provision of aircraft maintenance, repairs and overhaul (MRO) facilities to service the West and Central African Regions, the first of its kind in the nation and region. To penetrate the oil and gas sector, AKS invested in marginal oil field exploration, two export processing zones (EPZs) licenses were obtained for Ikot Abasi and Mbo, and two industrial estates were established in Uyo and Ikot Ekpene and others planned for agroallied industries. The objectives were to diversify the state economy and reduce reliance on revenue from oil.

While the state efforts focused on creating the stimulus and incentives for technology-enabled environment, the private sector activities are expected to drive the actualization of technological innovativeness. As already stated, AKS has a small private sector presence and limited nongovernmental organizations (NGOs) involvement in the development process of the state. It is already known that ICT is basically a private sector/nonstate actor driven enterprise. Two indigenous organisations representing the two categories above which have been in the lead in promoting STI in Akwa Ibom State have shared their perspectives which are summarised here and used in the final assessment of the extent of ICT enabled environment in AKS. International Management and Finance Institute (IMFI) was established in Uyo in 1993 as a private sector-led professional training and development institution and was approved by the government in 1995 as a registered professional tertiary institution. The Institute maintains a collaborative relationship as a training and examination centre for professional bodies and for universities in Nigeria and abroad. In 2003, the Institute became affiliated to the University of Uyo for the purposes of running Diploma Courses in Computer Science and Management Studies.

As a Management Development Institution, IMFI is duly accredited by the Centre for Management Development (CMD) for the provision of capacity development programmes for staff and executives. In 2007, IMF applied to the Federal Ministry of Education to operate as an ICT Academy under the newly inaugurated Innovation Enterprise (Technology) Institutions Programme. IMFI ICT Academy was in October 2008, formally approved as one of the first private Innovation Enterprise Polytechnics in the country. Thus, IMFI works in partnership with government, industry, commerce, the academia and the professions to ensure that its training courses are authoritative, qualitative and relevant to the needs of the labour market.

In addition to short period professional certificate courses for management, entrepreneurship and graduate re-skilling for employability, IMFI ICT Academy offers NBTE accredited programmes for the award of National Innovation Diploma (NID) in:

- i. Computer Hardware Engineering Technology (+COMPTIA)
- ii. Computer Software Engineering Technology (+MICROSOFT)
- iii. Networking & System Security Technology (+CISCO)

The vision of IMFI is being a leading private technological tertiary academy of international standard which distinguishes itself in producing skilled professionals in ICT, Business Management and Entrepreneurship, Finance and Accounting at Certificate, Diploma, Degree and Postgraduate levels. IMFI would be outstanding for its innovative enterprise based specialization with relevance to national development and global competitiveness (IMFI, 2012). In pursuit of its collaborative stakeholdership with the government of Akwa Ibom State, IMFI organised a 7Day Round Table on the theme “Seven Steps to a Model State through ICT” on October 6 -14, 2010 to harvest ideas on how STI can be applied to rapidly transform the State/nation. Seven steps were identified and recommended to fast tract development using ICT to leapfrog improvement in seven critical economic and social sectors namely:

Using ICT for quality Education and Training

Concerns were expressed about the prevalence of mass failure at public examinations; the implications of examination malpractices; the neglect of science, technical vocational and technological education; the quality and condition of service of teaching and research staff at all levels. ICT applications were therefore recommended to help in motivating learners, expanding education and training access though internet connectivity, empowering teachers (to innovate classroom teaching and learning), remedying the dearth of learning resources and integrating assessment tests into the learning process for faster feedbacks.

Using ICT for Effective Health Care Delivery

In spite of the huge capital expenditure invested by all levels of Government in Nigeria, healthcare delivery is still limited in scope and quality. By judiciously implementing ICT, healthcare delivery can save lives by improving operational efficiency and enhancing the quality of service as experienced in the advanced countries. It therefore proceeded to recommend:

- i. That ICT applications be considered in such areas as Electronic Patient Information System (EPIS)
- ii. That step should be taken to address the technical and human challenges likely to confront the application of ICT in healthcare delivery.

Using ICT for Food Security

It noted that modern technology has been applied in the developed nations to reduce the tedium and cost of agricultural production and therefore recommended the deliberate and systematic adoption of available ICT mechanisms to improve agricultural productivity, agricultural information sharing system, marketing and distribution and stock and inventory management.

Using ICT for quality Infrastructure

The Round Table advocated the judicious application of ICT to enhance the efficient conceptualization, design, construction, monitoring and evaluation of infrastructural projects and urged universities, polytechnics and technical colleges to give top priority to the development of science, technology and engineering courses, including ICT to the standard obtainable in the developed countries.

Using ICT for sustainable Industrialization, Job creation and Poverty eradication

Taking a cue from the path taken by the previously underdeveloped Asian, Indian, Chinese and Brazilian economies to leapfrog to the high level of industrialization and job creation witnessed in those societies today, the Round Table called for immediate prioritization of ICT learning, research and technological innovations, capitalizing on AKS' rich endowments in human and natural resources. The Round Table noted the rapid pace of job creation and innovations in the GSM subsector which is driven by ICT and urged an expansive and aggressive training of youths in innovative technical skills fields, such as software development, multimedia technology, network administration, electrical/electronic technology, industrial manufacturing, craftsmanship, communication technology, information technology (IT) Park Service Providers, computer aided industrial designs, digital marketing, etc. The availability of skilled manpower in these fields is indispensable if Nigeria is to meet the labour market challenges of globalization.

Using ICT for Good Governance, Efficient Justice Delivery and Security

The Round Table noted that the frequent low ranking of Nigeria by local and international economic monitoring agencies such as the World Bank, MDG, Transparency International, etc. is not because of lack of development policies but mainly because of inefficient planning and implementation institutions and poor quality of operational systems and the personnel involved, all of which can be greatly enabled to perform better with proper use of ICT. The Round Table urged governments in Nigeria to prioritize the implementation of e-governance, e-judiciary and e-policing by, among others: creating the enabling environment by promulgation of relevant laws to backup e-government, e-judiciary and e-policing; extending computer education to all citizens, starting from systematic adoption and implementation of IT Education Policy in primary, secondary and tertiary institutions and providing telecentres for communities, starting from each Local Government Area Headquarters.

Using ICT for Social Interaction and Communal Harmony and Peaceful Co-Existence

The Roundtable noted that for people to live together and relate well, they have to share information and interact meaningfully. In this regard, ICT has proved to be the most potent mechanism for expanding and deepening communication and social interaction, for example, through GSM, the FM Radio, TV, the internet, instant Messaging, e-mail, video conferencing and video phones, social networking sites, etc. The Roundtable recommended that apart from deploying ICT for mass education and skills acquisition, the potentials of ICT in dissemination of accurate and timely information to the public through public websites, community internet centres, e-libraries with local contents, social networking sites, etc. should be extensively explored (IMFI, 2010).

While IMFI develops the possible assessment indicators of ICT application to public service delivery, an indigenous NGO actually sets itself in complementing the application of ICT-enabled programme. IMFI's tracker #1 is concerned with using ICT for quality education and training. The Inoyo Toro Foundation (ITF), an NGO, works directly in this focused area of interest.

The Inoyo Toro Foundation; founded in January 2008, is one of the first Educational Foundations in Nigeria involved in the recognition of teachers by instituting the Annual Award for Teaching Excellence in public schools as one of the ways to support educational development in Akwa Ibom State in particular and Nigeria at large. Its objectives include encouraging the development of the Sciences, Mathematics and English Language in Akwa Ibom State public secondary schools; to create awareness on the importance of the aforementioned subjects and the benefit of specializing in the sciences at a later stage; and to complement government's efforts in enhancing the quality of education in Akwa Ibom State.

ITF works in five areas namely; annual teachers award for excellence, promotion of teachers certification, periodic surveys and gathering of education data, promotion of innovation and invention initiatives and mentorship programme. These five programme areas are meant to facilitate the achievement of its vision of 'eradicating poverty through education' (Inoyo, 2017; ITF, 2012).

On November 2- 3, 2017, ITF held its 10th Annual Teachers' Award for Teaching Excellence in Akwa Ibom State in Uyo. ITF speaks of constantly raising the bar of education standard in Akwa Ibom State. It points to its positive impact in the education sector of the state by providing the necessary incentives and direct facilitation on STI. Records show the awards and interventions in the 10 years of its existence have reached over 170 teachers with 73% of the awards going to STEM (Science, Technology Engineering and Mathematics) subjects (Inoyo, 2017).

ITF is itself constantly innovating in its programme offers. Frequently, new products are added to its staple. This year, the best Principal Award was added to the staple. Overall, its promotion of STEM education in Akwa Ibom State is transformative and pioneering and in recognition of its contributions to the advancement of ICT-related development, ITF was presented with a state Award during the 30th Anniversary of the State Creation on September 23, 2017.

The Enabling Acts

In 2009 at the First South-South Nigeria Economic Summit held in Calabar on April 23-25, 2009, the Government of Akwa Ibom State had declared itself a niche within the category of ICT application (AKS 2009) (See Box 1).

Box 1: 7 REASONS TO INVEST IN AKWA IBOM STATE

Highly developed infrastructure

Network of well-developed, closely knit roads, power, telecommunications, aviation and seaport facilities in place.

Security

Security of person, business and asset is guaranteed. The state is one of the most peaceful not only in the region but in the country. AKIIPPOC ensures secured business environment.

International Location

AKS is the gateway to the Gulf of Guinea, a globally significant region. Besides, its proximity to international boundaries is of immense economic importance. The state is hub for international business in maritime and very soon, aviation.

Skilled workers

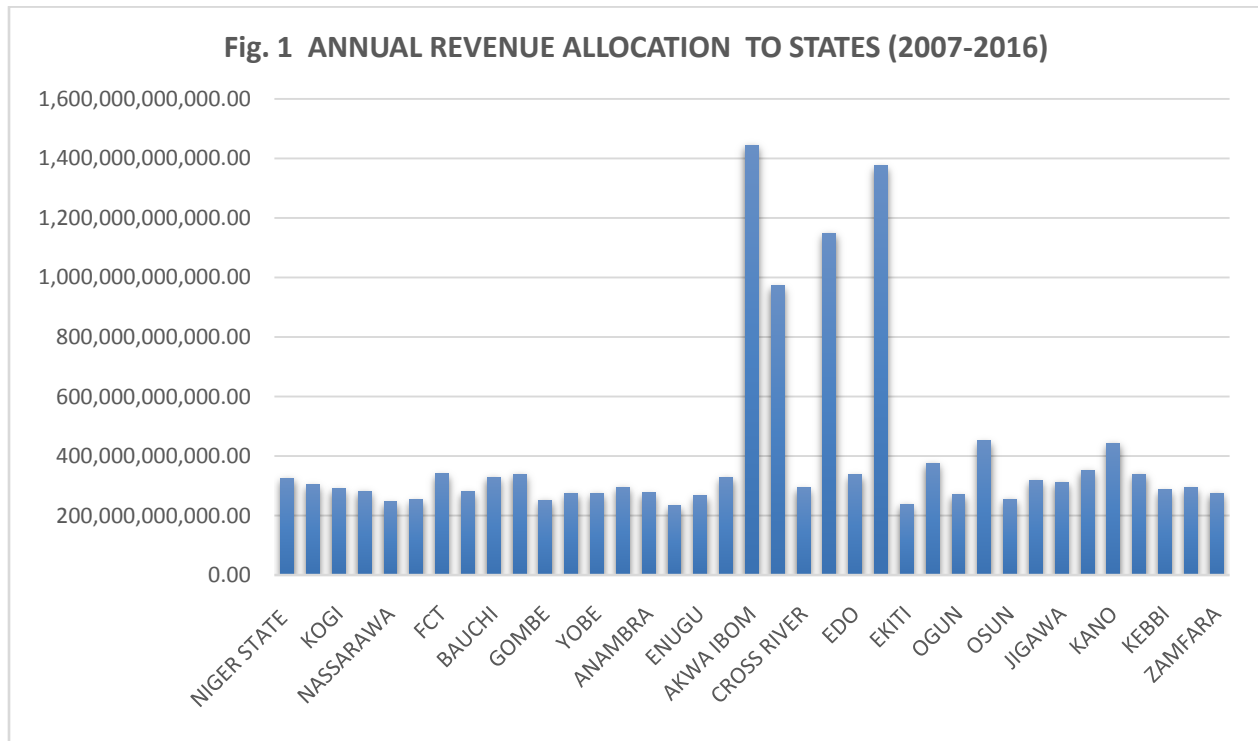
AKS indigenes have reputation for honesty, diligence and industry. These cosmopolitan values have been enhanced by constant upskilling programmes including the free education programme in the state, up to senior secondary school.

An innovative society

AKS citizens hold more patents than most other states in the country. From medicine to engineering, there are outstanding international patents to the credit of the state. Products of the school system are winning international Olympiad awards. The state university has international linkages and ICT Park has incubation pact even before their commencement.

Source: AKS (2009:1).

The basis for this self-rating is not given by Akwa Ibom State Government. However, what appears to guide that is the provisions of institutional framework for macroeconomic reforms in the State (AK-SEEDS for example) and the performance of 'foundational role' which included establishment of institutions, industries and design of policies and programmes. The availability of 'abundant good will and resources' also assured the government of its capability (Attah, 2006, 2007 and AKS 2017). As Figure 1 shows, Akwa Ibom State is the number one revenue earner in Nigeria in the last ten years. This ordinarily places the state in position to implement ICT-related innovative programmes.



Using available official published records and documents of Akwa Ibom State Government, we attempt an appraisal of the ICT enablement of AKS environment, using the seven assessment indicators of ICT application developed by IMFI. It is to be noted that this section merely updates the position presented in the section five of this article on the innovative pathway. The result is presented in Table 2.

Table 2. Trackers of ICT Enablement in Akwa Ibom State

	7 Sectors for ICT Application	Indicators of ICT Application	Examples of Outside Best Application
1	Education	E-library, Uyo & Samsung Smart Schools	Mobile learning Tech/Apps Virtual Reality Technology
2	Health	Proposed Central Data Centre for e-Medical Services	Health care delivery/ Monitoring Apps
3	Agricultural & Food Security	Use of Basic hand phone to coordinate extension services	Monitoring (Tracking)& Digitalization
4	Infrastructure	VADOC (Data) and proposed Central Data Centre using existing fibreoptic installation	Digitalization/ Tracking Apps
5	Industrialization/ Job Creation/ Poverty Eradication	(Work on IT Park suspended)	Hard/Software Industries & Apps in designing, developing, maintaining, installing and managing ICT System • Networking Apps
6.	Good Governance	Online payment platform for courts/AKUTECH & Online Screening for University Matriculation REMITA Payment platform	e-business/banking/payments platform • Interoperability platform
7	Communal Harmony	FM Radio and TV Stations	Digital identification system technology • Mobile Tech

Table 2, on the face value, reveals thin application of ICT to the seven sectors. Official documents of Akwa Ibom State are vague and empty on the ICT indicators. Although IMFI had officially transmitted the suggested seven trackers to Akwa Ibom State Government for consideration, there is nothing to show any serious commitment on the part of government to adopting same for implementation. The involvement of an NGO, ITF, in non-direct ICT sector component activities is not a product of formal government private sector stakeholder agreement or a response to a government’s invitation. The shallow ICT enablement in Akwa Ibom State may possibly be explained by low participation of the private sector in the enablement process. There is little statistical record to evaluate this view. It is insightful to note that it is in the #5 tracker sector of industrialization that the enablement process could have played out most.

According to official statistics of the National Bureau of Statistics, as at 2016, AKS had 3, 116, 758 active voice phone lines out of a total national 148.74 million and ranked the 20th in the country (NBS, 2016). ICT also involves manufacturing. There are no industries in AKS that assemble mobile phones and handsets, computers, chips or produce CDs, the devices videos and music are watched and played back or even pouches, which are integral to ICT. These are imported and this situation is at variance with the postulated drive for ICT enablement.

The policy implications of this thin ICT enablement in AKS can be highlighted as follows:

- There is a gap between the expressed Government's vision on the utilization of ICT and extant active measures for its acquisition, deployment and diffusion (penetration). This gap is incongruous and needs to be empirically explained through innovation study initiative.
- The involvement of the private sector in the ICT enablement process is weak. It is generally known that ICT is led by the private sector. Reason for this may be the absence of vibrant, strategic linkages within the technology triangle. Incentive systems should be introduced to commit the tripartite partners to the enterprise.
- Government should act beyond the foundational role at this stage of enablement by providing the mechanisms to resolve the conflicts of values in ICT enablement process as well as sponsoring the cost of creating awareness on the process of transformation and ICT enablement.

Conclusion

There is a conceptual harmony between the seven sectors for ICT application suggested by the private sector and the seven elements of the development vision of AKS enunciated by the Government. The evidence however suggest that there is a thin ICT enablement in AKS at this time. However, the promoters and beneficiaries of ICT power in Akwa Ibom State have endorsed the new thinking on technological innovativeness that ICT can be applied to all domains of human activities for the purpose of improving the quality of life and ensuring sustainable development. This suggests that the future of ICT in Akwa Ibom State and the nation is bright. Making ICT a driver of the success of the state development vision is a pointer to the imperative of deepening the ICT enablement process. Government's immediate and near future role is to move beyond providing foundational role in the process

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