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**LAND ADMINISTRATION MODERNIZATION THROUGH INSTITUTIONAL
REFORM and INTEGRATED LAND INFORMATION SYSTEMS in CROSS RIVER
STATE, NIGERIA**

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Abstract

This paper provides insight into the steps taken by the government of Cross River State, Nigeria in its efforts to establish the foundation for a functioning, efficient and transparent land administration framework.

Recognizing that the institutions responsible for managing land information lacked modern tools and skills to accomplish their tasks in an efficient manner and that spatial data was managed independently by various government agencies, the State launched a project that would consolidate land administration and equip the government agencies with the needed infrastructure to modernize land administration.

Funded solely by its government, Cross River State has reformed land laws, established a geodetic network based on a standard datum, reorganized government agencies, trained and equipped staff, streamlined and modernized workflows and processes and implemented a state of the art land information system. With the necessary base established, the State has changed the perception by citizens as to what they can expect when conducting land transactions, and laid the foundation for continued reform and service delivery by the government.

Key Words: Cross River, Land Information Systems, Legislative Reform, Nigeria, Registration

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Introduction

Nigeria is an economic powerhouse in Africa, with valuable natural resources and a large, rapidly growing economy. However, Nigeria faces significant governance challenges, including policies and practices in land registration that stifle the real estate market. Supported by massive oil deposits and record high prices for fuel, many Nigerian states have long been able to neglect the need for efficient and effective systems and policies for effective land administration, despite frustration and anger from citizens. This is reflected in that nation's position at 182 of 185 countries – and the lowest in Africa - in the World Bank “Doing Business” rankings for the ease of registering property. This important indicator evaluates formal property rights, including effective land administration, because in countries where “property transfer is too costly or complicated, formal titles might go informal again. And where property is informal or poorly administered, it has little chance of being accepted as collateral for loans – limiting access to finance” (Doing Business: Nigeria, 2012).

Nigerian states that lack lucrative mineral resources have had to look elsewhere to generate revenue and investment, such as the implementation of progressive and modern land administration frameworks. A successful example is that of Cross River State, which was recently delisted as an oil producing state and has sought alternate approaches to promote economic growth. Led by Governor Liyel Imoke, Cross River State has launched various initiatives to encourage local development. Key amongst them has been the commitment to land reform as an important element of the State's vision to create a conducive environment for doing business, increase investment by outside entities and better provide services to that state's citizens. By ensuring that land transactions can be made quickly, transparently and with confidence it is expected that investors might select Cross River as an investment location as compared to other regions of Nigeria and West Africa as a whole. Furthermore, a better understanding of property right allocations and ability to conduct transaction in an efficient manner will encourage citizens to register rights and allow the government to more effectively collect ground rents and lease payments.

Land reform and streamlining of land administration processes has been managed by Engr. Bassey Oqua, formerly the Commissioner for Lands and Housing and now Commissioner for Special Projects, under which the first phase of the land reform project was completed. The commitment from the Cross River State government is demonstrated by their total investment of over 1 Billion Naira (approximately 6.3 Million USD) so far in the land administration modernization exercise.

Cross River State is relatively unique in West Africa in that it has chosen to fund the project directly as opposed to looking for donor support.

Many of the efficiencies have been realized through the implementation of an integrated land information system to track all land related transactions. This land information system, when fully implemented, will also serve the Cross River State's planning departments as well as the agriculture, forestry, water board, finance, health, emergency response, fire service, security, and utilities sectors. The system will secure the records, minimize land disputes and allow citizens to more easily and efficiently conduct transactions.

Historical Land Administration in Cross River State, Nigeria

Land tenure systems in Cross River State are generally broken down into customary and public systems, with the customary tenure more prevalent in rural areas of the state. The public land tenure practice represents an attempt by the Nigerian Government, through the Land Use Act of 1978, to modify land tenure and access for purposes of development. This public land tenure is operational and predominant in the urban areas where individual land rights are common, though negligible in the rural communities.

Communal land tenure practices, an aspect of customary land systems, are more common in rural areas with relatively low population density. Under the communal system, land is held under an arrangement that provides for the joint use of the land by all members of the self defined community. Land is held by these self defined groups and may include villages, towns, customary groups, religious sects and extended families. A key tenet of the communal system is that land belongs to the community and members of the community cannot be alienated.

Another arrangement within the customary tenure arrangement is for family heads to grant land-use rights to community members and to outsiders who make a suitable compensation and are approved by the customary group, however these grants are often not documented and therefore leave the grantee with an unsecured asset. Grants of land made to the individual entitle the grantee, but further allocations or subleases by the grantee are not permitted without the knowledge and agreement of the family head.

A distinctive feature of customary tenure arrangement that tends to constrain land information systems and government involvement in land issues is that the traditional rulers manage the land

for the entire community. These rulers manage allocation and make decisions regarding the use of communal land. This power to dictate land use brings a degree of political and social power, and any effort to diminish these powers often results in a resistance to the proposed change.

The current law guiding land administration in Nigeria is the Land Use Act, cap L.5 2004, originally promulgated in 1978, designed at solving the multiple land tenure systems that existed in the Country. It was intended to usher in land reforms in Nigeria, through comprehensive tackling of four major challenges of land management: lack of uniformity in the laws governing land use and ownership; uncontrolled speculation in urban land; the question of access to land rights by Nigerians on equal basis; and the issue of fragmentation of rural lands arising from application of traditional tenets of inheritance or population growth and increasing land uses which exert tremendous pressure on available land (Mamman 2000, Udo, 1990).

The Land Use Act of 1978 is Federal Law which binds, and may not be altered by, the Legislature and Governor of Cross River State. According to the law, all land (except federal land) within Cross River State became vested in the Governor as at 29 March 1978. The land so vested is to be held in trust and administered for the common use and benefit of all Nigerians. The Act goes on to provide for the grant of two types of rights of occupancy – the Statutory Right of Occupancy (SRO) and the Customary Right of Occupancy (CROs). These are exclusive rights of occupancy, for definite terms, and a ground rent is normally payable.

In respect to rural and peri-urban land only, Customary Rights of Occupancy (CROs) may be granted to persons or organisations by Local Government for residential, agricultural and other purposes. In the case of CROs, the Act itself does not provide for exclusivity, definite terms or rent (but the standard form Cof O for CROs prescribed in the subordinate State Land Use Regulations is expressed in terms anticipating both a ground rent and a term.).

The grant of a SRO (but not a CRO) has the effect of extinguishing all prior rights to use and occupy the land in question. However, the terms of covenant 2(b) in Land Form 3 in the State Land Use regulations indicate that it is assumed that certain prior mortgages and encumbrances may survive the grant of a SRO. In relation to an SRO, the Governor may issue, either at time of grant or otherwise, a certificate under his hand, known as a Certificate of Occupancy (CofO), which evidences the right of occupancy. As regards a CRO, a CofO is issuable only on the application of the holder. Section 10 provides that every CofO is deemed to bind the holder to

pay the rent. Express covenants may also be included in CofOs and, where accepted by the holder, will bind successor parties.

Through is a fixed statutory process and standard applications, under which an applicant can be granted a piece of land through a leasehold of up to 99 years. An annual ground rent is payable to the Ministry, due by the 31st March each year. The rental fee is fixed for 5 years, at the start of the lease, and is reviewed every 5 years. Historically in Cross River State, the Ministry of Land & Housing has been ineffective in managing rent collection, and there are many cases in which years of outstanding rents are uncollected because incomplete records. It is also believed that the small amount paid as rent and late payment penalties are disincentives for collection, as the amount collected is markedly disproportionate to the level of effort required to collect the rent and penalties.

Below is a table showing the yearly collection of Ground Rent and Searches from 2006 – 2013 in Cross River State.

YEARLY COLLECTED FEES FOR GROUND RENT, SEARCH & CERTIFIED TRUE COPY								
YEAR/FEES	2006	2007	2008	2009	2010	2011	2012	2013 (Jan & Feb)
Ground Rent Fee (NGN)	3,325,488.44	8,724,809.30	7,930,776.91	9,342,147.31	774,121.00	NA	NA	Automated Process not in use yet
Search & CTC Fee (NGN)	111,478.00	149,400.00	62,500.00	86,000.00	8,400.00	NA	NA	409,500.00

Disadvantages of the Current System

Although a CofO is not mandatory for private lands, it is needed for any private land to be used as official instrument or collateral for banking transactions. Once the CofO is obtained, subsequent or secondary transactions can be made at the Registry of the Ministry of Lands and Housing. Prior to the project kick off, the Registry at the Ministry of Lands and Housing was staffed with only four individuals, and all transactions occurred centrally in the capital city of Calabar. With the registry largely lacking in indices, and lacking space to store records, any record search was time consuming and often times unsuccessful. Investigation reveals that most citizens elect not to register transactions due to the fees and costs associated with securing a CofO and because the process is both time-consuming and unclear. Approximately eighty CofO were issued state wide during the entire year of 2010.

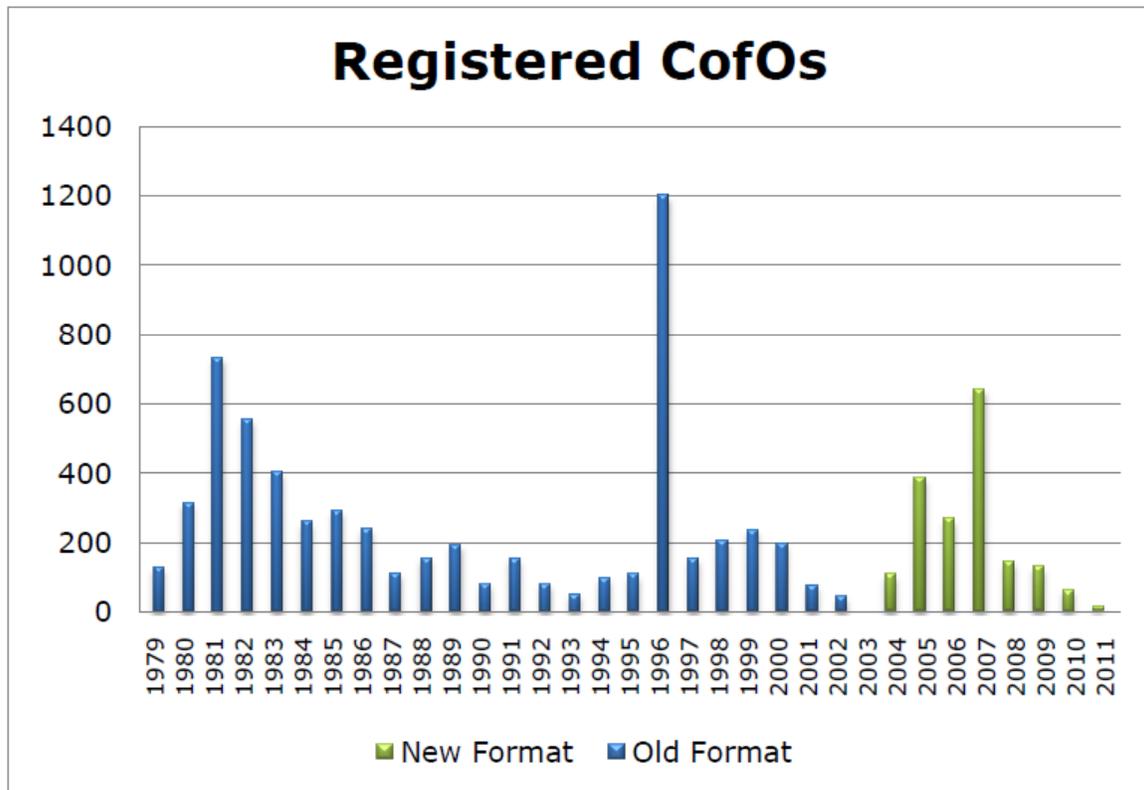


Figure 1 - CofO's Registered Per Year

In Cross River State, the system of land administration dates back to the colonial era when land transactions were stored in volumes of land Registers in the Eastern Regional Office at Enugu. Cross River State as a self-governing political entity inherited some of these land records from the Eastern Regional Government, and which are now stored in the Calabar Registry. The system of land administration in CRS is a largely manual process, as it was in the colonial era, and as such land acquisition, development control, cadastral title registration and surveying still involves manual inputs.

A critical look at the current land allocation processes and administration exposes the inadequacies inherent in the present procedures of land management. Some of the problems identified with the existing system of record keeping include the followings:

- Forgeries of land documents;
- Encroachment onto right of ways,
- Multiple allocations of parcels and overlapping allocations;
- Inefficient revenue generation;
- Obsolete hardware for data collection and management;

- System is vulnerable to alteration, theft, and substitution, encouraging corruption;
- Paper based records are difficult to preserve and irreplaceable;
- Duplication on similar media is cumbersome and will result in similar problems of maintenance after a few years;
- Updates of ownership or boundaries is time-consuming and prone to errors;
- Retrieval of records in the event of dispute, change, etc. is difficult to inefficient indexing and the bulk of information in the storage; and
- Constant handling of records leads to further wear and tear.

It is against this backdrop that Cross River recognized the need to modernize land administration operations in Cross River State to obviate the above bottlenecks and promote socio-economic development through an efficient land information management system.

A New Era in Land Administration

Recognizing that the existing land administration infrastructure was insufficient, the Ministry of Lands and Housing (MLH) of Cross River State developed a modernization vision which, through the use of land information systems, would ensure that:

- Property rights be underpinned by secure, accurate, accessible and up-to-date land ownership and cadastral information;
- Land registry processes be improved and streamlined in order to adopt more transparent methods of operation and to compete effectively for foreign direct investment;
- Security of tenure be strengthened through the provision of Certificates of Occupancy and elimination of duplicate CofOs; and
- Annual rent payments and rent arrears be tracked and collected.

In 2009, the Cross River State Government launched the Geographic Information System (GIS) initiative to streamline, integrate and share information among government stakeholders including departments for lands, surveys, and town planning. The goal was to create a “one-stop-shop” agency, the Cross River Geographical Information Agency (CRGIA), as an independent, para-statal entity. Created by law, the agency is designed to allow the general public and citizens of the state easy access to geographic and land-related information. The citizens will be able to conduct their land transactions in person at the agency or via a publicly hosted portal. The project was designed to enhance revenue generation on land-based transactions, optimize workflows in

land use planning, create a reliable foundation for future land reform initiatives and ensure prompt client services to citizens in Cross River State and outside the state.

In order to reach these goals the project set out to:

- **Reduce the cost to consumer** – For many citizens the costs associated with registration are high, especially if they have retained a private surveyor and/or lawyer for the transaction; normally these can add to more than 10% of the cost of the plot. Depending on the kind of registration you are doing, Land attracts Capital Gains Tax (10%), along with Stamp Duty (3%) or a Conveyancing Fee (2%). The whole process has to be done in person in Calabar, which adds costs for those out-of-town.
- **Speedup the process** - The time taken for most transactions can be long and arduous and our research revealed that most transactions took well over ten steps and would take four to six months. The number of registration steps (requiring the applicant to move from one office/section/location to another) contributes greatly to the time needed to finalize registration, and this alienates many citizens.
- **Inform the consumer:** Consumers are generally poorly-informed, partly because the processes are not documented in a manner that is easily understood, but more importantly because bureaucracies are not built around customer service or satisfaction models. Publishing the steps and processes will increase overall transparency and accountability.
- **Augment sustainability:** The State Government is expecting economically sustainable agencies. This will have to be achieved through more efficient processes and staff, automation, and a new business model.
- **Increase investment opportunities:** The State has to attract outside investment. Property Rights, and their guarantees, are frequently touted as one of the most important factors for investment.

The Cross River State government contracted Telecom Technologies International Limited (TTi) as Consultant to manage and define the overall project and manage subcontractors for the modernization process. TTi realized from the outset that a system would not solve all the problems of land information management and was merely a component of a much larger initiative. Consequently, they designed an approach that addresses institutions, processes, laws, human resources, IT and geospatial infrastructure and bundles of land rights. Recognizing that creating the CRGIA would be a long process, TTi elected to divide the project into multiple sub-components which would establish the actual infrastructure for land administration within Cross

River, and without which, more complex systems could not be put into place. This initial phase of the project, the Fast Track Phase, implemented in 2011 and 2012, was composed of four stand-alone components: 1. Certificate of Occupancy Certification , Re-certification and Outstanding Ground Rent Computation; 2. Information & Communication Technology; 3. Institutional Framework Modernization; and 4. Geodetic Infrastructure Improvement. These components are summarized below.

Certificate of Occupancy Certification and Re-certification

The Certificate of Occupancy Certification component referred to the procurement, configuration and installation of an off the shelf Geographic Information System (GIS) in addition to a more robust, workflow driven Land Information System (LIS) which would allow for integration and management of the registry and cadastre. The Certificate of Occupancy itself is the basic document attesting to land rights within Cross River State and will be issued (or reissued for those with pre-existing titles) to all right holders in the state ensuring that all titled properties will be in the land information system from the outset. Computation of Ground Rent, plus penalty if in defaults dating back to CofO date of issue, is part of the component. This is to help the government improve its revenue drive.

While in due course subsequent transactions will be needed and configured, the first phase focused on initial configuration of the workflow, reports and forms used for the issuance of Certificates of Occupancy and which correspond to the existing Ministry of Lands and Housing processes and procedures.

Fast Track Information & Communication Technology

The Fast Track Information and Communication Technology (ICT) components purpose was to procure, install and maintain the hardware and IT infrastructure core which would support the new CRGIA. This hardware and software includes all IT components to run the CRGIA agency, and included creation of an internet web portal, and all other IT needs required to allow the agency to operate.

Institutional Framework Modernization

The Government of Cross River State recognized that the creation of a new agency responsible for all land information matters would require extensive reform within existing agencies. This component was designed to review the existing processes in land transactions and make

recommendations as to how roles, policies and processes would change with the creation of a new agency, particularly by looking at how they would conform with internationally recognized best practices. Other activities included a recommendation on legal reforms needed to create the Cross River Geographic Information Agency stakeholders workshops and information dissemination activities, and training of staff for their new roles within the newly created agency.

Geodetic Infrastructure

The projects final activity relates to modernizing the geodetic infrastructure of Cross River state, and constructing the needed foundation which would allow for future registry, cadastre, planning and survey works to occur efficiently and accurately. This included the observation of first order points across the state, training of government survey staff in the use of modern survey equipment, and the transformation of antiquated projections to the national grid.

Project Implementation

On the recommendation of TTI and using an open tender procurement process, Cross River State Government selected Thomson Reuters and Teqbridge Limited of Nigeria to implement all four components of the fast track phase. While the government received multiple tenders for each component, Thomson Reuters and Teqbridge were unique in their ability to undertake all components of the fast track phase. It was recognized that having a single vendor accomplish all four activities would be more efficient and allow for a more integrated framework.

The first phase of the project was completed in December 2012, after which the new Cross River Geographical Information Agency doors open to the public and metrics on revenue and transactions will be available.

With the help of Teqbridge and Thomson Reuters, systems have been implemented, processes re-engineered and recommendations developed in order to meet these well designed goals.

Fast Track Certificate of Occupancy Certification

Critical to the issue of land administration in Cross River, and the impetus for the entire CRGIA project is the need to better document and secure the rights of citizens by creating an institution that is efficient, affordable and consumer oriented. Key to delivering on this goal is the expedient

and affordable provision of reliable Certificates of Occupancy. This can only be done through the use of a modern land information system which is populated with accurate data and will replace the antiquated manual processes which have proved to be cumbersome, time consuming and fraught with error.

Our technical solution focused on the provision of off the shelf Geographic Information System (GIS) software, in conjunction with registry (GRM Registry) and cadastre (GRM Cadastre) software configured to meet the needs of the Government of Cross River State in streamlining, modernizing and updating its Land Registry and land administration framework. At the same time, the off the shelf solution delivered the flexibility which would allow for additional workflows to be added at a later date, as well as adjustment of existing fee, report and process structures.

Over the course of three months, our technical team, composed of Nigerian and international experts with a thorough understanding of, and proven track record in implementing solutions for land registries conducted a number of studies which served as the foundation for the configuration of the land information system. These studies, including a Business Area Analysis and Business Process Re-Engineering were conducted with the collaboration of existing staff at the MLH, and appointed representatives by Cross River State Government, and were only finalized following significant discussion and revision with project counterparts. Only upon final acceptance of these reports could final configuration and installation of the land information system begin.

The end result of this process has been the installation of an integrated LIS, completed with approximately 3 workflows configured, all relevant fees required for the Certificate of Occupancy issuance being automatically calculated and all necessary reports and documents issued by CRGIA being created automatically by the LIS.

WORKFLOW PROCESSES IN CRGIA AND ITS DESCRIPTION

In CRGIA, there are three basic workflows deployed in the land information system under the first phase of the project: Indexing and Scanning; Recertification; and Certification. These workflows are being implemented, under the “CRGIA Fast track” and geared towards expediting land transaction core processes before incorporating the other Subsequent Transaction processes in a later phase

INDEXING AND SCANNING - This workflow is designed to digitally convert all existing paper records relating to land transactions held at the Cross River State Land Registry and incorporate them into the land information system. The Indexing and Scanning workflows capture a scan of the paper record while various fields relating to the transaction are indexed by the scanning clerk

The Indexing and Scanning workflow (INSC) takes into consideration the tenure, term of ownership, commencement date, title holder's details, etc. of a particular property and depicts the holder's right to hold said property, and the expiration of term as well as all instruments relating to that property in the system. This means that a Property detail created in the system can have many transactions within. Additionally, Cadastral Plans/Maps created in GRM Cadastre are linked to a particular transaction in the system to singularly identify which property the transaction is based on, thereby creating an integrated registry and cadastre. This helps to develop a database for all transaction on land that has occurred in the state, even before the enactment of Land Use Act 1978.

RECERTIFICATION - This workflow is designed to revalidate all existing transactions on properties with active CofO. Due to irregularities in the processing and documentation in the MLH, owing to analogue process, fraudulent activity or human error, some issues have cropped up regarding who holds legal right to property. Therefore to create a system with accurate, reliable and error-free data and rightful title claims to properties, the Recertification workflow is required for active CofO on properties with any post- assignment or lease or properties with Building Leases for those with instrument before the enactment of Land Use Act of 1978, though they are by law, to convert their Building Lease to a CofO. The applicant will submit the original CofO which will be used for the revalidation process, and a new CofO created.

The workflow checks the details of the owner, the property details, previous transaction that have transpired on the said property (e.g assignment, mortgage, encumbrances etc). The workflow also allows town planning department of MLH to conduct a check on the property building pattern, land usage and other regulation stated in the law for compliance, and enter/scan in their field report, which will aid the lands officer to review the said claim of ownership by the applicant and either approve or reject the application for CofO validation. Also, the survey plan of the property

will be review and a site visit will help correct analogue method mistakes, because a better accurate Trimble Equipment will be used and plan will be updated in the system.

Once all this verification has been concluded, and there is neither encumbrance nor caveat on the property, and the applicant has paid the necessary fees (using the approved fee structure by the government which system computes automatically for the applicant) for the processing of the CofO recertification, a new CofO will be issued to the holder(s).

CERTIFICATION - When Government, individual or community maps out a portion of land and either allocates (if government) or assigns (if individual or community), the assignee or allottee is by law required to secure a CofO for the said property to which they are claiming right of ownership. As a result, the Certification workflow is designed to enhance the process of CofO processing and registration allowing for checks and counter checks of details of the applicant on the said property. This process comes in effect only if:

- There is an allocation from government on the said property for which government advertised the availability of plots of land for allocation and thus allocated it to applicant after he/she has paid both the application fee and other fees deemed fit by government.
- The applicant has a Deed of Assignment, Lease, Deed of Gift, Conveyance etc he/she entered into with a previous owner of a property, and thus wants to secure his/her own CofO for the said property.

Primarily, on application the first process is land revision which incorporates a site visit by town planning departments and verification that the right to that piece of land is vested on the applicant and that also, all rules and regulation guiding land use within the state were adhered to completely. Subsequently, the survey department will conduct a detailed survey of the property as well. The completed surveys are loaded into system, reviewed and readied for linkage to property transaction. Thus the applicant is meant to pay certain fees (using the approved fee structure by the government) as computed by the system. After all the above conditions have been completed, the applicant will be issued a Certificate of Occupancy (CofO) on that said property.

The application of this computerization strategy, at the enterprise level has significantly streamlined operational efficiencies on the government side, as well as making all required fees etc. transparent to the client from the outset. In addition, the CRGIA has begun to realize an increase in external clients' confidence in the registry system as well as the wider real estate

market, through increased security of property records, improved transparency through electronic audit trails, wider access to information via the internet, improved revenue generation through ground rent collection and the downstream ability to expand system functionality to support e-commerce.

Training

While this land information system is a critical cog in the land administration process, it was recognized from the outset that the system would only be successful were it operated by well trained and motivated professionals. Over the course of the Fast Track Project, approximately 200 applicants were interviewed out of which 79 were eventually hired to staff the new CRGIA department. Due to the new hires limited experience with land issues, land information systems and the Ministry, training was considered a critical component of the

The training sessions, offered over several months and including on the job training, have allowed the agency to develop a skilled cadre of staff. Not only are staff members conversant with the new registry and cadastre systems as system administrators, GIS experts and land administration specialists, they are also now customer-oriented specialists with an understanding of how IT can benefit a modern organization. The following list shows titles, participants and duration of training courses for the project:

TOPICS (Course Title and Description)	#	Duration (days)	Duration (hours)
Course Name: Introduction to Basic ICT for CRGIA Staff. Description: This training is for CRGIA staff that has little or no ICT knowledge and is geared towards bringing them up to speed as it regards ICT, its function and usability.	22	14	4 (double class)
Course Name: Introduction to System Administration and Management for CRGIA IT Staff. Description: Training for CRGIA IT department personnel for fine tuning their ability to managing the server system, network system, security and users, as this is the back bone of the CRGIA infrastructure.	4	5	6
Course Name: Introduction to Basic Database Management and Generic DBMS for CRGIA IT Staff. Description: Training for Database administration, management and troubleshooting, also implementation of relational DBMS as the application is based and optimal minimization of DB downtime	4	5	6
Course Name: Introduction to GRM Registry Indexing and Scanning workflow for CRGIA Staff. Description: This is introducing the GRM registry application to the staff of CRGIA, on the utilities, tools and procedure on how to use the application in line with the proposed workflow. Staff were given a system each for hands-on training on the application with the test server, however configuration is still on-going on the application	41	5	6

Course Name: Introduction to GRM Cashier for CRGIA Account Staff. Description: This training is for the accounting department of CRGIA, regarding the use of the Cashier application in cash confirmation, invoice issuance and financial report deliverables as it concerns CRGIA. Each staff trained with a system using the test server after the class.	5	3	2
Course Name: Introduction to GRM Registry, Recertification workflow for CRGIA Staff. Description: This training is detailing the staff of CRGIA on the adopted process for Recertification and the significance of each stage of the process. Thus each staff will be acquainted with what the next person is doing, so as to have a general knowledge of the whole process as well as their own designated task.	41	3	6
Course Name: Introduction to GRM Registry, Certification workflow for CRGIA Staff. Description: This training is detailing the staff of CRGIA on the adopted process for Certification and the significance of each stage of the process. Thus each staff will be acquainted with what the next person is doing, so as to have a general knowledge of the whole process as well as their own designated task.	41	3	6
Course Name: Introduction to GRM Registry Indexing and Scanning workflow for Registry department, MLH. Description: This training is necessary because they are the custodian of the registry documents and after the indexing and scanning of those documents, they will have to do the final review of the indexed/scanned details for conformity and correctness before passing the transaction as correct and complete.	5	5	2
Course Name: Introduction to GRM Registry Web Admin for CRGIA IT Staff. Description: This is introduction of the administrator to admin web page of GRM Registry for setting and configuring the GRM system and updating the system dictionaries and user setting.	3	2	2
Course Name: Introduction to CRGIA Portal for CRGIA Staff. Description: This is introduction of the web portal developed for CRGIA by Teqbridge Ltd, which handles e-payment and application for various transactions on land and also how to relay information about CRGIA via the web portal.	2	2	2

For the GIS trainees and Surveyors, training was provided on digitizing processes for paper records. As at January 2013, a total of 15,044 property files were delivered from the Ministry of Lands and Housing to the CRGIA center for electronic record archiving. Of these total files, 6,046 files have been processed and completed, 7,634 are in various stages of completion, while 1364 remain unattended to due to mainly incomplete documents. As at January 31st, 3013 a total 5,000 parcels have been digitized. Of this number 2,286 parcels have been processed and integrated into the parcel fabric.

Fast Track Information & Communication Technology

Teqbridge and Thomson Reuters coordinated the provisioning of the required ICT infrastructure and implementation of the Web Portal. This included definition of hardware and infrastructure specifications as well as the subsequent deployment, installation and maintenance of the required ICT infrastructure in coordination with the State's ICT department. In addition, we designed and built a CRGIA Web Portal that enables the public to apply and pay online for certification and re-certification of private or government land or make online payments for Ground Rent via Interswitch ATM cards.

The CRGIA computing infrastructure is located in three sites, partly for security and redundancy. We have installed the production server in a remote location and also sync all backups to another remote location. Then Test and Development servers as well as all scanning and printing services are located within the premises of CRGIA. It should be noted that all the three sites are connected via high-speed fiber network.

Institutional Framework Modernization

The Government of Cross River State recognized that the creation of a new agency required significant institutional reform, and as such, this activity was a priority for the government. Under the Institutional Reform component, international experts collaborated with Nigerian land specialists in order to implement an approach that is compatible with international best practices while at the same time being specific to the unique business and cultural environment of Cross River State. Land Attorneys, land administration and registry professionals, institutional and enterprise GIS experts and social development advisors all collaborated to develop recommendations and actions plans for the MLH and CRGIA.

Institutional Reform

As Cross River State works to establish a new independent organization with a mission to build and maintain a central land administration system, and to provide GIS services to ministries, organizations and departments across the State, it was recognized that there is a need to elicit GIS user needs of departments of the Ministry of Lands & Housing as well as other Ministries and Agencies across the State. An initial survey of existing State MDAs revealed a total of 72 agencies and ministries in the Cross River State. In order to ascertain which agencies have a need for GIS information, implementing partners worked with MLH staff to conduct interviews and distributed questionnaires to all relevant agencies.

After briefly reviewing the high level mission and services offered by the MLH and responding government agencies, the analysis concludes that significant investment in training will have to be summoned to bridge the knowledge gap created by the move from what is essentially a paper-based operation to an integrated, and GIS-based, enterprise information system. The most significant challenge is that technology, in addition to radically changing some of the business processes, will require staff to develop the ability to conduct their everyday activity with the tools that are the basis of modern productivity (i.e. e-mails, productivity suite, database entry etc.

Given this, three significant success factors are identified: 1) Continuous staff training on

everything from using e-mail to database data entry; 2) Implementation of simple and accessible GIS tools; and 3) an incremental approach to developing future GIS applications.

While the current fast track phase of the project focused on activities required for managing and issuing Certificates of Occupancy, later phases will need to focus on the above referenced issues in order to ensure true integration relating to spatial data across the government agencies.

Within the Ministry of Lands and Housing (MLH), the project made numerous recommendations to ensure that the leadership of the MLH engage more closely with supporting existing Ministries, Departments and Agencies (MDAA) but also engage more closely with the staff of the MLH to lead them through a period of significant change. The ability of the current cadre of staff to adapt to the use of technology as part of their everyday business activities is a major concern that should not be underestimated. Further recommendations focused on how to make needed changes in order to allow for more effective operations, and included such topics as:

1. Adjusting fees structures;
2. Revising business processes;
3. Training needs in IT, records management, customer service, LIS and GIS and other relevant topics;
4. Revision of staffing structure to reflect a more IT driven organization; and
5. Revised emphasis on service delivery.

Social Development

As part of the Fast Track phase, the Cross River State Government mandated that a study of the possible social impact of the CRGIA be conducted to analyse the potential intended and unintended social consequences of the CRGIS project and any social change processes that may be invoked by the CRGIS intervention. An assessment was conducted both of the potential impact of the fast track phase, as well as the possible impact of the fully operation CRGIA agency with completely populated land information system.

Furthermore, recommendations were made as to the need for, and composition of public awareness and public education campaigns intended to inform citizens of the change in processes for conducting land transactions, as well as the importance of registering their rights. Currently, such public education campaigns have not yet been initiated.

Legal Reform

A major hindrance to the adoption of a modernization strategy was recognized to be the legislative framework within which the land registration service sits. Excessively burdensome regulations that are not flexible stifle the opportunity for change; however, these inflexible regulations can often only be addressed by legislative reform.

International and Nigerian land attorneys were consulted over the course of the project, and governing regulations were examined early and options for change identified so that any changes the system brings could be readily adopted by the CRGIS. As a result of the legal review, two new bills were drafted to be sent to the State House of Assembly to enact into law. One of the two drafts is the “Land Register Law 2011,” which seeks to bring the laws governing land registration systems in Cross River State to international standards taking also into consideration the limitations posed by the Land Use Act of 1978. Recommendations included:

1. It is provisionally recommend that the State retain a deeds registration system, but with the improvements discussed at part 4.
2. It is recommended that capture and publication of information relating to ground rent payments become formally part of the land registration function.
3. It is recommended that the Registration Titles Law of 1935, Cap. R2 be repealed without replacement.
4. It is recommended that the Land Instruments Registration Law of 1924, Cap. L3 be repealed and replaced by a Law developed from the discussion draft
5. It is recommended that the minor, consequential and updating amendments to other Written Laws of the State.
6. It is recommended that the State Government consider communicating to the National Government the comments relating to the Land Use Act given in part 5 of this Report.
7. It is recommended that consideration be given to amending the current terms of Land Forms 3 and 3A prescribed in the State Land Use Regulations.

The implementation team also presented conclusions on the legal instruments required to effect the changes, giving a discussion draft of a bill that would affect those changes lying in the legislative competence of the State legislature.

The second draft bill is the “Cross River Geographic Information Agency Law 2011,” which discusses the provisions required to constitute Cross River Geographic Information Agency as a service agency. It seeks

- (1) to established the Cross River Geographic Information Agency (“the Agency”);
- (2) to established the Agency as a body corporate with separate legal personality from the State, the Governor and the Commissioner; and
- (3) to established the Agency may have a seal.

This draft was presented to the House of Assembly by the Cross River State Attorney General and Commissioner for Justice. It was deliberated upon and passed into law by the House after public hearing by those for and those against. The bill was finally into signed into law by the Executive Governor in July 2012, thereby conferring legal entity to Cross River Geographic Information Agency (CRGIA).

Geodetic Infrastructure

The general objective of the geodetic infrastructure component was to initiate the development of a modernized geodetic infrastructure in Cross River State and to develop a GPS-based geodetic and cadastral surveying capacity within the Survey Department and the private sector surveying community. Under this component we developed two-dimensional transformation parameters for transformation of the existing Cross River State geodetic reference systems into UTM 32N Projection/Minna Datum.

The concept established a unified geodetic reference in Cross River State by redefinition of the datum of the existing statewide GPS network. For that purpose 16 stations from the network were measured with GPS to compute transformation parameters between ITRF2005 and the local WGS84 datum originally used in the network. Using those parameters the coordinates of all Cross River GPS points were transformed into ITRF2005, the earth-centred earth-fixed terrestrial datum used in the Nigerian GNSS network NIGNET.

The campaign for measurement of control points was conducted using 3 GNSS receivers Trimble R7 with Zephyr Geodetic 2 antenna, and 6 GNSS receivers Trimble R8 over the course of three weeks in 2011. The observation scenario was designed to provide maximum accuracy and

redundancy to the network, with each site measure for a minimum of six hours per day for three consecutive days.

Furthermore, the Cross River Survey Department has been equipped with Trimble Differential GPS and a Continuously Operating Reference Station, and all members of the survey department have been trained in the use of the equipment.

Results

There is early evidence that the impact of the reform is having a positive effect on the state. The staff of CRGIA and stakeholders including personnel in Ministry of Land and Housing departments have come to realize that it will not be “business as usual” as workflow-driven processes do not allow for manipulation of the system as all transactions are tracked from beginning to end. The agency has the legal power as well as the automated system to issue and register CofOs and collect the associated fees. It is important to note that public comments have been positive since the agency was commissioned about two months ago. Both the applicants and customers trust the transparency of the system and largely depend on the information coming out of it. Customers are treated courteously by welcoming customer-service personnel who directs to appropriate service desks. This is miles apart from what obtained in the past where information and directions were ignorantly or sometimes deliberately made opaque in order to achieve premeditated objective. The system depends largely on configured workflows which automatically compute bills like the ground rents and other fees for registration without human intervention or arbitrary and unapproved “discounts” by the old land officials.

As of today, the system though ready has not been fully put to use as the Ministry of Lands and Housing is yet to terminate the processing of land documents at their end. It is envisaged that within the next 2 -4 weeks these processes will completely be transferred to CRGIA and attendant full blown operation will commence from the agency. Meanwhile, because over 96% of the property files have been digitized all searches take place at the agency now. The following table could be indicative of what to expect in terms of revenue when full operation is enable at the CRGIA:

YEARLY COLLECTED FEES FOR GROUND RENT, SEARCH & CERTIFIED TRUE COPY								
YEAR/FEES	2006	2007	2008	2009	2010	2011	2012	2013 (Jan & Feb)
Ground Rent Fee (NGN)	3,325,488.44	8,724,809.30	7,930,776.91	9,342,147.31	774,121.00	NA	NA	Automated Process not in use yet
Search & CTC Fee (NGN)	111,478.00	149,400.00	62,500.00	86,000.00	8,400.00	NA	NA	409,500.00

As mentioned above, the only services fully enabled at the Agency at this moment is the Search & Certified True Copy (CTC). For the two months of January and February 2013 the agency has collected over NGN409,000.00. This is figure is above the amount collected for the same services between 2006 and 2010 (5 years). It is only a pointer to the level of revenue accruable to government when ground rent, CofO, and registrations and other transactions are enabled at the center.

Conclusion

Cross River State's land administration reform and improvements are exemplary in a country with an overall poor record for land information management. As a state-funded project, without bi-lateral or multi-lateral support, and regular reporting to the Governor, the project provides an example as well as illustrates its high priority for the state government. This innovative approach may provide a roadmap for other Nigerian States and African governments to modernize their land policies.