



JISTEM: Journal of Information Systems and
Technology Management

E-ISSN: 1807-1775

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Brasil

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JISTEM: Journal of Information Systems and Technology Management, vol. 10, núm. 2, mayo-agosto,
2013, pp. 271-286

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THE IMPACT OF IT GOVERNANCE ON IT PROJECTS -THE CASE OF THE GHANA RURAL BANK COMPUTERIZATION AND INTER-CONNECTIVITY PROJECT

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ABSTRACT

This research seeks to analyse the root causes of the massive failures of IT Projects especially in government establishments. This study shows that the successful implementation of IT projects does not lie only Project in Management principles. It answers the question ‘why are IT projects failing despite the application of tried and tested Project Management principles ? The paper also concludes that Project Management principles per se do not guarantee the successful implementation of IT projects, but have to be brought within the principle of IT Governance. Conclusions are drawn from the Ghana Rural Bank Computerization and Inter-connectivity Project, an activity under the Millennium Challenge Account of the Millennium Development Authority to show that IT Governance needs to be inculcated into IT Projects to make its implementation successful.

Keywords: IT Governance, Project Management, IT Projects

1. INTRODUCTION

The concept of IT governance emerged in the late 1990’s when Brown (1997), Sambamurthy and Zmud (1999) wrote about “IT Governance arrangement and Framework”. They said that IT Governance represents an organization’s IT related authority patterns. However, IT Governance was not treated as a field until 2004 when 2 researchers, Weill and Ross (2004) consolidated existing research about how IT is managed in 250 organizations, including 400 direct case studies and hundreds of interviews with managers. The result of the study was the realization that IT governance is a key component of realizing value from IT investment, ensuring that IT is aligned with and supports organizational goals. Their research showed that firms with superior IT governance have more than 25% higher profits than firms with poor governance

Manuscript first received/*Recebido em* 30/01/2013 Manuscript accepted/*Aprovado em*: 17/04/2013

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given the same strategic objectives. These top performers have custom designed IT governance for their strategies. They argued that just as corporate governance aims to ensure quality decisions about all corporate assets, IT governance links IT decisions with company objectives and monitors performance and accountability. Based on the study of 250 enterprises worldwide, IT Governance shows how to design and implement a system of decision rights that will transform IT from an expense to a profitable investment.

IT governance objectives are to define structures, processes, mechanisms that will influence decision making rights and responsibilities about main IT issues, control and monitor the effectiveness of such issues and mitigate IT related risks in order to achieve organizational objectives.

IT Governance in Ghana

There is presently no published work on IT Governance in Ghana although research has been undertaken in areas like Local Governance and decentralization. Ghana's decentralization system and local government system are intended to give ordinary people the opportunity to participate in decisions that affect their lives (section 35, Clause 5d of Ghana's 1992 constitution). Gender equity and gender sensitivity have been regarded as prerequisite of a sustainable development, Ofei-Aboagye (2004).

It is not surprising therefore that the absence of any research on IT Governance both in the public and private sector of Ghana has led to all manners of challenges facing a national IT project like the National Identification System (NIS), which is being implemented by the National Identification Authority.

The NIS is supposed to be a computerised registry that will keep information on all Ghanaian citizens and, legally and permanently resident foreigners. Out of the registry, an identity document that uniquely identifies the Ghanaian citizen (resident or living abroad) or the legally resident foreigner will be produced. Other aims of the project was to

- Help with crime prevention, healthcare, welfare services, disaster management;
- Assist in the delivery of public services to targeted populations, banking services;
- Create a credible voters register, social security;
- Check the application and acquisition of passports and drivers' licences and aid with increased revenue collection, Multi-Sectoral Technical Committee Report (2002)

National identity cards were first issued to citizens in the border regions of Ghana including Volta, Northern, Upper (East and West), Brong Ahafo, and parts of the Western Region in 1973. The project was however discontinued three years later due to problems with logistics and lack of financial support. This was the first time the idea of national identification systems arose.

Again, in 1987, the Government of the Provisional National Defence Council (PNDC) through the National Commission for Democracy (NCD), revisited the national identity card concept by establishing several committees including a Technical Implementation Committee. Due to economic difficulties, the issue was not pursued.

Once again, in 2001, when the National Economic Dialogue was convened, the National Identification System (NIS) was seen as a major policy concern. As a result, a multi-sectoral Technical Committee consisting of stakeholder organisations was established to resurrect the project. Consequently in 2003, the National identification Secretariat was set up by the government to implement and manage the National Identification System (NIS). The Act establishing the National Identification Authority was passed in 2006

A pilot mass registration exercise was held to test the forms and equipment deployed for the exercise as well as the registration process as outlined by the Authority. This pilot registration exercise took place in two communities, Abokobi and Sege, both located in the Greater Accra Region, for ten (10) days from July 27, 2007 to August 4, 2009. The testing selection and training of staff for the Central and Western Regions were also executed successfully, with mass registration taking off in the Central Region on July 1, 2008.

However as it 2009 the project was still not completed,dogged with problems mainly due to lack of funds. This situation seriously threatened the successful completion of the project. The NIA commenced the distribution of the identity documents in 2011 but it had to stop the distribution due to lack of funds, History of National Identification Authority ((2010)

This paper seeks to prove that applying IT governance principles to Project management principles would ensure the successful implementation of IT projects. The paper uses the case study of the Ghana Rural Bank Computerization and Inter-connectivity Project to prove the hypothesis that Project management principles per se do not guarantee the successful implementation of IT projects.

2. LITERATURE REVIEW

The emerging e-marketplace has changed the face of business for thousands of business organizations. The result of being thrust into the technological market place has resulted in a massive rise in IT project failures, with failures running as high as 80%, (Johnson, 1994).

In information systems and organization theory research, the alignment or fit between information technology (IT) and organizational structure has long been hypothesised to be the sine qua non for success. Raymond, Paré and Bergeron (1995) argued that taking organizational size and environmental uncertainty into account, it was found that IT sophistication is positively related to structural sophistication, and also IT usage is positively related to organizational performance, and the relationship between IT management and structural sophistication is stronger among the better-performing firms than among the worst-performing firms.

Huang, Zmud, and Price (2010) also postulated that Information technology (IT) governance practices involved efforts by an organization's leadership to influence IT-related decisions through the location of decision rights and the structure of decision processes. They contended that governance practices such as Steering Committees and governance related communication policies had positive effects on IT related decisions.

Using the Telecentres project as the focus of her research, Madon (2005) argues that the long term survival of a project depends on how interactions are managed

between a host of players including the government, private entrepreneurs, international donors, telecommunications suppliers, local companies, civil society organisations and individual community members. She proposes sociology of governance approach in managing these relationships.

Using the corporate governance of IT standard, i.e. ISO/IEC 38500:2008, Wilkin, Campbell and Moore (2012) analysed how Information Technology Governance (ITG) was practised in the deployment of a large IT project in an inter-organisational public/private sector context. Their findings demonstrated that ITG strategies related to human agency's contribution to the realisation of value for participating stakeholders, particularly through pre-emptive stakeholder participation in evaluating IT functionality of the old system and iteratively in the deployment of the new system. Further, their research showed that ISO/IEC 38500:2008 has merit as an analytical framework to objectively evaluate corporate governance of IT, although there is need for some enhancement. LeCardinal and Marle (2006) proposed a definition process of a project structure which should be constructed in order to reach the objectives of the project and to deliver the final results.

Failed Projects

In the US, the American Reinvestment and Recovery Act of 2009 also known as the HiTec Act for the National Health Service. The project which is expected to cost £11 billion has the initial aim amongst others to establish (a) an electronic transfer of prescription service, (b) an electronic booking service (c) a detailed electronic patient record to be viewed by local organizations and an authorized summary worth \$787 billion in tax cuts and spending by the government to stimulate the economy, The Recovery Act (2009). Of this amount nearly 10% (\$75.8 billion) was invested in technology projects which included a \$1.2 billion increase in IT operating and projects budget of the Departments of Veterans Affairs, and \$200 million for improvements to the Department of Homeland Security's Technology infrastructure, Kauffman (2009). However, as in 2008 68% of IT projects were shown to be either partial or total failures, Schwalbe (2009). Some of the Projects that failed include the FBI's Virtual Case File System Project, which the agency scrapped in 2005 after sinking \$170 million into it; the \$8 billion system modernization of the Inland Revenue Service launched nearly 10 years ago; and the U.S. Citizenship and Immigration Services' \$190 million automation effort. Bishop (2008)

In the UK, the unpleasant story of the Electronic Patient Record Project readily comes to mind with regards to project failures. In 1998 the UK government launched the National Health Service Information strategy dubbed 'Information for Health'. The strategy was intended to run until 2005. The goals of the strategy included the creation of an Electronic Health Record containing 'life long core' clinical information for each patient by 2005 developed initially by linking local primary health systems. However this project was superseded in 2002 by the 10-year National Programme for Information Technology Project (NPfIT) which had as its theme, 'Delivering 21st Century IT Support record available nationally'.

However, in 2011, 9 years after its launch, the UK parliamentary Public Accounts Committee report said parts of the \$16 billion national programme for IT had proved to be unworkable, Public Accounts Report (2011). Donabedian (1988) and Batalden and Buchanan (1989) suggested 3 steps by which an ERP could be made more relevant. They are, identifying the customers, understanding the system requirements, and translating those requirements into functional characteristics of the system. The

Committee was of the view that the intention of creating electronic records was a "worthwhile aim" but one "that has proved beyond the capacity of the Department of Health to deliver. The report went on further to say that the "Implementation of alternative up-to-date IT systems has fallen significantly behind schedule and costs have escalated. The Department of Health could have avoided some of the pitfalls and waste if they had consulted at the start of the process with health professionals." This is a clear case of lack of an effective governance structure. This confirms the argument that the key challenge of governance is at the operational level where governance hinges on individual and organizational integrity and ability to translate strategies and legal frameworks into institutional effectiveness and efficiency, Alabi and Alabi (2011). The Report also said officials were "unable to show what has been achieved for the £2.7bn spent to date on care records systems", adding that taxpayers were "clearly overpaying BT", one of the project's consultants said. The company was receiving £9m for every NHS site, yet the same systems had been sold for just £2m to other hospitals". The report also criticised the Department of Health's "weak programme management" It also noted that the massive scale of the project had caused companies to walk away, leaving just two groups holding the contract.

3. BACKGROUND OF THE GHANA RURAL BANK COMPUTERIZATION AND INTER-CONNECTIVITY PROJECT (GRBCIP)

The Millennium Challenge Corporation (MCC) signed a five-year, approximately \$547 million Compact with the Republic of Ghana on August 1, 2006. The Millennium Challenge Account (MCA) is viewed as an opportunity to address fundamental structural problems in the local economy, as well as to help improve the economic, political and social stability of the sub-region. Ghana's principal economic goal is to improve the standard of living for its citizens, and to achieve middle-income status within a decade, driven by private sector led growth. The Compact program was intended to advance these goals by enhancing economic growth through poverty reduction. The Millennium Development Authority (MiDA) was charged with the responsibility for managing the Ghana Millennium Challenge Account (MCA) Compact.

The goal of the MCA Ghana Program was to accelerate the reduction of poverty through economic growth led by agricultural transformation. This was to be accomplished through the transformation of agricultural practices in identified locations in Ghana and involved promoting a commercial orientation to the production, post-harvest storage, transportation, processing and marketing of high-value cash and staple food crops. The support was targeted at improving resources and removing infrastructural constraints in the agricultural value chain from production through processing and marketing.

Specifically, the MCA Ghana Program sought to achieve the identified goal by deploying the following projects:

- **Agriculture Project:** This project set out to transform agricultural practices through the introduction of capacity-building interventions to improve crop-husbandry and business management skills of operators of the agriculture value-chain. It provides resources in terms of

infrastructure (irrigation, post-harvest equipment and feeder roads) and credit as well as land security.

- **Transportation Project:** This intervention addressed highways, trunk roads, feeder roads and ferries to improve access to domestic and international markets for agricultural produce.
- **Rural Development Project:** This was designed to strengthen rural institutions that provide services complementary to, and supportive of, agricultural and agri-business development. It includes support for the development of professionals, provision of basic services (electrification, educational facilities and water and sanitation) and strengthening of rural financial services (“Financial Services Activity”). The Ghana Rural Bank Computerization and Inter-connectivity Project was under the Financial Services Activity of the Ghana Compact.

Rural Financial Services in Ghana

Rural and community banks are the primary formal financial service institutions in Ghana. Rural banks operate as commercial banks under the Banking Law of Ghana, except that they cannot undertake foreign exchange operations, and their minimum capital requirement is significantly lower than that required of commercial banks. Rural banks operate as unit banks owned largely by members of the rural community through purchase of shares and are licensed to provide financial intermediation. They were first initiated in 1976 to expand savings mobilization and credit services in rural areas not served by commercial and development banks. As at the time of the project, there were 121 rural banks in Ghana, spread across the 10 regions of Ghana, with 534 agencies and branches. About twenty of these rural banks are ranked among Ghana’s top 100 businesses. Ghana Club 100 (2010)

Since 1976, when they were first established, rural banks have improved their overall performance. The need to enhance this desirable trend led to the establishment of ARB Apex Bank Limited which started operations in July 2002 as the Apex Body for Rural banks in Ghana. The apex body seeks to provide rural bank capacity building programs and some supervisory role to further develop the performance and the image of the rural banks in the financial services industry in Ghana. Rural banks finance their activities mainly through deposits from clients’ borrowings from banks, equity and concessionary loans from government microfinance programs.

Project Rationale

The Ghana Rural Bank Computerization and Interconnectivity Project (GRBCIP) represented an important aspect of strengthening and improving the capacity of the rural banks to deliver financial services. It was also to allow the rural banks to offer and support new banking services, credit services and financial instruments. The project concentrated on building a technical infrastructure intended to open the door for a broad range of new financial services and capabilities that will directly benefit not only the small rural farmers but also most of the people of Ghana.

The project was intended to draw a large number of people currently not served or underserved into the financial system by automating and inter connecting private and community owned rural banks. 121 rural banks with 534 branches were expected to be

inter-connected through a Wide Area Network (WAN) and this was completed. The WAN was focused on moving cash electronically domestically and internally and making the rural banks part of the country's payment system. Simultaneous to the rolling out of the WAN, the project was expected to support the computerization and automation of the rural banks. This involved providing computers and accessories such as printers and UPS, banking software and training for all operational and technical staff of the all the rural banks:

Project Description

The objectives of the GRBCIP were threefold:

- (i) Continue and complete the computerization of rural banks in Ghana which was started under the Rural Financial Services Project
- (ii) Install a based V-SAT based Wide Area Network (WAN) to link all rural bank HQs and branches.
- (iii) Provide a reliable network for implementing electronic payments/funds transfer capabilities among the rural banks.

The GRBCIP had three (3) main components.

- a) The first component was the computerization and standardization of the banking operations in the rural banks. This component was expected to: (i) strengthen the competency of rural bank staff through change management, consistent and standardized procedures, automated banking operations and computer literacy training; (ii) installation of computer server hardware at the Data Centre located at Apex Bank and install computer workstations hardware and local area network (LAN) equipment in all the rural banks; (iii) install consistent and reliable banking software that supports electronic payments/transfer capabilities; and (iv) strengthen the technical skills of the Apex Bank technical team to enable them to manage and support the infrastructure.
- b) The second component dealt with the design and implementation of a wide area network (WAN) that inter-connected the rural banks. The network technology (VSAT) also provided voice communications and internet connectivity to the rural banks.
- c) The third component installed reliable secondary power source through standalone generators to each branch of all the rural banks.

Details of Various Project Tasks

a) Strengthening the Competency of Rural Bank Staff.

This task focused on the change management/mindset required to transform the current manual operations of the rural banks into a consistent and automated process. It involved data analysis and data conversion, computer literacy training and training in the use of computerized banking software.

b) Installation of Computer Hardware.

This task planned the design and construction of a state of the art Data Centre and a Disaster Recovery site, installation of servers, redundant storage, tape backup facility and corresponding uninterruptible power supplies which are all located at Apex Bank headquarters that run the standardized banking software. It also configured and installed the Local Area Network, workstations and printers at the rural banks.

c) Installation of Banking Software.

This task configured and installed the banking software on a central server and at the rural banks. It will also migrate the bank's data into eMerge. The installation and migration will be coordinated for a specific rural bank HQ and all of its branches/agencies.

d) Strengthening the Technical Skills of the Apex Bank Technical Team.

This task strengthened the technical skills required by the Apex Bank Technical Team through a training program. This training program was needed to build up institutional knowledge and expertise in the eMerge banking software in order to make up for the scarcity and high cost of the requisite technical expertise to implement and support the deployment of the software.

e) Design and Implementation of a Wide Area Network (WAN).

This component designed and implemented a wide area network that interconnected the rural banks with the Data Centre at Apex Bank and the branches of the rural banks. The telecom method recommended was pure VSAT (very small aperture terminal) satellite network utilizing KU band and the recommended network topology was the star topology. The VSAT network also provided voice communication interface to the rural banks.

f) Installation of a Reliable Secondary Power Source (Generator Sets).

This component installed standalone generators, if necessary, and based on the reliability and availability of electrical power in each rural bank. The capacity of the generators provided to each rural bank was scaled to the power requirements of the new computerized environment.

The key questions to be answered were:

- Did the project increase the interconnectedness of the rural banks?
- Did the project increase efficiency and reduce transaction cost for rural banks?
- Did the project draw additional people into the financial system?

4. METHODOLOGY

This paper uses the case study approach to explore the Governance structure that complemented the project management principles that ensured the successful implementation of the Ghana Rural Bank Computerization and Inter-Connectivity Project. It then makes a comparative analysis of the methods used in the above projects that were either abandoned or stalled.

As a qualitative research, the paper examines the governance principles adopted in the GRBCIP and relates it to the other projects that failed and shows that the governance principle that complemented the project management principle in the GRBCIP; if it had been adopted in the other projects, it could have saved those projects. The hypotheses that this paper seeks to test are the project management principles per se. They would not guarantee the successful implementation of IT projects if they were not combined with solid governance principles

Data Collection

In evaluating the effectiveness of the governance principles adopted in the GRBCIP, the following documents and reports were reviewed:

- a. The Implementing Entity Agreement signed between the Millennium Development Authority (MiDA) and the ARB Apex Bank. Being the apex body with supervisory role over the Rural banks, MiDA selected Apex Bank as the entity to supervise and coordinate the project
- b. Monthly reports of the Steering Committee of the project, including the monthly reports of the Project Management Supports Consultants i.e. KPMG who were the main project managers, quarterly reports of MiDA's Monitoring and Evaluation department, reports of the Technical Committee of the project, monthly reports of the Data Centre manager, monthly and quarterly reports of various contractors and consultants who undertook the actual implementation.
- c. Interviews with Branch managers of selected banks including selected customers. 20 branch managers were selected at random. However, it was restricted to 2 managers per region. The interview was either face to face or via telephone. It also included first hand observations of live banking hall transactions before and after the project.
- d. Report on projects that either failed, or stalled including the National Identification Project of Ghana, and the Electronic Patient Records Project of the UK National Health Service.

Data Analysis

The data that was gathered was used to analyse the governance structure of the Project Implementation Team including the reporting structure, the decision making process within the project team. The structure was compared with the structure found in the above mentioned projects. The Monitoring and Evaluation (M&E) reports of MiDA was also used to ascertain whether the project objective of was fulfilled through the quarterly tracking of pre-determined indicators such the total number of inter-bank of cheques and total value of deposits within the rural banking system as well as the

monthly total number of customers and customer transactions. The responses given by the branch managers in the interviews were tabulated and inferences and conclusions drawn.

5. RESULTS AND DISCUSSION

Governance Structure of the Project Implementation Team (PIT)

a) Project Steering Committee

The project had a well defined structure with clear reporting lines. At the helm of affairs was the Project Steering Committee (PSC) which had as its core mandate the development of policy guidelines. All major policy decisions were made at the PSC which had as its chairman, the managing director of ARB Apex Bank. The committee met once a month or when the occasion demands for an emergency meeting and submitted monthly reports to the project sponsors MiDA. The deputy managing director of ARB Apex Bank was the alternate chairman of the committee. Other members of the committee were:

- i. Head of Finance of ARB Apex Bank
- ii. Head of ICT of ARB Apex Bank
- iii. Two Representatives of the Association of Rural Banks
- iv. Representative of Bank of Ghana (Until his appointment, the current second deputy Governor of Bank of Ghana was the central bank's representative on the committee. He was then Head of Payment Systems)
- v. The Project Manager of the Project Management Support Consultants (PMSC) i.e. KPMG who were the Project Managers

There were 3 ex-officio members of the committee i.e. the Project Manager of MiDA in charge of the GRBCIP and his deputy and then the Project Director for the Project Management Support Consultants, the managers of the project.

b) Technical Sub-Committee of the Steering Committee

Next on the project team structure was the Technical Sub-committee of the Steering committee. Their core mandate was to advise the Steering Committee on all technical issues. The committee was responsible for the technical design of the project including the specifications for the construction of the Data centre, Wide Area Network and Local Area Network, specifications for PCs and accessories and the electric generators. Its chairman was the Head of Finance of Apex Bank, and the other members were the Head of IT of Apex Bank and his deputy, the Head of Banking Operations of Apex Bank, the Project Manager of PMSC and his deputy. The Project Manager for MiDA in charge of the GRBCIP and his deputy were ex-officio members. The Technical committee met at least twice in a month or when the occasion necessitated the holding of an emergency meeting. The project managers of the various consultants on the projects were invited at regular intervals to attend the meetings of the committee to clarify issues where necessary. The chairman of the committee presented a monthly report to the Steering Committee.

c) Role of Other Committees

There were 2 other committees that reported to the Technical Committee. They were the Technical Infrastructure Committee whose membership was the Project Manager of Data Centre, Wide Area Network, Local Area Network consultants, Computer Hardware and Generator sets suppliers. The Project Manager of the PMSC chaired that committee. The other committee was the Applications Committee comprising Project Managers for the banking software consultants and suppliers of other third party software such as Anti-Virus, and Server applications. This committee was chaired by the deputy Project Manager of the PMSC.

d) Role of the Project Management Support Consultants (PMSC)

Apart from being members of the Steering committee and other sub-committee, the core mandate of the PMSC was to advise MiDA on all technical and operational issues and most importantly, sign-off on all deliverables by the various consultant and contractors. Consequently they coordinated all the field work involving all the various consultants, ensuring that all supplies and installations of equipment and software at Rural bank all sites including the Data Centre were according to specifications. MiDA only paid consultants for deliverables after the PMSC had certified that the work had been actually completed satisfactorily and according to specifications. This is a far cry from the Electronic Patient Record Project of the UK, where the parliamentary selected committee on health report stated that officials were "unable to show what has been achieved for the £2.7bn spent to date on care records systems", adding that taxpayers were "clearly overpaying BT, one of the project consultants said. The PMSC also liaised with Apex Bank and coordinated all technical and operational training and Change management programmes for the Rural banks.

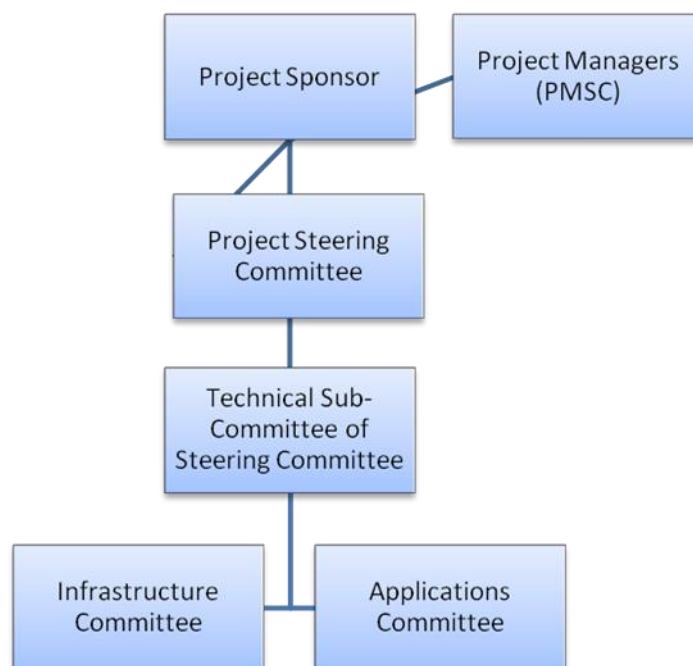
Benefits of the PIT Structure

From the structure it is very clear and apparent that the project was bound to succeed. The PIT was structured and aligned to the strategic vision of the project. One advantage of the structure was that it made it possible for decision to be made quickly. The information loop was such that information flowed throughout the project team very easily despite the massive nature of the project. Risks identified were quickly dealt with. With the Project Manager of MiDA and his deputy being ex-officio members of both the Steering Committee and the Technical sub-committee, information flow to the Project sponsors was instant despite the monthly reports of the Steering Committee

The structure allowed for the Rural Banks to be part of all decisions made on the project because they had reps on the Steering committee. What is more, the Technical Committee and the PMSC made presentations at all Rural bank managers conference and workshops on the project progress and took feedback and suggestions. Representatives of the rural banks ably assisted by Apex Bank staff were the main participants in the User Requirement Analysis for the customization of the banking software and also the User Acceptance Test and coordinated by the PMSC. This is contrary to what happened in the UK Electronic Patient Record Project where the Parliamentary sub-committee report stated that officials of the Department for Health did not consult with health professionals at the start of the project. Direct providers of care (physicians, nurses, dentists and other health care professionals) will remain the users of the highest priority in design consideration. This is because by designing any system, direct users need to be involved (Dick and Steen 1991). The same goes for the National Identification Project in Ghana where there was no Requirement Analysis and User Acceptance Test involving the citizenry.

So it can be said that the governance structure of the GRBCIP allowed for an all inclusive and holistic approach to the project. All stakeholders from the sponsors MiDA, to partners such as Apex Bank and Bank of Ghana, and the beneficiary community were all involved at every stage of the project and were all kept in the information loop.

Organizational Chart of the Project Implementation Team



Source: PMSC Inception Report

Achieving the Objectives of the Projects

The successful completion of a project is not an end in itself. What is more important are the benefits that would accrue from the completed projects to the intended beneficiaries. Some of the benefits can be gleaned from the MiDA Monitoring and Evaluation quarterly reports which tracked the following indicators:

a) **The total number of inter-bank transactions.** This is defined as the number of cheques received by rural banks plus number of remittances received by these banks. The financial services intervention is at two levels i.e. Bank of Ghana (for all clearing banks in the country, that is, mainly commercial banks and the Apex Bank acting as a clearing bank for all the rural banks), and Rural Banks (nationwide). Inter-bank transaction is a record of business conducted among banks on behalf of their customers as well as on their own behalf. The classification of the inter-bank transactions are as follows: (i) Total number of cheques received from clearing (ii) Total number of cheques sent to clearing (iii) Total number Apex Link Transfer transactions. This is a money transfer system between Apex Bank and the Rural banks (iv) Others are a total number of money transfer transactions such as Western Union which runs on the back of the internet services provided by the project. This indicator shows the importance of the wide Area network. Through the network, the rural banks are now able to clear customers' cheques through the

Cheque Codeline Clearing system which is managed by the Ghana Inter Payment and Settlement Systems (GhIPSS) within 3 working days. This certainly would bring joy to their customers. Hitherto, clearing of cheques by rural banks could take up to 21 working days.

Table 1 shows that the end of the compact target of inter-bank transactions of 1,106,925 was achieved and it represents an increase of 114% of the baseline figure of 516,565.

b) **Amount of Account Deposits in the Rural Banks.** This is defined as the amount of total deposits in Rural Banks nationwide. The deposits are classified as (i) Fixed Deposits (ii) Savings Account (iii) Current Account (iv) Susu Account. This indicator is expected to improve with the introduction of the automation of the banks because their customer base is expected to increase due to improved services.

Table 1 shows that the end of the compact target of US\$1,117,776,372 was achieved representing a whopping 294% increase from the baseline figure of US\$283, 421,932. The Year 3 figure of US\$745,184,248 also shows a 163% increase, while the Year 4 figure of US\$931,480,310 shows an increase of 228%.

c) **Number of Banks Connected to the WAN.** This is defined as the number banks connected to the WAN by way of installation of indoor and outdoor VSAT equipment and activating the connection to the central hub and to the Data Centre. The baseline figure was zero. However, by Year 3, 21 banks had been connected, representing 17.3% of the baseline. By Year 4 the number of banks connected to the WAN had increased to 91 representing 71.2% of the baseline figure. The end of the compact figure of 121 was achieved.

d) **Number of Banks Automated with Banking Software:** This is defined as the number of banks that are connected to the banking software which is located on the central server at the Data Centre. The baseline and annual targets were the same as that of the number of banks connected to the WAN

Other Achievements

In an interview with selected branch managers of the rural banks, it was revealed that the turnaround time for processing a cheque for payment by a teller reduced from an average of between 10-15 minutes on a very busy day to between 2-5 minutes. This has led to new customers walking through the doors of the banks to open new accounts and transact business with rural banks. Again problems associated with manual computation of bank transactions were eliminated because all processes are now automated.

Comparative Analysis of the GRBCIP and other Failed Projects

From the above, it can be seen that all targets set by the GRBCIP were achieved. This means that the project objectives were met and thus was successfully implemented. This can be attributed in part to the IT governance principles that were very evident throughout the duration of the project.

This is in sharp contrast to projects like the Ghana National Identification Project which is yet to be completed after more than 10 years of implementation. In effect the project is yet to achieve its objectives as compared to the GRBCIP. The same

can be said of UK's Electronic Patient Record Project which is also behind schedule, with a massive cost overrun. What is more, there is no end in sight for the 2 projects.

Table 1: MiDA M&E Indicator Tracking

Indicator	Indicator Level	Indicator Type	Unit of Measure	Base-line	Annual Targets					End of eCompact Target
					Year1 Feb 07- Mar 08	Year 2 Apr0 8- Mar 09	Year 3 Apr 09- Mar 10	Year 4 Apr10- Mar 11	Year 5 Mar 11- Feb 12	Year 1-
Amount of AccountDeposit in Rural Banks	Outcome	Level	US\$	283,421,932			745,184,248	931,480,310	1,117,776,372	1,117,7
Number of Inter-bank transactions	Output	Cumulative	Number	516,565				983,993	1,106,925	1,106,92
Number of Banks Connected to the WAN	Output	Cumulative	Number	0			21	91	121	121
Number of Banks Automated with Banking Software	Output	Cumulative	Number	0			21	91	121	121

6. CONCLUSION AND RECOMMENDATIONS

This study shows that for an IT project to be completed on schedule, within budget and according to specification, there should be a strong presence of an effective governance structure. Merely applying project management principles would not accomplish the task. For example a PRINCE2 principle recommends the development of a Project Charter which is a statement of the scope, objectives and participants in a project. And it provides a preliminary delineation of roles and responsibilities, outlines the project objectives, identifies the main stakeholders, and defines the authority of the project manager. However, if the governance structure is not right, information flow within the team would be very limited. Whether there is a change of personnel of a project team or a change of government, a solid presence of a governance structure would definitely see the successful completion of a project.

A clear governance structure, with well defined responsibilities and reporting lines is a pre-requisite for the successful implementation of a project. One important fact that must be noted is that individual members of project teams should be removed from their normal schedules and attached permanently to teams. However this situation can be circumvented only if a proper governance structure ensures that the individual or group of individuals allocate a specific time frame to the project as it happened to staff of ARB Apex Bank who were drafted into the project team. The allocation of specific time frame can be adhered to if the executive is fully involved in the process and

approves this arrangement. Without executive involvement and approval it would be impossible to achieve this feat.

Finally, without the executive being fully involved in every aspect of a project, challenges are bound to exist especially with regards to funding. MiDA being the sponsors of the GRBCIP were fully involved in every aspect of the project and were therefore prepared to release extra funding where it was needed. Ghana's National Identification Project consistently failed since its inception in 1973 mainly due to funding. Perhaps, lack of executive support and commitment to the project could be the cause.

It must, however, be noted that there are similarities between the IT Governance methodologies that were applied in the case of the Ghana Rural Bank Computerization Project and methodologies applied in other countries. The methodology applied in the GRBCIP should not be seen as been peculiar to only Ghana, as it can be successfully applied in different enterprises either public or private as well as in other countries worldwide.

7. LIMITATIONS OF STUDY

One limitation of the study was the inability to interview members of the Steering Committee of the Project as well as officials of the Millennium Development Authority to obtain their views on the impact of the structure and design of the project team. Any future research should consider interviews with these officials.

There is however scope for future research. This has to do with any role of IT Corporate Governance on Post Project Implementation.

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