

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC887

Project Name	GH eTransform Ghana (P144140)
Region	AFRICA
Country	Ghana
Sector(s)	General information and communications sector (100%)
Theme(s)	e-Government (50%), e-Services (25%), Managing for development results (25%)
Lending Instrument	Specific Investment Loan
Project ID	P144140
Borrower(s)	Ministry of Finance and Economic Planning
Implementing Agency	Ministry of Communication
Environmental Category	C-Not Required
Date PID Prepared/ Updated	26-Mar-2013
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Concept Review Decision	Track I - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

1. Ghana is one of the most stable countries in Africa, having earned a reputation for peaceful transfer of power for more than a decade. The recent election held in December 2012 was considered very peaceful by international observations, albeit contested by the opposition party in the country's court system.

2. The economy continues to perform well, with GDP of \$35.1 billion, and growth rates above the average for the Africa region, at 8.0%, 14.4% and 7%, in 2010, 2011 and 2012 respectively. The combined high growth and income per capita of \$1,410 have resulted in the recent classification of Ghana as a lower middle-income country.

3. Economic growth has been largely fueled by strong cocoa production, growth of the construction and transport sectors, increased gold production, and the commercialization of oil. The

poverty rate has improved significantly as a result of this growth, decreasing from 52% to 29% of the population between 1992 and 2006. Economic performance is however dampened by the large fiscal deficit which reached about 11.5% of GDP in 2012, signaling a relaxation of the prudent fiscal consolidation process which started since 2009. Inflation is currently around 9.2 %, having eased in recent months on the back of declining food price inflation. The new Government's commitment to strengthen fiscal reforms, combined with increased oil and gas production and exports are expected to further improve the economic performance.

4. The government of Ghana continues to make progress in engaging with the private sector. The recent approval of the National Policy on Public Private Partnerships, and the establishment of an office under the Ministry of Finance to manage PPP transactions in Ghana continue to improve the enabling environment for partnerships between government and the private sector on key infrastructure projects. Several PPP projects in the Customs, Revenue, and Water sectors are already in place, yielding positive results and demonstrating the potential benefits of such partnerships.

5. The government's efforts to improve education and health have also contributed to the improved well-being of its citizens. Over the past eight years, there has been some expansion of educational infrastructure leading to improved enrollment and completion rate of basic education (including lower secondary school) as well as upper secondary level. Between 2005 and 2012 for example, gross enrollment at upper secondary increased from 25 to 37 percent and enrollments in TVET more than doubled from 31,466 to 79,986. With the attainment of middle income status, there is the pressure to expand secondary and TVET education even more and this has become a key priority for Ghana. The Ghana Skills and Technology Development Project is also providing support to improve demand-driven skills development and to increase adoption of new technologies in selected economic sectors via a skills development fund. Similar efforts are being made in the health sector where the government has recognized the importance and contribution that ICT can make to improve access to quality health care. The government is currently implementing a number of ICT initiatives aimed at addressing various needs in the health sector. The Ghana Health Service has developed a strategy document which highlights some key initiations which can be scaled up and/or coordinated in a more effective way to bridge the e-health gap. Some of these initiatives are aimed at improving the health information management system. Others are focusing on commodities and logistics management, while others focus on improving the messaging processes. The strategy/Health Service Enterprise Architecture document also seeks to define the structure and organization that will govern the deployment of IT solutions in health service delivery.

Sectoral and Institutional Context

6. Ghana has been a pioneer in African telecommunications sector reform, leading the region on market liberalization and deregulation, with six competing operators, including regional heavyweights such as MTN, Vodafone, Airtel, Millicom (Tigo) and Glo. It has also become a key hub for submarine cables linking the north and south of Africa to Europe and the rest of the world, resulting in impressive broadband speeds (leading the continent) and reduced prices.

7. The improvement in communications infrastructure has allowed the eGhana Project (World Bank financed) to leverage these successes. The project is supporting the government by introducing innovative applications to transform services of key government agencies including revenue and immigration. The improved broadband access is also helping the government to develop an IT/IT Enabled Services Industry to diversify the country's revenue sources, and develop

the enabling legislation to ensure a competitive environment for telecommunications and IT businesses. A number of International Business Process Outsourcing companies have located in Ghana to take advantage of the competitive costs and enabling environment. Some 40 small and medium local companies have also formed an Association (Ghana Association of Software and IT companies) to capitalize on the IT/IT enabled business.

8. Despite these successes, Ghanaians have not yet fully adopted ICT in their daily lives or in business operations. While over 80% of the population has access to mobile phones, these are used primarily for voice communications. Less than 10% of the population use internet, although access to the Internet via mobile phone is getting easier as both device prices and access charges are falling. The recent ICT for Transformation Report prepared under a World Bank Technical Assistance concludes that Ghana has the potential to develop a knowledge-based economy and become a strategic destination for ICT-based business processes in the region. To achieve this, however, the country needs to develop a critical mass of users of e-enabled services by promoting: i) local content, services and applications (including for entertainment, agriculture, health, education, banking, electronic identification) that are interesting, relevant and affordable to attract enough users (either individual or corporate) to pay for or use these services; and ii) m-payment systems that offer micro-transactions to facilitate easy payment for services done at scale. Ghana's ability to create this critical mass of users is even more challenging, as a core part of the population beyond the urban areas, is still unable to capitalize on ICT's potential to provide essential services such as healthcare, education, or financial services. The mobile and internet platforms could provide unique opportunities for scaling up relevant ICT services to these communities. The opportunity exists for eTransform Ghana project to apply ICT to key levers of Ghana's economic and social development, support applications that reach citizens nationwide, improve the efficiency of service delivery while creating jobs and stimulating inclusive growth.

9. The recent country experience in automating customs, revenue and financial management systems, and the subsequent impact of improved revenue generation, efficient services and improving public perception, has demonstrated the potential impact of smarter use of ICT to transform and extend the reach of public services. The rich experiences has also exposed additional gaps that need to be addressed to ensure a well-integrated and digitized government, with trusted and readily available data, and trusted identification and authentication systems to ensure better targeting of services to citizens.

Relationship to CAS

10. In line with the Africa Strategy, the current Ghana CPS focuses on the following three pillars: (1) Competitiveness and employment, (2) Vulnerability and resilience, and (3) Governance and public sector capacity. The eTransform Project is aligned with the common strategic themes identified in the CPS – higher growth and economic opportunities for the poor and job creation, efficiently and effectively managed public sector, improved health management and service delivery to the poor and vulnerable, delivery of quality education and TVET system to create larger portion of middle level skilled workers, and efficient and transparent management of public resources. The eTransform project will improve the reach and efficiency of public and private service delivery through smart use of ICT.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

11. The Project Development objective of eTransform Ghana is to improve efficiency and coverage of government services through ICT, and enhance ICT-enabled entrepreneurship.

12. The interventions are expected to lead to more efficient and transparent targeting and use of limited public resources. They would improve the delivery of public and private sector services, especially in rural and underserved areas. They would promote trust in payment systems, and enhance confidence in electronic commerce and financial transactions. They would also lead to diversified employment opportunities, and a more integrated and coordinated public sector that is able to make better policies and do more to respond to citizens' needs using trusted and open data.

Key Results (From PCN)

- 1) Increased rate of acceptance of national ID by financial institutions for business transactions
- 2) Increased number of digitized government records
- 3) Increased use of ICT for training of teachers and students with a particular emphasis on rural women and youth
- 4) Increased volume of communication between selected rural health centers and urban hospitals using ICT
- 5) Reductions in number of days for Registering Business online
- 6) Increased number of Start-up projects, particularly in the Ict-enabled sector

III. Preliminary Description

Concept Description

The proposed project is expected to be structured along four major components to reflect (a) government's efforts to develop more coherent and robust foundation for e-government (b) scaled use of ICT to transform priority areas of development; (c) enabling environment conducive to e-government applications; and (d) Project management support. Details on components are given below:

Component 1 – Common services and Infrastructure for Electronic Government - This component will develop shared systems, processes and information for use across government, and facilitate a trusted exchange for government-to-citizen (G2C) services and business-to-citizen (B2C) services. Specific activities will include:

- i) Electronic Repository of Citizen Identity and Passport Information (e-ID and ePassport) – The component will support the development of a consolidated system for national electronic identity (e-ID) and an electronic registry for passport information (e-Passport).

National e-ID systems help establish the identity of citizens and offer a more secure, robust mechanism for government and businesses to engage with citizens. With e-ID, government can target beneficiaries and more efficiently offer services to citizens, especially the poor, using electronic delivery channels. Businesses can authenticate customer identity, and develop and offer new products and services through internet or mobile phones. Citizens can gain access to a larger universe of online applications and services that can be used more securely in a variety of industries and public services. e-ID can have potential linkages with downstream applications to support a host of public and private services, including travel documents (such as passports), driver's license, taxation, voter registration, financial accounts, health records, immunization records, etc.

The National Identification Authority (NIA) of Ghana is responsible for developing and managing a comprehensive National ID system and issuing cards to Ghanaian citizens. To date, they have had some minimal success, resulting in the proliferation of different ID systems under multiple institutional structures. The multiplicity of ID systems is making it challenging for government agencies, businesses and financial institutions to properly authenticate citizens and their personnel data. This, in turn is contributing to the limited and high cost of doing electronic business in Ghana. The inefficient ID system is also challenging the Government's ability to offer targeted services and generate revenue. The Government is requesting support from the World Bank to develop a more robust electronic identification system which would serve as the primary form of identity for all Ghanaians. The e-ID system would host linkages with and be interoperable with the disparate ID systems that currently exist in Ghana. The development of the e-ID system would entail an upgrade of the operational procedures used in identification, both within NIA and in downstream agencies looking to authenticate citizens for the delivery of public or private services. Project funds will support institutional strengthening and capacity building for developing, operating and maintaining a state-of-the-art e-ID system. Project funds will also support an identity management system with public key infrastructure (such as biometrics for authenticating citizens at e-ID service centers) to enable authentication of online or mobile users. The project will leverage the work of related agencies and programs, such the National Health Insurance (NHIS), Electoral Commission, LEAP, etc.

To link e-ID with the issuance of passports, the Government is also requesting support for a new ePassport system to improve the efficiency and security of people traffic at the country's borders. The current system for passport continues to be analogue, and lacks the requisite digital and security features to support globally interoperable applications. The system does not conform to the standards of International Civil Aviation Organization (ICAO). The project will therefore support the use of advanced passports such as a chip-embedded passport system which can facilitate biometric comparison at domestic and international borders and improve security and trust of Ghanaian identification systems. The ICAO requires all countries to have such biometric features by 2015.

ii) Digitized Government Data – Digitizing data is often a first step to making information-based services online, and, where applicable, to launch open data. Automated processes and information systems may be incomplete when vast archives continue to be left in paper form, and the citizen is unable to access data electronically at their convenience. Government has requested the support of World Bank to digitize information from selected government agencies such as Births and Deaths registry, Registrar General's Department (RGD), and Ghana Revenue Authority. Digitized information can go a long way to improve interoperability across government agencies (such as between Births and Deaths registry and e-ID system in order to verify the identity of Ghanaians), upgrade workflow, and achieve business continuity in government agencies by securely retaining important electronic records. Project funds will support scanning, indexing and management of paper records into searchable and re-usable electronic databases. The digitization program is expected to be extended to medical and educational records based on need. The work will build on earlier support from the Rockefeller Foundation which trained and employed disadvantaged youth to digitize the first batch of RGD records through an Impact Sourcing Program. Ten regional innovation centers, built under eGhana project, may serve as possible venues for carrying out or administering the digitization work. Partnerships with business process outsourcing centers may be explored to provide additional business opportunities for small and medium IT companies. There is also opportunity to use this process to create opportunities for a

large number of Ghanaian youth to get connected to platforms like Samasource, oDesk, CloudFactory etc. which might provide them with enduring opportunities for income and skills development through Microwork.

iii) **Electronic Service Delivery Platform for Mobile, Online and Payment Applications:** The project will support the development of online and mobile applications at scale for selected government services so that citizens nationwide can apply for services online or via mobile phones, check status of their accounts or applications, and pay for services electronically. Project will build on pilot e-service applications conducted under current eGhana project. Pilot e-services have included: (a) content management application for hosted services on online portals; (b) payment gateway to enable electronic payments for online services; (c) electronic form application to collect citizen information electronically; and (d) application to electronically manage documents. Several government agencies including the following have shown an interest to deliver electronic services: Ministry of Food and Agriculture, Ministry of Employment and Labor Relations, Ministry of Water Resources, Works and Housing, Ministry of Local Government and Rural Development, Ministry of Tourism, Ghana News Agency, Ghana Investment Promotion Center, SSNIT, National Health Authority and Public Service Commission.

Component 2 – Transformational Applications (US\$25 million) – This component will be aimed at transforming the efficiency and outreach of service delivery in selected government agencies and sectors. State of the art technology relevant to Ghana will be used to simplify administrative and business processes within and between agencies. The component will focus on improving the outcomes of the priority sectors of Health and Education, but will also allocate funds to complete e-government applications for 3 agencies and departments for which the procurement packages have been completed under the eGhana Project. Details of this component are as follows:

iv) **Improvements in Health and Education service delivery using ICT –** Government considers investments in and impact of these two sectors so closely intertwined as drivers of poverty alleviation and critical to achieving the Millennium Development Goals that they must be considered together.

In the area of health, the project will focus on: i) improving management and tracking of health information at major hospitals, polyclinics and health service providers in Ghana using management information systems, mobile-based feedback channels and mobile health applications; ii) extending outreach of medical services to rural and peri-urban areas using low-cost technologies, mobile-based remote tracking and improved training of healthcare professionals; iii) improving communications between rural and urban healthcare professionals, and collaboration between Ghana's Medical Professionals and counterparts abroad; and iv) providing basic information on health information in local languages to citizens via the web/mobile etc. in order to help improve basic health, hygiene, reproductive health etc. in cooperation with local NGOs already working on mHealth and neo-natal services. ICT can help address challenges in the health sector including in the following ways: (a) health information systems and electronic health records; (b) disease and emergency tracking; (c) efficient supply of pharmaceutical and critical life-saving drugs; (d) point of care diagnostics and remote patient monitoring; (e) remote data collection and surveillance; (f) public health awareness and education using mobile or email broadcast; (g) health behavior change using ICT-enabled public education campaign; (h) nutrition management using online and mobile applications; (i) emergency medical services with national calling number for medical emergencies

and ambulance dispatch; and (j) telemedicine and ICT-equipped community workers.

Under education, the objective is to upgrade the quality of teachers and improve educational content for students and teachers. The project will therefore: i) leverage the Tertiary Institutions Connectivity Program currently being developed under eGhana to create a National Research and Education Network (NREN) to provide collaborative learning opportunities (with national and international players), develop possible educational content, and improve educational, technical and medical research; ii) use low-cost and climate-friendly technologies to improve teacher training and student learning; and iii) increase access to distance education opportunities and open education resources.

v) Improvements in National Procurement, Parliamentary and Judicial Processes using ICT

Under the eGhana Project, extensive preparatory work has been completed for the launch of selected e-government applications to improve National Procurement, Parliamentary and Judicial processes. The e-Procurement, e-Parliament and e-justice Projects are respectively focusing at increasing transparency, coordination and competition in the public procurement process; improving the transparency, accessibility, accountability, and effectiveness in the Parliamentary processes; and improving the efficiency of the country's legal system. Under the eTransform project, support will be given to develop electronic applications for improving related operating processes; increase the transparency and reliability of government activities; and ensure citizen participation in the governance processes.

Component 3 Enabling Environment for Digital Ghana – policies and regulations to promote electronic delivery of services using shared platforms, transformational applications, and a transparent, secure and open environment. These include:

- i) policies and regulations for electronic commerce and electronically managing citizen data for identification, passports, health, education, immunization and related applications;
- ii) policies and activities for fostering entrepreneurship development in key technology areas e.g. climate change, smart cities, and mobile services. Opportunity to collaborate with private sector on an IdeaFAB that could be located in the Kofi Annan Center of Excellence, GIMPA, or the Kwame Nkrumah University of Science and Technology or some similar institution for identifying future opportunities in emerging technologies and innovation and leveraging digital platforms.
- iii) policies and regulations for cybersecurity and privacy of data, transactions, signatures contracts and related provisions for electronic applications and services, This sub-component could include a detailed study on safeguarding digital infrastructures for Ghana which could lead to recommendations on policies, laws, regulations, institutions, partnerships and investments that would be needed for ensuring a safe cyber security environment in Ghana. This would have important implications for future investment flows into the country.
- iv) provide capacity building support for innovation hubs, including iHubs and Living Labs, in collaboration with infoDev, to promote ICT-enabled entrepreneurship and innovation in Ghana;
- v) provide institutional strengthening and capacity building support for government agencies involved in the ICT applications under eTransform project; and
- vi) support policies and regulations for open data and innovative analytics methods (such as big data analytics) to gather government data, make information public, promote engagements with the private sector, civil society and academia; and develop government capacity to gain insights and intelligence from public data. Government of Ghana, through NITA, has initiated a portal with

some 100 datasets and an open data application. More public datasets are expected with the proliferation of new e-government applications and electronic service delivery. NITA expects to establish a central platform for open data. Project resources will support initiatives including (a) availability of additional datasets for open data ; (b) upgrade of any shared facilities such as portal and related applications; and (c) institutional capacity building.

Component 4 – Project Management Support

The MoC will serve as the Project executing agency and will have overall responsibility for the management of the project. The MoC has had extensive experience in implementing the eGhana through a dedicated Project Implementation Unit, complemented by core group of consultants from the National IT Agency (NITA) and the ITeS Secretariat who have managed the day-to-day implementation and supervision of the e-Government and ITES components as well the financial management, procurement, disbursement, monitoring and evaluation, progress reporting and communication functions. It is expected that the new project will leverage the expertise of some of these experts. The World Bank will work with the Ministry to assess the requisite expertise for the eTransform project

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01			x
Natural Habitats OP/BP 4.04			x
Forests OP/BP 4.36			x
Pest Management OP 4.09			x
Physical Cultural Resources OP/BP 4.11		x	
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12		x	
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60			x

V. Financing (in USD Million)

Total Project Cost:	78.00	Total Bank Financing:	78.00
Total Cofinancing:		Financing Gap:	0.00
Financing Source	Amount		
BORROWER/RECIPIENT	0.00		
International Development Association (IDA)	78.00		
Total	78.00		

VI. Contact point

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