Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 18-Apr-2020 | Report No: PIDISDSA28820

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Ghana	P170910	eTransform Ghana - Additional Financing	P144140

Parent Project Name	Region	Estimated Appraisal Date	Estimated Board Date
GH eTransform Ghana	AFRICA	17-May-2019	02-Jul-2020

Practice Area (Lead)	Financing Instrument	Borrower(s)	Implementing Agency
Digital Development	Investment Project Financing	Ministry of Finance	Ministry of Communications

Proposed Development Objective(s) Parent

The Project Development Objective of the eTransform Project is to improve the efficiency and coverage of government service delivery using ICT.

Components

Component One - Enabling Environment for Electronic Government and Business
Component Two - Support for Digitization and Connectivity
Component Three - Scale up of Applications to Improve Service Delivery in Priority Sectors
Component Four - Project Management Support
Contingency and provision for exchange rate losses

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	75.00
Total Financing	75.00
of which IBRD/IDA	75.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	75.00

IDA Credit	75.00

Environmental Assessment Category

C-Not Required

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **Ghana is a middle-income country which has performed well in the last two decades, with economic growth slowing in recent years.** Between 2005 and 2012, the Ghanaian economy grew an impressive 7.7 percent per year on average, with an annual job creation rate of 4.0 percent, meaning that every 1 percent increase in economic growth was associated with 0.5 percent increase in job growth. Economic growth has largely been driven by commodity exports (cocoa and gold, for which prices more than tripled between 2000 and 2010) and the start of commercial oil production in 2011. However, GDP growth rates slowed between 2012 and 2016, (with a low of 1.6 percent in 2015), before picking-up again to 8.1 percent in 2017, and falling again to 6.1 percent in 2019. In 2020, it is expected that growth rates will be lower, at around 2.5 percent, and may even turn negative as a result of the Coronavirus pandemic (COVID-19), which arrived in Ghana in March 2020 and, by the end of that month, had led to a partial lockdown of Accra and Kumasi,

2. **Dependence on commodities results in volatility and non-inclusive growth.** Ghana's commodity driven growth has increased economic volatility with cyclic volatility costing Ghana about 0.3 percent of growth per year during 2000–2015, and as much as 0.7 percent per year in the early 2010s.[1] Moreover, while growth rates are still high, their impact on poverty has dramatically slowed since 2012. As emphasized by the recent SCD for the country, Ghana's largest fall in poverty, 2 percent a year, was experienced during 1991–1998. As growth accelerated, however, the annual reduction in poverty rate fell to 1.4 percent in 1998–2005 and 1.1 percent in 2005–2012. Since 2012, the poverty rate declined more slowly, the incidence of extreme poverty actually increased slightly to 13.4 percent in 2019 (using the international poverty line of US$1.9 per cen in purchasing power parities)[2]. This may reflect the declining contribution of agriculture, in which the majority of poor households are engaged, the limited job opportunities for higher productivity in the services sector, and a largely capital-intensive industrial development in commodity focused sectors. Coronavirus is expected to lead to a rise in poverty levels on 2020, associated with higher unemployment and underemployment.

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[1] Ghana SCD 2018.
[2] World Bank. April 2020.

3. **Ghana needs to invest more, diversify, and increase productivity – in short, accelerate *economic transformation*, if it is to achieve higher and inclusive growth.** The "lack of structural transformation and economic diversification" are the key challenges to achieve inclusive development for commodity-dependent developing countries such as Ghana[3]. The oil and gas sector is expected to continue to be the main driver of growth, with a recovery of commodity prices in the medium term further boosting exports earnings. However, at 16.7 percent of GDP during 2014–2016, Ghana's overall gross capital formation is low compared with its structural and aspirational peers and productivity growth remains limited. According to the World Bank Long-Term Growth Model, even if investment levels reached 25–30 percent of GDP—moderately higher than the historical average of 20–25 percent—the predicted per capita growth would not go much beyond the 1.7–2.5 percent range, barely keeping up with the projected 2.2 percent population growth. This suggests that raising overall productivity, in addition to higher investments in non-traditional (non-extractive) sectors, will be critical to ensuring that growth is inclusive and achieves poverty reduction.

4. **The current government's strategy is to transform the Ghanaian economy to achieve inclusive and sustainable growth, with the private sector as the main driver.** In the words of Ghana's President, the aim is to "build the most business-friendly economy in Africa" and foster the competitiveness of Ghanaian firms. To achieve this, the government's agenda includes: reforming the energy sector; improving trade facilitation and the business environment; investing in infrastructure; and diversifying beyond primary products (hydrocarbons, gold and cocoa).

Sectoral and Institutional Context

5. **Ghana has demonstrated significant progress in enabling access to digital technology to stimulate growth across multiple sectors of the economy.** A combination of factors including a competitive market structure, an increase in private sector investment in communications infrastructure, and a reduction in telecommunications prices, at the wholesale level, has been instrumental in fueling innovation and driving economic growth**.** Liberal policies and strategic initiatives for private sector participation have paved the way for the creation of a highly competitive mobile and internet market in Ghana. The government has undertaken a series of policy and infrastructure-related reforms in recent years. The National Telecom Policy; the Data Protection Act; the Electronic Transaction Act; the Electronic Communications Act; implementation of a fiber optic bone are some of the initiatives which should put Ghana on a more solid footing for sustained economic growth, improved service delivery, and effective policy-making to fuel a digital economy.

6. **Available data on Ghana are not consistent but estimates indicate that the sector currently contributes around 5 percent of GDP and some 7 percent of Government revenues**[4]. Strong competition has resulted in near ubiquitous mobile coverage and a high mobile penetration rate of 130 SIM cards per 100 inhabitants, compared to an average of 80 in the rest of Africa. The country's internet penetration of about 36 percent is notable, albeit only slightly above the Africa regional average. Although less advanced than in East Africa, mobile money usage is growing and uses are expanding from pre-paid utility services to purchases of goods and cash transfers to rural communities. Digital technologies are driving innovation, creating jobs, and transforming businesses in Ghana. Apart from the direct contribution of the ICT sector to Ghana's GDP, there are several indirect contributions in terms of demand for ancillary and support services and industries. As the

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[3] UNCTAD Commodity Markets, Economic Growth and Development Report 2017
[4] GSMA

ICT sector generates demand in, for example, real estate, hardware, security, transportation, telecom, hospitality industry, the actual contribution to GDP is estimated to be much higher.

7. **Ghana's proactive policy and regulatory interventions have been key to the relative success of the reforms and progress made to date.** Several policies have been put in place to strengthen competition[5] and establish foundational legal framework. Key legislation has been passed to strengthen the National Communications Authority (NCA) and other regulatory institutions and safeguard electronic communications and transactions. Ghana Investment Funds for Electronic Communications (GIFEC) provides universal service and access to underserved and rural communities, and the National Information Technology Act (NITA) is mandated to create an enabling environment for effective deployment and use of ICT by all public-sector institutions/organisations.

8. **At the international level, Ghana has one of the most competitive markets for international capacity in the region**. There are five submarine cable landings in the country providing over 18 Terabits per second (Tbit/s) of capacity. At the national level, five[6] regional mobile operators, (MTN, Vodafone, Airtel/Tigo, Expresso and Glo) continue to make significant investments in terrestrial backbone and last mile infrastructure. Improved international connectivity, which has been promoted through the eTransform project, has resulted in a drop-in wholesale bandwidth prices to below one-fifth of their previous level, and relatively cheaper retail prices to end-users. This is in turn fueling innovation and investment in the broader ICT sector, including in IT and IT-enabled Services (ITeS).

C. Proposed Development Objective(s)

Original PDO
9. The Project Development Objective of the eTransform Project is to improve the efficiency and coverage of government service delivery using ICT.

Current PDO
10. The Project Development Objective of the eTransform Project is to improve the efficiency and coverage of government service delivery using ICT. (No change).

Key Results
11. The acceleration of project disbursement since the January 2018 restructuring has contributed to an improvement in progress toward results achievement. Overall, the project is progressing well and fulfils the eligibility criteria for an additional financing. a number of activities under the original project's sub-components have recently been completed:
    - The eProcurement system (sub-component 3.7) went live on 30 April 2019. It is estimated that it will lead to savings of up to US$100m for the Government through more efficient procurement;
    - The eJustice system (sub-component 3.6) which promotes paperless courts, went live in March 2019 and has already processed more than 43,000 cases digitally;

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[5] ICT4D Policy (2003), the pro-investment National Telecom Policy (2004) and National Broadband Policy (2012)

[6] Reduction from 6 to 5 players to reflect the recent merger of Airtel and Tigo

- The project is also supporting a paperless Parliament (sub-component 3.5), which has gone live in March 2020, and the more efficient processing of entries and exits at the airport and issue of visas (sub-component 3.8);
- The international bandwidth available to Government (sub-component 3.3) has increased from 2.5 to 10 Gbit/s under the project, with a further 10 Gbit/s supplied to the higher education sector, and will increase further under the AF;
- Three tech hubs have been funded under the project (sub-component 1,4), two in Accra and one in Kumasi, and in the first year of operation they have already provided training to over 2,000 people, with an even mix between men and women.

D. Project Description

12. The eTransform Ghana project (P144140) is an IPF supported by a US$97 million IDA financing. The Project Development Objective (PDO) is *to improve the efficiency and coverage of government service delivery using Information Communication Technologies (ICT)*. The main client is the Ministry of Communications (MoC), where the project implementation unit (PIU) is located. There are around a dozen beneficiary agencies or institutions, notably the National Information Technology Agency (NITA), the Ministry of Justice, the Ghana Immigration Services (GIS) and the Parliament.

13. Project implementation started in January 2015 and initially proceeded well until disbursement slowed because of uncertainty over the implementation of a national digital ID program. Ultimately, the Government of Ghana (GoG) decided to fund this activity from its own resources and requested a restructuring of the project in mid-2017. The restructuring was completed in January 2018, without changing the PDO, and saw the digital ID component dropped while other activities were added or scaled up. In particular, the digitization and internet connectivity activities, which were previously dispersed throughout the project, were regrouped in a revised component 2. Newly introduced activities included cybersecurity, support for higher education connectivity, automated hydromet stations, repurposing of post offices and support for automation of functions within the MoC.

14. The mid-term review (MTR) for the project was conducted from November 26 to 5 December 2018. The MTR mission recommended that the project ratings for progress toward achievement of the PDO and Implementation Progress (IP) be upgraded to "Satisfactory." This was formalized and recorded in the March 19, 2019 implementation status report (ISR). The disbursement rate reached 74 percent on April 9, 2020. The acceleration of project disbursement since the January 2018 restructuring has contributed to an improvement in progress toward results achievement. Overall, the project is progressing well and fulfils the eligibility criteria for an additional financing. A number of activities under the original project's sub-components have recently been completed.

15. The GoG's official request letter of request justifies the need for additional financing as follows:

   a. To accommodate the shortfall between the original project budget estimate (US$97m) and the actual value of bids received, notably for activities under sub-components 2.1 (Digitization) and 2.2 (Connectivity), which proved much pricier than anticipated. The GoG's ambition for these two activities has also expanded. In particular, the GoG requested that the pre-purchase of internet connectivity cover backbone connectivity be extended to cover some 254 Districts,

including Regional Capitals, and noted that this connectivity is essential to supporting implementation of the Ghana Integrated Financial Management Information System (GIFMIS), Tax Revenue Integrated Processing Systems (TRIPS) and other eGovernment services and applications;

b. To scale-up project activities that were successfully completed, notably those for the Judiciary Service of Ghana, where case automation is now being extended outside Accra.

16. The project development objective (PDO) of the eTransform Ghana project is "*to improve the efficiency and coverage of government service delivery using ICT.*" This remains valid and no change in PDO is proposed for the Additional Financing (AF). In line with the rationale for additional financing described above, and on the basis of discussions held with the client during the mission (May 13-17, 2019[7]) and a reappraisal mission (March 2-6, 2020), and following discussion at the DM held on July 30, 2019, it has been agreed to include a number of scale up activities under the AF, as listed in Table 1. The activities, which were approved at the DM, are described in more detail, by component, below.

Table 1: Summary of activities proposed for inclusion under the Additional Financing

Ref.	Ref. in FA	Activity	Original allocation (US$'000)	Proposed additional financing (US$'000)	Comments
Component 1: Enabling Environment for Electronic Government and Business					
1.1	Part A-1(a)	Additional security for data center	1,250	100	Cost Overrun, Amendment to existing
1.2	Part A-1(d)	Data analytics and visualization software for Open Data	450	250	Scale up of ongoing activity
1.3	Part A-1(a)	Managed services extension and additional training for the eVerification and Authentication system	4,000	400	Scale-up of ongoing activity
1.4	Part A- 2	Innovation ecosystem scale-up	3,500	1,500	Scale up of ongoing activity
1.6	Part A-3	Regulatory reform and capacity building: Additional studies on the digital economy	1,750	2,000	Scale up of ongoing activity
Component 2: Support for Digitization and Connectivity					

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[7] At the time of the Decision Meeting, on July 30 2019, this mission was upgraded to the status of appraisal mission.

2.1	Part B-1	Digitization (GIS and OAG activities)	6,500	2,700	Scale up of ongoing activity Procurement
2.2a	Part B-2	Connectivity (Lot 1: Backbone Connectivity to District Centers)	3,300	45,400	Scale up of ongoing activity
2.2b	Part B-2	Connectivity (Lot 3: Managed services extension to Security Operations Center)	2,600	550	Scale up of ongoing activity
Component 3: Scale up of Applications to Improve Service Delivery in Priority Sectors					
3.3a	Part C-2	Campus networks at University of Health and Allied Sciences (UHAS) and University of Energy and Natural Resources (UENR)	3,500	1,500	Scale up of ongoing activity
3.3b	Part C-2	Ghana Academic Research and Education Network (GARNET) scale up	340	1,400	Scale up of ongoing activity
3.4	Part C-3	Upgrade of eRegistrar system in Registrar General's Department (RGD)	500	1,000	Scale up of ongoing activity
3.6	Part C-3	Integrated Information Management System for OAGMoJ	2,280	3,800	Scale up of ongoing
3.6	Part C-3	eJustice (Phase 2), extending case management system to Appellate Courts and all High Courts nationwide	3,300	8,000	Scale up of ongoing activity,
3.7	Part C-4	eProcurement, scale-up from 6 sites to whole of Government	4,500	2,000	Scale up of ongoing activity,
3.8	Part C-4	Ghana Immigration Services (GIS) relocation of eGates from T2 to T3, and managed services extension	16,300	2,900	Scale up of ongoing activity
4	Part D	Strengthening the Project Implementation Unit	7,500	1,500	Support to existing PIU over AF
		Total	*61,570**	*75,000*	

Note: * Original project total was US$97m but some activities are scheduled to be completed without additional financing.

Component 1: Enabling Environment for Electronic Government and Business

17. The objective of component 1 is to create an enabling policy and regulatory environment for the development of digital services in Ghana. This component has been progressing relatively well, and as of April 2020, several activities have been completed, or are near completion.

1.1 <u>Cloud Storage</u>. An initial strategy study has been completed. However, implementation was delayed because tendering documents pertaining to strategy implementation were submitted late to the WBG for no objection. Some **US$100k is requested from the additional financing** to cover unanticipated costs of physical security for the data center (i.e. a cage fence).

1.2 <u>Open Data Platform</u>. Tendering for this activity was completed in June 2018. The activity is largely completed, though some training still remains to be finished. Some **US$250k from the additional financing** will be used for purchase of additional data analytics and visualization software, and user licenses, for use with open datasets, for better end-user functionality and operations.

1.3 A) <u>Cybersecurity</u>. Specialist consultants to create a Cybersecurity Emergency Response Team (CERT) have been recruited. A cybersecurity maturity model has been completed and has been published and further technical assistance has been provided using funds from the Government of Israel. Other planned activities, around awareness raising and capacity-building, will be completed by the end of 2020.
B) <u>Authentication and verification system</u>. This activity was expanded as a result of the 2018 restructuring. Tendering for an authentication and verification system based on Public Key Infrastructure (PKI) was completed in August 2018 and this system is now largely delivered but is awaiting the delivery of a disaster recovery component and additional physical security at the primary site. **An additional US$0.4m in additional financing is requested** to provide for an extension to the managed services contract for the PKI vendor and additional user training in the use of PKI. This will cover an extended period of two years for implementation of the authentication and verification operations.

1.4 <u>Innovation Ecosystem</u>. Competitive tendering for an Innovation Hub (iHub) and a Mobile Applications Lab (mLab), both hosted at the Accra Digital Center, was completed in June 2018 and a grant was awarded to the existing iHub grant in Kumasi[8]. All three tech hubs have successfully kicked off activities, and the second round of grants for the Accra-based hubs were released in May 2019 following achievement of agreed benchmarks. **An additional US$1.5m in additional financing is requested** to support the scale up of activities at the two Accra-based tech hubs. All innovation and training grants administered by the tech hubs will follow the requirements of the Grants Manual, which was defined at an early stage of the project and handed to the tech hubs during the contracting phase. In particular, the tech hubs will be monitored for their success in providing innovation and training grants that are gender balanced, with equal opportunities for men and women.

1.5 <u>Regulatory reform and capacity building</u>. A number of studies have been carried out, including revision of regulations governing the activities of the National Information Technology Agency (NITA), while others are planned, specifically a regulatory and legal gap analysis and a digital strategy. The Office of the Ghanaian Vice-President hosted a Digital Economy Roadmap Conference in Accra, on May 15-16, 2019, with active participation from the WBG. The Bank team completed a Digital Economy Stocktaking study as preparatory work. **An additional US$2.0m in**

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[8] The iHub in Kumasi had been a beneficiary under the earlier eGhana project.

additional financing is requested to support further studies for the development of the digital economy in Ghana in a scale up of this activity (sub-component 1.6), as well as the possible Ghana Digital Acceleration Program (GDAP) considered under IDA19.

18. In total, **the AF will expand the budget for Component 1 by US$4.25m,** as well as allocate a further US$0.290m from the contingency to cover for exchange rates losses, increasing the total allocation for Component 1 from US$18.72m to US$23.26m (+24.3 percent).

Component 2: Support for Digitization and Connectivity

19. The objectives of Component 2 are to digitize a selected number of government processes and to substantially increase the bandwidth available to Ministries, Departments and Agencies (MDAs), including in rural areas. This component was substantially revised during the restructuring, when the Digital ID component was dropped, and digitization and connectivity activities scattered throughout the project were regrouped together under this component, to benefit from demand aggregation and economies of scale. Nevertheless, the GoG's ambitions for what could be achieved proved to be much greater than what could eventually be funded under the original project. The gap between aims and means became evident when competitive tendering was launched. In that context, it is proposed to increase this component's funding and to scale up its scope under the proposed additional financing.

- Digitization of public records. The aim of this activity is to allow beneficiary organizations to scan, index, and electronically manage paper records, and to set up searchable and easy-to-use electronic databases. An initial feasibility study was completed in March 2018 which identified six potential beneficiaries of such digitization efforts. Following a competitive tendering process, it was decided to move ahead with four of them: the Judicial Service of Ghana (JSG), the Registrar General's Department (RGD), the Births and Deaths Registry (BDR) and the Ghana Immigration Services (GIS). These four could be funded under the original project. At its request, a planned digitization at the Ministry of Health (MoE) has been dropped, but additional funding was needed to digitize the records of the Office of the Attorney General (OAG). The latter will be **supported under the additional financing, at an estimated cost of US$2.7m.**

- Connectivity. This activity, which stems from a clustering of previously separate actions at the time of the restructuring, has been greatly expanded. Hitherto, different government departments have acquired connectivity under *ad hoc* arrangements, on small monthly contracts from commercial suppliers, and in some cases MDAs have even built their own networks. The approach being applied under the project is **demand aggregation and pre-purchase of capacity**, for government as a whole (MDAs, schools and hospitals) under so-called "Indefeasible Rights of Use" (IRU) for 5-10 years. This ensures value for money, with competitively tendered contracts with the private sector that guarantee long-term supply agreements with GoG. They include the Ghana Integrated Financial Management Information Systems (GIFMIS), which is crucial for the efficient functioning of Government. Government users therefore benefit from service level agreements (SLA) with vendors while the private network providers are incentivized to invest in higher bandwidth capacity and service more locations. No network construction is financed, though vendors may be encouraged to invest (for instance, to replace microwave and satellite with fiber) as the GoG is serving as an anchor tenant in rural areas. Competitive tendering for the connectivity transaction was undertaken in Four Lots:

Lot 1: Backbone connectivity to all 254 District Centers around the country. Some US$5m funding was provided under the original financing and a further **US$45.4m will be covered by the proposed additional financing.** Initially, the scale up was limited to 69 District Centers, but thanks to the additional funds mobilized under the AF, internet connectivity could now be extended to some 254 District Centers.

Lot 2: Last Mile Connectivity. This is the most ambitious part of the project, with service to 2,000 plus ministries, departments and agencies located around the country. At present, resources are insufficient to cover this activity, and it will be postponed to a possible future operation.

Lot 3: Security Operations Center. This contract, worth US$2.67m, has been awarded to the leading bidder and financed under the original project. Thanks to a **US$0.55m additional financing, a managed services contract will be expanded** to allow for a longer period of vendor support.

Lot 4: International bandwidth. This contract has been awarded to the leading bidder, using funds from the original project.

20. Earlier work on connectivity included the completion of feasibility studies for expanded connectivity among schools and hospitals. Support has also been provided to NITA to allow it to recruit network engineers for troubleshooting and performance monitoring and to purchase a traffic management system. A transaction advisor was also recruited to assist with the internet connectivity pre-purchase.

21. Overall, **US$48.65m in additional financing to component 2 is proposed, increasing its allocation from US$11.58m to US$60.23m** (i.e. +420.1 percent).

Component 3: Scale up of Applications to Improve Service Delivery in Priority Sectors

22. The objective of this component is to enhance the delivery of government services using ICT. It covers a large number of beneficiaries and range of activities spanning from pilot programs and proof of concept, to full-scale implementation. The priority activities selected for scale up under the AF are closely aligned with the ongoing digitization and connectivity activities under Component 2. Seven of these activities will benefit from scale up under the AF:

3.1   eHealth: A strategic plan for an integration health system in Ghana was completed in April 2019 and the results disseminated through a workshop. This provides a basis for future investment and development and will be particularly useful in the light of the current Coronavirus pandemic. However, given the size of the funding required and the specific sectoral focus, it is considered best if this is done through separate funding programs, such as those prepared in response to the Coronavirus (Covid-19) pandemic. A US$35m Ghana Emergency Preparedness and Response Project (EPRP) was approved in early April 2020, and it includes provision of additional IT equipment for health workers. The additional connectivity provided under activity 2.2 will therefore assist in ensuring its productive use.

3.2   Digital Schools: This activity foresees the provision of computer labs and networking for senior high schools and the development of a portal for digital content for teachers. It complements the ICT training for teachers supported under sub-component 3.11. However, the value of bids exceeded the

available funding. The MoE has proposed to rescope this activity and prioritize the development of the content portal, building on what already exists. As a consequence, the number of senior high schools to be provided with computer labs will be downscaled from 200 to 55, thereby remaining within the original project budget. Every effort will be made to ensure equal provision to girl and boy students, with the addition of a new sub-indicator.

3.3   Digital Universities: As originally formulated (Tertiary Institutions Access Program), this sub-component brought connectivity and campus WiFi networks to eight universities and colleges, benefitting some 107,000 students, with the investment project completed in 2017. It is now proposed to scale up this activity by installing campus networks in two additional universities – University of Health and Allied Sciences (UHAS) and University of Energy and Natural Resources (UENR) – for an estimated cost of **US$1.5m to be funded under the additional financing**.

During the 2018 restructuring, it was agreed to also support the **Ghanaian Academic Research Network (GARNET)** under a separate activity, by pre-paying its membership fee for the EU AfricaConnect 2 program. This was to leverage four times that amount in funding for bandwidth, as well as access to open educational resources (OER) and capacity building, through the West Africa Consortium of Research and Education Networks (WACREN). This activity disbursed quickly and brought additional internet capacity of around 10 Gbit/s to more than 200,000 students across 20 universities and colleges, both public and private. GARNET also formalized its governance structure to reflect open access principles and to function as a specialized internet service provider for the higher education sector. In light of this sub-component's success, i**t is proposed to make available a further US$1.4m in additional financing to GARNET.** This will enable it to further improve the quality of service offered, to serve additional universities (up to 60), to pre-pay membership fees for EU Africa Connect 3, and to employ dedicated staff (rather than volunteers). Every effort will be made to ensure equal provision of connectivity to male and female students, with an additional monitoring indicator added for this purpose. In the long run, GARNET will be self-sustaining thanks to the membership fees it generates under its new business model as a specialized internet service provider for the higher education community.

3.4   Digital Services: This activity is intended to improve the back-office functions of NITA, in how it serves government MDAs. Currently six government eServices are fully operational on the e-service platform. A study of the enterprise architecture and an interoperability framework was completed in 2018. As a result, a tender is planned to upgrade the Government's online eServices portal and the ePayments facility. This should help address problems of low user take-up. The funding allocated to the Data Exchange Hub and other digital services was combined with the connectivity transaction (under component 2**)** during the MTR**. A further US$1m additional financing is proposed** to help the RGD upgrade its eRegistrar functions. The RGD is one of the key agencies benefitting from the digitization work under component 2.1 and under the eGhana project.

3.6   eJustice: The eJustice activity is intended to digitize the case management system at the High Courts in Accra and to digitize records. The system was completed in early 2019 and was officially launched

by the President of Ghana on March 20, 2019. This has been one of the most successful activities undertaken under the eTransform Ghana project, with roll-out completed in all 43 high courts in Accra and more than 43,000 cases digitized through the system by end of January 2020. Two activities are proposed for scale up under the additional financing. **US$3.8m is allocated to extend the case management system to the MoJ and the Office of the Attorney-General (MOJAGD). Another US$8.0m is also proposed to fund a second Phase of the original system so to extend it countrywide, to all high courts, the appeals courts and the Supreme Court, and to the Circuit Courts.**

3.7   eProcurement. The aim of this activity is to automate the procurement system for the Public Procurement Authority (PPA), starting with 6 pilot institutions and then extending to the whole of Government. Following an initial feasibility study, the system was delivered for the initial 6 institutions in June 2018 and training of users, and potential bidders, was completed in January 2019. The system went live and was announced to the media on April 30, 2019. It is estimated that it will save the GoG some US$100m through more efficient tendering. It is now being rolled out to the remaining 660 MDAs. A recent evaluation by the regional procurement team noted some weaknesses in implementation, notably the need for additional training, and that the platform is still hosted by the vendor rather than by NITA. Accordingly, **a further US$2.0m additional financing will be allocated to eProcurement**, to cover the costs of hosting the platform at NITA, additional capacity-building and scale-up of eProcurement to all MDAs. This will supplement the US$2.0m earmarked under the original project funding.

3.8   eImmigration. This was the single largest sub-component in the eTransform project, amounting to US$16m. After an initial slow start, it is now operational. The application provides secure entry and exit for all visitors and residents to Ghana at some 10 entry points, including the international airport, seaports and border crossings. It covers issue of visas, work permits and biometric identification, as well as interconnection between the Ghana Immigration Service (GIS) and other national and international agencies. The Secure Border Management System (SBMS) went live on December 6, 2018 and has progressively replaced the older Personal Identification Secure Comparison and Evaluation System (PISCES) system, which does not conform to Ghanaian privacy and data protection requirements. The visa management system has been operational since February 8, 2019. However, in order to assure maximum value from the system, **some US$2.9m in additional financing is required** to transfer the eGates installed in Terminal 2 to the newer Terminal 3, to extend the managed services contract for the vendor by six months, and to purchase 33 additional workstations to speed up processing of arrivals at the international airport.

23. Overall, **US$20.6m in additional financing is proposed for component 3, increasing the component's total allocation from US$50.66m to US$71.26m** (+40.7 percent).

Component 4: Project Management Support

24. Project management is assured by a project implementation unit (PIU) located within the MoC. Although the unit has been operating at below its full staffing allocation for some time, it is nevertheless performing satisfactorily, with procurement, financial management, monitoring and safeguards all rated "satisfactory". The efficient management of the project by the PIU is the main reason for the significant increase in

disbursement since restructuring was initiated in August 2017, and for the successful upgrade of DO and IP ratings from MU to S during that period. It is recommended that the PIU take on an additional staff member to lead on change management among beneficiaries with a specific mandate to increase the level of take up of the new eServices.

25. To strengthen the PIU's capacity to handle the increased volume of activities proposed under the additional financing, and the extension of the closing date to 31 October 2022, **the AF is also allocating an additional US$1.5m to Component 4**, bringing it **from US$7.5m to US$9.0m (+20.0 percent).**

26. Overall, **some US$20.6m is proposed under additional financing for component 3, increasing the total allocation for this component from US$50.66m to US$71.26m** (+40.7 per cent).

27. The **Additional Financing provides a timely response to Coronavirus** in a number of ways as listed below. Activities can start being implemented immediately using existing project funds:

- Activity 2.2: Of most immediate utility is the **increase in internet bandwidth** for Government use facilitated by the pre-purchase of capacity for some 254 District Centers. This will relieve congestion on remote working, and particularly the use of remote meeting technologies (eg Skype, Zoom, WebEx etc). Provision of internet data bundles for government staff working remotely could also be provided as a short-term response.
- Activity 3.3a and b: Similarly, the provision of **campus WiFi networks** at two new universities, and **additional internet bandwidth for universities**, provided through GARNET, will facilitate online teaching and remote learning.
- Activity 2.1: **Digitisation of archives and other public records** will allow online searches to be conducted and will reduce the need to face-to-face contact for information search;
- Activity 3.6: **Automation of case handling** for the Judiciary, and the development of an integrated information management system for the OAG/MOJ will reduce the need for face to face contact and will facilitate remote working.
- Activity 3.7: The **scale-up of eProcurement to all Government** ministries, departments and agencies will ensure business continuity and reduce the requirement for physical travel to deliver bidding documents;
- Activity 3.8: The use of **eGates f**or entry and exit at the international airport, once international travel resumes, will reduce the requirement for face-to-face contact.

In total, activities worth some US$67.7m, or 90.3 per cent of the total AF, should contribute directly to the Coronavirus response.

E. Implementation

Institutional and Implementation Arrangements

28. Project management is assured by a project implementation unit (PIU) located within the MoC. Although the unit has been operating at below its full staffing allocation for some time, it is nevertheless performing satisfactorily, with procurement, financial management, monitoring and safeguards all rated "satisfactory". The efficient management of the project by the PIU is the main reason for the significant increase in disbursement since restructuring was initiated in August 2017, and for the successful upgrade of DO and IP ratings from MU to S during that period. It is recommended that the PIU take on an additional staff member

to lead on change management among beneficiaries with a specific mandate to increase the level of take up of the new eServices.

29. To strengthen the PIU capacity to handle the increased volume of activities proposed under the additional financing, and the extension of the closing date to 31 October 2022, **the AF is also allocating an additional US$1.5m to component 4**. Overall, **the AF proposed an increase in allocation to Component 4 by US$1.5m, from US$7.5m to US$9.0m (+20.0 percent).**

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F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Ghana, including activities in 254 District Centers

G. Environmental and Social Safeguards Specialists on the Team

Justice Odoiquaye Odoi, Environmental Specialist
Sarah Antwi Boasiako, Social Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	No	No change
Performance Standards for Private Sector Activities OP/BP 4.03	No	No change
Natural Habitats OP/BP 4.04	No	No change
Forests OP/BP 4.36	No	No change
Pest Management OP 4.09	No	No change
Physical Cultural Resources OP/BP 4.11	No	No change
Indigenous Peoples OP/BP 4.10	No	No change
Involuntary Resettlement OP/BP 4.12	No	No change
Safety of Dams OP/BP 4.37	No	No change
Projects on International Waterways OP/BP 7.50	No	No change
Projects in Disputed Areas OP/BP 7.60	No	No change

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The eTransform Project is largely focused on electronic applications and is likely to have minimal environmental impact. It is anticipated that a scaled up use of ICT applications and services in the country will increase energy use since activities which were previously executed manually will be replaced with the use of electronic systems.

Pollution from e-waste in terms of its disposal and management of the devices purchased under the additional financing could be anticipated. However, the negative environmental impacts expected from the project are minimal, and any equipment that reaches the end of its useful lifecyle will be recycled or safely disposed of in line with the relevant guidelines (Hazardous and electronic waste, Control and Management Act No. 917 (2016) . The Additional Financing does not introduce any new elements that were not considered under the original program, and rather it is a scaling up of selected activities that were deemed successful. The intervention mechanism proposed for Component 2 involves the pre-purchase of internet capacity from private sector providers. Thus, no new construction, civil works, cabling or movement of earth is financed by the program.

This original eTransform project did not trigger any environmental safeguards and was rated "Category C". There are no adverse environmental impacts expected from this additional financing, and based on environmental screening according to OP 4.01 (Environmental Assessment), the additional financing is not anticipated to have any environmental safeguard issues and was rated Category C. No environmental assessment instrument needs to be prepared. However, as the project may include some limited the replacement of ICT equipment, a plan for proper disposal, recycling or continued use of this equipment will be prepared. In this respect, the Government of Ghana is benefiting from technical assistance from the Government of the Netherlands.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
None anticipated

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
Team and clients to ensure that energy efficient resources with minimum negative environmental impact are used.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.
Borrower has already implemented a similar project and quite familiar with safeguard policy issues and mitigation plans. There is also capacity building arrangements for relevant staff of the project team and implementing entities to ensure full comprehension prior to and during project implementation. During implementation of the original project, when sites that had not yet been identified or agreed on at the time of appraisal, follow up management plans were elaborated to address specific issues.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.
Key stakeholders include Ministry of Communications, NITA, Ministries of Education & Health, the Births and Deaths

Registry, the Attorney-General's Office and the Judiciary. Borrower has had public consultations as well as publishing notices in reputable local newspapers.

B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting) (N.B. The sections below appear only if corresponding safeguard policy is triggered)

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Have costs related to safeguard policy measures been included in the project cost?

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

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APPROVAL

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