

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: AB4119

Project Name	Regional Communications Infrastructure Program - APL2 - Rwanda (RCIPRW)
Region	AFRICA
Sector	Telecommunications (60%);General information and communications sector (20%);General industry and trade sector (20%)
Project ID	P106369
Borrower(s)	SECOND PHASE : REPUBLIC OF RWANDA
	Ministry of Finance and Economic Planning P.O. Box 158 Rwanda
Implementing Agency	
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Environment Category	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
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1. Country and Sector Background

1. **Rwanda is a small, poor landlocked country but has been growing steadily over the past few years.** With a per capita GDP of USD 353¹ and with 60% of the population living below the poverty line, it is one of the world's poorest countries. It has one of the highest population densities in the world and a highly rural population. Rwanda's economy is largely agriculture based, accounting for about 41 percent of GDP but over 80 percent of the population. Services make up 38 percent of GDP and consist mainly of wholesale and resale trade in various products, transportation and public administration. The economy has been growing at 4-5 percent per year over the past 2 years, despite significant energy shortages. The growth has come mainly from the construction, financial services and the ICT sector.

2. **ICT services in Rwanda are costly but are improving.** Despite a clear commitment by the Government to the use of ICT in government and the wider economy, tariffs in Rwanda have remained high and the quality of service is low. Teledensity remains low at approximately 9.7%, compared to the

¹ Source: IMF March 2008. Note. This is significant increase from previous estimates of GDP for Rwanda. This increase is due to the use of more recent survey data and improved compilation methods, which are more closely in line with the United Nations 1993 systems of national accounts.

average for Sub-Saharan Africa of 19%² and subscribers are concentrated in the urban areas. The primary reason for this poor sector performance has been lack of network coverage and the high price of calls. Both have resulted from the lack of effective competition in the market. Government has recently taken some steps towards rectifying this through reform of the regulatory framework and increasing competition in a private sector-led environment.

3. **The government wants to accelerate infrastructure development through strategic investment.** In parallel with its policy of market liberalization and private-sector led development, the government wants to accelerate the pace and extent of communications network infrastructure roll-out. To achieve this objective, it has implemented the following measures: (i) providing broadband connectivity to selected institutions by VSAT through state-owned New ARTEL (ii) re-injecting US\$40 million in the sector out of the \$100m revenue generated by the sale of Rwanda Telecom in October 2007 to develop a national backbone infrastructure down to district level – to be managed by a private company (iii) rolling-out wireless broadband services in Kigali and privatize that network, (iv) leverage the on-going roll-out of Electrogaz electricity transmission network to roll-out of a fiber-optic backbone network using the ground-wires of the transmission network.

4. **The Government justifies these interventions** as a way of addressing short-term requirements (e.g., for providing connectivity to revenue collection agencies at border crossings) where the private sector is not currently providing infrastructure and as a means of promoting market development. They argue that these interventions are transitional measures and that they have demonstrated a clear overall commitment to a privately owned and operated ICT sector.

2. Objectives

5. **Project Development Objective.** The core Project Development Objective is to contribute to lower prices for international capacity and to extend the geographic reach of broadband networks.

Table 1 Monitoring and Evaluation framework

Project Development Objective	Outcome Indicators
Connectivity development objective: To contribute to lower prices for international capacity and to extend the geographic reach of broadband networks	Volume of international traffic (Mbit/s) Volume of national traffic using 2 proxies: ③ Internet user penetration ³ ③ Total teledensity (fixed and mobile) Average price of international communications using the proxy: Price of wholesale international capacity link from Rwanda to European hub (E1).

3. Rationale for Bank Involvement

² Source: ITU Trends and market statistics for Africa 2007

³ As measured by the number of broadband subscribers

6. **Strong Government commitment to the ICT sector.** The Government is committed to the use of ICT and to the areas covered by this project. Government has clearly identified ICT as a driver of growth in Rwanda. This has been articulated in their long-term strategy documents and through their budgets and prioritization of development partner support. This prioritization has recently been reaffirmed through the identification of the ICT sector as a key source of future economic growth and education in Science and Technology has been singled out as a major part of the country skills development strategy.⁴

7. **Proposed Bank involvement is consistent with eRwanda project and RCIP operations in the region.** The project builds on existing projects in Rwanda and in other countries. The World Bank is already supporting the government's ICT strategy through the eRwanda project. This focuses on the development and application of e-government applications, provision of equipment to district offices, development of the government portal and related Ministerial websites, and capacity building in the institutions responsible for ICT. The World Bank is also supporting related activities in other countries in the region through, for example, the RCIP Phase 1 projects in Burundi and Kenya.

8. **The project supports regional integration.** The support for the purchase of international capacity contained in the RCIPRW project will facilitate cross-border communications traffic and hence promote trade, stimulate cross-border movement of factors of production and promote regional integration. This is a key strategic objective of the both the World Bank and the Government of Rwanda.

9. **The project leverages private-sector finance and expertise.** All activities funded by this project will be implemented through the private sector. By operating as a source of demand, the government is reducing commercial risk for the private sector and stimulating investment. This model of partnership achieves the government's sector development objectives without diverting from the overall sector policy of private-sector led, competitive markets. It also leverages the private-sector's operational and investment resources both within Rwanda and from the wider region.

10. **The impact of this project on the private sector will be positive.** The majority of the funds under the RCIPRW project will be channeled to private companies which will be selected through a competitive bidding process. In itself, this is likely to provide a major stimulus to the sector and will facilitate network development across the country. The boost to the supply of low-cost international connectivity available on a wholesale basis will also be a major boost to the sector since it will reduce the cost of providing broadband services and will encourage entry and investment into the downstream segments of the market.

4. Description

11. **The major deliverable will be the establishment of Rwanda's national capacity to provide broadband connectivity.**

12. **Component 1 – Enabling Environment.** This component will provide capacity building support to the agencies and ministries of government concerned with the project, The Ministry in Charge of Science, Technology Scientific Research and Information Communication Technologies in the Office of the President, RITA and RURA. Part of this capacity building will support the functioning of the government institutions to ensure that the government's objectives are being met. This support will be provided through a combination of project management, technical advisory support, training and studies. This component will provide the preparatory work that will be required for the connectivity tenders to be undertaken as the main focus of the project, including detailed technical designs and transaction advisory support. It will also support any environmental impact assessment work that is required and the implementation of the communications strategy.

⁴ para 2.57 of Economic Development And Poverty Reduction Strategy, 2008-2012

13. **Component 2 – Connectivity.** The objective of this component is to provide broadband access to targeted public institutions within the country and to provide wholesale broadband connectivity to the submarine fiber-optic cables under development along the East coast of Africa.

- **Subcomponent 2.1 – Support to the roll-out of broadband services.** The focus of this subcomponent is the provision of broadband services to institutions across the country. This will be done on a competitive basis and will be open to any licensed operator or ISP willing to invest and provide the specified services. This subcomponent will complement the other investments that the government and the private-sector are undertaking to boost connectivity and the capacity of the backbone network countrywide.
- **Subcomponent 2.2 - International connectivity.** As a land-locked country, Rwanda faces significant challenges in getting access to low-cost international connectivity. This component will support this objective through the establishment of high-capacity international telecommunications connectivity through bulk-purchase of capacity for Government use.
- **Subcomponent 2.3 – Enabling the establishment of third-party virtual landing station.** This component will support the establishment of a virtual landing station or ‘tele-house’ which will be a neutral exchange point which will house the termination point for international cables and which will allow operators and ISPs to interconnect. This will ensure that all players in the market have equal non-discriminatory access to wholesale international connectivity.

14. **Component 3 – Project Management.**

5. Financing

Proposed funding for this Second Phase of RCIP includes an IDA contribution of about US\$24 million:

Source:	(US\$m.)
Republic of Rwanda	0
IDA Grant for Rwanda	24
Total	24

6. Implementation

15. **The project will be under the remit of the Ministry of Science Technology, Scientific Research and Information Communication Technologies in the Office of the President, the implementing agency will be RITA and the regulatory aspects of the project will be undertaken by RURA.** The Minister will be responsible for ensuring coordination of the whole project.

16. **RITA will be the agency with primary responsibility for the RCIP Rwanda Project.** RITA operates under the Minister of Science, Technology and Communications under the Office of the President and is the Government body mandated to coordinate all government ICT projects. It is currently implementing the eRwanda project and it has been agreed that its mandate will be expanded to include the implementation of RCIP Rwanda. The day-to-day operations of the eRwanda project are being implemented by a dedicated eRwanda implementation team headed by a full-time Project Manager. This

eRwanda team is being expanded to become a combined eRwanda/RCIP project team which will include RCIP technical staff reporting to the ED of RITA. The additional technical team members will be multidisciplinary but will focus on the additional skills required for the project, namely technical network design, procurement and design of competitive tender awards. In order to support both projects, the joint eRwanda/RCIP support team has been supplemented by additional resources for finance and procurement. RURA will be responsible for all areas of the project which fall under its mandate, including any regulatory aspects.

7. Sustainability

17. **The project fits squarely within the government's development strategy.** The Government of Rwanda has identified ICT as one of the central pillars of its development strategy. It has proved its commitment to reform of the sector through the steps that it has already taken, its willingness to make tough decisions and a commitment to ensuring that the sector meets the development priorities of the country. This project is part of a range of coordinated steps that the government is taking simultaneously to improve the performance and reach of the ICT sector. These steps complement each other and the government is investing a significant amount of its own resources in them. From a political, financial and institutional point of view, the government is fully committed to the objectives of the project. This will greatly enhance the sustainability of the project and its outcomes.

18. **The project is implemented through the private-sector.** All project activities are implemented through the private-sector. The project will therefore stimulate sector development in the country and promote competition. The stimulation of the supply of low-cost wholesale international connectivity will be a major boost to investment and competition in the downstream segments of the market. These impacts will last beyond the end of the project, increasing the sustainability of the project outcome.

19. **The government has already demonstrated a willingness to commit funds for providing connectivity.** The government already pays for a number of public institutions to provide connectivity to public institutions. This is done in different ways – through funding New ARTEL, allowing public institutions to purchase connectivity services from private operators and investing directly in the fiber-optic backbone network. However, at the moment, the costs of this are high, service quality is variable and unevenly distributed across the country. The proposed RCIP project will reduce the cost of broadband connectivity to public institutions and provide it throughout the country on a systematic basis. This will reduce the financial and institutional burden on the government and therefore will enhance the sustainability of the program.

20. **The project is being implemented through existing institutions.** The project is fitting directly into existing government structures and no new organizations are being created. This means that the project is strengthening existing institutions rather than undermining them. The only staff that are being hired specifically will be working on a contract basis and their role will cease when the project is completed. During the course of the project, a dedicated team of RITA staff will be assigned to work with them hence skills will be transferred and the experience retained within RITA after the project is completed.

21. **The fiscal sustainability of the project will be sustained through cost-sharing with recipient institutions.** The government is committed to introducing the use of ICT in public institutions and has indicated that the cost of the broadband connectivity provided to institutions will be shared between the project and the institutions themselves. The level of this contribution will vary according to the type of institution and will be determined during the course of the project. By running a competitive tender for supplying the institutions under the project and when complemented by the reduction in costs arising from the improved international connectivity, the cost of broadband will be reduced from current levels. This will further improve the long-run financial sustainability of the project outcomes.

8. Lessons Learned from Past Operations in the Country/Sector

22. **Lessons have been learned from the experience of eRwanda.** The eRwanda project experienced some delays in reaching effectiveness. The primary cause for this was the delay in obtaining parliamentary approval for the project. This was discussed with the Minister responsible for the sector during the preparation and appraisal of RCIPRW. Steps will be taken to ensure that parliamentary approval is obtained as quickly as possible. A second lesson that can be learned from the eRwanda experience to date is the importance of integrating the project within RITA as a whole. By doing this, the project is able to maintain consistency with the overall mandate of the government but this potentially adds a layer of bureaucracy to the decision-making process. By choosing to implement the RCIPRW project as part of the existing eRwanda project team, these problems are expected to be minimized for the RCIPRW project. A third issue for the eRwanda project has been the time taken to become fully competent with the financial and procurement rules of the World Bank. They were ably assisted by the team at HIDA (funded through the PSCBP) and also employ the services of a procurement coach. All staff, including procurement staff, have also attended formal training on WB rules. One key lesson from eRwanda is that it takes time to develop the knowledge, skills and systems to be able to manage the project effectively. Again, the use of the eRwanda structure for the implementation of the RCIPRW project is expected to significantly minimize any problems of this nature.

23. **Lessons have also been learned from the experience of RCIP1 operations.** The RCIP1 operations for Kenya, Burundi and Madagascar were reviewed by the World Bank Quality Assurance Group (QAG) as part of the eighth quality at entry assessment exercise (QEA8). While the assessment concluded that overall quality at entry was “Satisfactory” (the second highest ranking), it identified a number of areas which could be improved. While the relevant guidance is being implemented as part of the supervision of RCIP1 operations, it is also being captured for the preparation of subsequent RCIP operations, including RCIPRW:

QAG QEA8 Quality Enhancement Recommendations on RCIP phase 1	Corrective Action Taken as Part of RCIP Rwanda Preparation
Weak implementation capacity, capacity across the participating countries.	<ul style="list-style-type: none"> ③ Locating the project implementation team in an institution which already has stepped-up World Bank project implementation capacity. ③ Using the on-going eRwanda project to start building capacity for the implementation of RCIPRW before RCIPRW becomes effective
Lack of procurement readiness ↗ should pay more attention to streamlining and consolidating the various tenders.	<ul style="list-style-type: none"> ③ RITA, the host to the project implementation team, already has operational procurement specialists ③ The number of components in the project has been kept to a minimum to ease project implementation.
Delays in staffing key positions, low readiness of the first year’s program for implementation (vary across participating countries though) ↗ may cause the delay of completing the first phase within 4-5 years of implementation.	<ul style="list-style-type: none"> ③ Using the on-going eRwanda project to start building capacity for the implementation of RCIPRW before RCIPRW becomes effective ③ RCIPRW will have a 5-year implementation period as opposed to 4 years for RCIP Burundi and RCIP Madagascar. ③ Recruitment of project staff has already started. Procurement and FM staff have already been hired and the recruitment of the Lead Technical Manager is underway.
Adequacy of the monitoring arrangements. ↗ The panel concern that the project	<ul style="list-style-type: none"> ③ RITA will be responsible for monitoring and evaluating the performance of the project activities.

documents and monitoring information would be difficult to collect if there are large number of agencies that provide the data. The project documents do not seem to anticipate these kinds of difficulties.	<p>Sufficient staffing resources have been provided through the eRwanda project and within RITA itself to support the M&E activities.</p> <ul style="list-style-type: none"> ③ RURA (the telecom regulator) is responsible for collecting data on the sector and is already carrying out this mandate. ③ The RCIPRW M&E framework and monitoring plan has been designed to take account of existing mandates and responsibilities.
Risk management <p>↗ for the improvement of the quality, the panel felt that additional steps (such as giving attention to capacity building during preparation, simplify the content of policy components, and extending the implementation period in weaker countries) would be helpful and further mitigate the institution risk.</p>	<ul style="list-style-type: none"> ③ Using the on-going eRwanda project to start building capacity for the implementation of RCIPRW before RCIPRW becomes effective ③ The content of the policy component is being simplified in discussion with RURA (the telecom regulator) and RITA ③ RCIPRW will have a 5-year implementation period as opposed to 4 years for RCIP Burundi and RCIP Madagascar
Comments on TA and training: Selection of output indicators - Some more micro level output indicators of human development in terms of numbers of personnel in different skill categories would be considered to choose essential for the two PDOs. - Limit the number of indicators to measurable items. (choose the indicators that provide more indication of outputs than outcomes.)	<ul style="list-style-type: none"> ③ Indicators related to RCIPRW have been developed in consultation with the government to ensure that they are both appropriate and measurable. ③ A limited set of indicators has been selected, including four program indicators and three additional project specific indicators.

24. **Different roles for public and private actors in the ICT sector.** The Rwanda RCIPRW project clearly reflects the need to develop strong partnerships with the private sector to develop telecommunications infrastructure, where Government and the telecommunications operators have differentiated roles. This project is based on the well-learned lesson that the private sector is better placed to develop and operate ICT infrastructure, as it is generally able to provide investment for infrastructure rollout. The role of the government is to focus on providing the right incentives for infrastructure and services to reach areas unattractive for the private sector on a purely commercial basis, as well as in cases where large sunk initial investments are required.

25. **Infrastructure as a pre-condition for the development of applications.** The Rwanda RCIPRW project focuses mainly on infrastructure rather than on the development of applications. Experience in other countries shows that developing applications without having the appropriate infrastructure can be problematic - infrastructure is a precondition for the success of application take-up. This project focuses mainly on this area. The eRwanda project caters for the development of ICT applications and the provision of equipment to the District Offices and thus is complementary to RCIPRW.

26. **Technical assistance needed to support implementation of project activities.** Finally, the project design also reflects the limited capacity of the implementing line ministry, which imposes a limit to the scope and depth of activities that can be developed prior to effectiveness of the project. It also reflects the innovative nature of the activities to be carried out under the project and the technical support that will be required to ensure that the project successfully contributes to sector development. The project provides financing for extensive technical assistance to allow for detailed design of the connectivity

components and will also provide support for the formulation of the bidding documentation for complex contract related to the connectivity project component.

27. **Detailed preparatory work has been undertaken for RCIP.** The Government has done extensive preparatory, planning and policy development work in the ICT sector. At the base of this are the NICI Plans which provide a comprehensive description of government policy and plans for the ICT sector in Rwanda. The design and implementation of the eRwanda project is based on developing ICT applications and improving the quality of eGovernment in the country. This provides valuable insight into the state of ICT development and usage. Finally, over the 12 months prior to the project, extensive technical advisory work has been carried out in the area of ICT needs⁵ broadband⁶ and international connectivity⁷. This preparatory work means that, when the project is declared effective, implementation will be able to begin as quickly.

9. Safeguard Policies (including public consultation)

28. **Category B rating.** The RCIP Program overall has a Category B rating. Activities financed under the RCIPRW are fully consistent with the set of activities eligible for financing under RCIP. Under the revised and agreed design of the RCIPRW, the actual physical components of this project will be limited and comprise (a) the building of wireless networks using existing fixed infrastructure (b) indirect financing for the laying of some fiber-optic cable and, (c) support for the establishment of a third-party virtual landing station in Kigali (a building which houses telecommunications equipment and is aimed as a point of interconnection between networks). The risks associated with this kind of infrastructure are generally low, and the project is therefore assigned to environmental category B under OP 4.01. Land acquisition for terrestrial facilities would only be required in the case of the virtual landing station and would be acquired by the entity in charge of operating that facility (not the Government). This facility is likely to be an existing telecom-related building and is therefore not likely to trigger OP 4.12 Involuntary Resettlement considerations. The laying of fiber optic will make use of existing infrastructure including existing electricity networks and rail roads rights of way on existing main roads. It is therefore assessed that OP 4.10 (Indigenous Peoples) and OP 4.11 (Physical Cultural Resources) are not triggered.

29. **A draft ESMF and draft RPF have been prepared by the government and publicly disclosed.** In line with meeting the conditions for appraisal of the project, and in line with the approach validated during the formulation of the RCIP regional program, the government prepared a draft Environment and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF). The documents were commented upon by the Rwanda Environment Management Authority (REMA) and a version of each document deemed acceptable to the Association was publicly disclosed in-country as well as in the World Bank Infoshop in both English and French ahead of appraisal. Comments were received from the public and it has been agreed with the Government that the documents would be finalized and disclosed again no later than three months after the Project effectiveness. A related dated covenant has therefore been inserted in the Financing Agreement. It is also specified that no civil works related to the Project can be done until the final version of the ESMF and RPF has been adopted and disclosed.

⁵ Districts, City of Kigali and provinces. Assessment of ICT needs (baseline study) December 2006

⁶ Rwanda National Backbone Study, May 2008; Scanbi Invest

⁷ Advice to government on international connectivity by Robert Bruce.

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	

10. Contact point

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