



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 04-May-2020 | Report No: PIDC28583

**BASIC INFORMATION****A. Basic Project Data**

Country Rwanda	Project ID P173373	Parent Project ID (if any)	Project Name Rwanda Digital Acceleration Project (P173373)
Region AFRICA	Estimated Appraisal Date Sep 07, 2020	Estimated Board Date Nov 30, 2020	Practice Area (Lead) Digital Development
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance and Economic Planning	Implementing Agency Rwanda Information Society Authority (RISA)	

Proposed Development Objective(s)

To increase digital inclusion, improve the efficiency of public service delivery, and strengthen Rwanda's digital innovation and entrepreneurship ecosystem.

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	100.00
Total Financing	100.00
of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Development Association (IDA)	100.00
IDA Credit	100.00

Environmental and Social Risk Classification

Concept Review Decision



Moderate

Track II-The review did authorize the preparation to continue

B. Introduction and Context

Country Context

- 1. Rwanda is a small, landlocked country, located in East Africa, characterized by a predominantly rural population.** The country is densely populated, with approximately 12 million people in a total area of 26,338 km². Rwanda's population is young (60 percent are under the age of 25) and increasingly urban (with an urban growth rate of 5.5 percent per year), though most Rwandans continue to reside in rural areas.
- 2. Rwanda needs renewed momentum toward poverty reduction and to accelerate growth and off-farm job creation.** The past two decades have been characterized by a remarkable 8 percent average growth and impressive poverty reduction - with poverty rates falling from 77.2 percent in 2001 to 55.5 percent in 2017. Since the 1994 genocide, per capita GDP has risen three-and-a-half-fold, surpassing 20 countries in Sub-Saharan Africa (SSA). Rwanda's job creation figures are modest, meriting interventions that can help accelerate related development beyond agriculture (accounting for close to 70 percent of total employment and about 33 percent of GDP). Moreover, low levels of human capital, including low levels of digital skills, hamper the country's development potential.¹
- 3. Public sector investment has been key to stimulating growth yet needs to be paired with efforts to develop a more vibrant private sector.** Since the early 2000s, Rwanda has been able to sustain its economic growth by consistently increasing public investments, with the public sector emerging as the main driver of structural transformation. Rwanda has one of the highest public sector investment-to-GDP ratios in the world, yielding rising public debt. Although Rwanda has made considerable progress in terms of improving the investment climate and the private sector is growing, it is yet to create jobs in large numbers and drive further structural transformation. Moreover, future public investment needs to be geared towards bridging lingering infrastructure and service delivery gaps for the poor and crowding in private sector investment.
- 4. The country's socio-economic development vision is ambitious – aiming to become a middle-income, knowledge-based economy by 2020, and upper middle-income country by 2035.** Investment in information and communication technologies (ICT) and digital economy development emerges as a central tenet of this strategy, viewed as enabling the country to bypass many 'traditional' pathways to prosperity. Notably, the National Strategy of Transformation (NST1) identifies ICT as a cross-cutting enabler for development. Greater digital adoption and ICT-driven innovation are both seen as instrumental to supporting productivity gains across both primary and non-primary sectors and creating off-farm jobs. Meanwhile, use of digital tools and platforms can help spawn growth in services (financial, hospitality etc.), which have increasingly been driving growth², expand access to new markets through e-commerce, as well as offer a range of benefits to users, including means to enhance household income-generation and access to digitally-enabled services.
- 5. The global COVID-19 pandemic is expected to seriously impact Rwanda's economy, illustrating the need for investments that can support increased resilience.** Both the tourism and air-transportation sector, which have absorbed a substantial part of Rwanda's public investment in recent years, are likely to come under major strain. This, in turn, threatens to create severe and immediate fiscal pressure. The rapidly unfolding pandemic is thus

¹ Rwanda Systematic Country Diagnostic

² Services contributed 47 percent of GDP in 2018, followed by agriculture at 31 percent, and industry at 16 percent.



demonstrating that Rwanda's economic model is highly vulnerable to the risks posed by global pandemics and would benefit from further interventions that support business continuity in the face of related shocks. In this setting, digital technologies offer a means for governments, individuals and businesses to cope with social distancing, ensure business continuity, and prevent service interruptions.

Sectoral and Institutional Context

6. **Rwanda has distinguished itself as a country that is deeply committed to leveraging digital transformation as a means to accelerate growth and reduce poverty.** Government is committed to using digitally-enabled solutions, wherever possible, to leapfrog traditional approaches and support innovation in service delivery. Beginning as early as 2000, Rwanda began charting an ambitious course for achieving rapid digitization, through a series of five-year plans – culminating in the SMART Rwanda Master Plan³. These policies have resulted in the progressive roll-out of digital infrastructure, impressive public e-services expansion, as well as initiatives to support digital skills and to position Rwanda as a regional ICT hub, underpinned by government institutions and leadership committed to this agenda. Today, Rwanda continues to articulate ambitious strategies in relation to many of these areas.
7. **A digital economy country diagnostic conducted in FY19⁴ reviewed the key building blocks of Rwanda's digital economy and identified key progress made so far and challenges that lie ahead, which should be addressed under the proposed operation.** In sum, while substantial progress has been made, particularly in areas such as digital infrastructure and development of public digital platforms and services, Rwanda still has a long way to go in terms of accelerating digital transformation and fostering the emergence of an advanced digital economy (see Figure 1)

Figure 1: Status of digital economy development in Rwanda

	Nascent	Growing	Advanced
Digital infrastructure	Access to undersea internet cables, backbone networks	Backbone networks, data clouds, IXPs, privacy, and cybersecurity	4G/5G networks, rural connectivity, internet of things
Digital platforms	Digital shared services, digital identity, and digital financial management	Digital government, open data, e-commerce	Mobile apps, AI applications, and software-enabled platforms
Digital financial services	Basic digital payments, e.g. person-to-person payments	Broad digital payments, e.g. business-to-person, government-to-person	Digital financial services, e.g. savings, credit, insurance
Digital entrepreneurship	Talent development, and business mentoring	Angel/seed financing, innovation centers, regional hubs	Venture financing, M&A, IPOs, BPO centers, local digital industry
Digital skills	Bootcamps, and digital skill trainings	Business/management skill training	Digital-savvy workforce

Source: Digital Economy for Africa (DE4A) – Rwanda Country Diagnostic

8. **Rwanda has made substantial progress in terms of increasing the supply of broadband connectivity and boosting network expansion over the last 10 years, yet lingering digital adoption gaps remain.** Roll-out of a national fiber optic backbone network has extended Rwanda's "middle-mile" network, helping to distribute growing international capacity⁵ across Rwanda – bringing a larger part of the population within proximity to the fiber backbone and ultimately to high-speed internet services. Rwanda has set the bar high regionally in terms of mobile network

³ See: https://minict.gov.rw/fileadmin/Documents/Mitec2018/Policies_Publication/Strategy/SMART_RWANDA_MASTER_PLAN_FINAL.pdf

⁴ Key findings are featured in the 15th edition of the Rwanda Economic Update. See: <http://documents.worldbank.org/curated/en/912581580156139783/Rwanda-Economic-Update-Accelerating-Digital-Transformation-in-Rwanda>

⁵ Rwanda's access to international bandwidth has grown ten-fold over the last five years, on the back of new cross-border terrestrial links that allow Rwanda to access undersea cables landing in neighboring Kenya and Tanzania.



coverage, which provides “last-mile” access to broadband for most existing users. 3G network coverage now stands at 93.5 percent, compared with a regional average of 76 percent, yet internet penetration is at 58.3 percent⁶. While Rwanda’s expansion of digital infrastructure has been impressive, big gaps thus remain in the uptake of high-speed internet services – particularly among key user groups. Lingering connectivity gaps are characterized by larger gaps in access for rural communities (which make up a majority of Rwandan households), women, the elderly and persons with disabilities. Several barriers hamper further uptake of broadband connectivity, and along with it access to other digital services that require users to first be connected, including: device affordability; services affordability; a large basic digital literacy gap; weak access to locally relevant content; lingering gaps in last-mile access; as well as issues related to competition and services quality.

9. **The Government of Rwanda (GoR) is keen to move towards a “24-hour, self-service, cashless and paperless government”⁷ and have taken decisive steps to build out its e-service capabilities yet is still far from achieving government-wide digital transformation.** The GoR has sought to support digital adoption by rapidly expanding its e-service offering, putting in place many of the basic building blocks needed to support initial government digitization. This has allowed it to quickly scale its e-service offerings from a very low base. Though there is still considerable work to be done to complete government’s digital transformation, Rwanda has made progress in terms of digitalizing public records, expanding the use of management information systems (MIS) and rolling-out shared cloud-based infrastructure⁸ and enabling greater data exchange between various government entities. The Government’s online one-stop-shop platform for e-services, *Irembo*, now provides access to a growing array of citizen-facing e-services⁹. The platform went live in 2015 and as of the end of 2019, some 98 services were being offered online, covering everything from permit requests to civil registration. Several back-end systems that support core government functions have also been rolled-out in areas such as financial management, public procurement, tax collection and human resources. Compared to many of its African peers, Rwanda thus emerges as a high performer in global e-Government rankings.¹⁰ However, several factors still prevent public e-services from having greater impact in terms of both expanding services delivery, access, efficacy and innovation, including: low user uptake; weak application of user-centric design; weak use of shared systems and services; limited depth and breadth of digitization of sectors and services; digital skills gaps in the civil service; the security of digital transactions; as well as limited support for private sector innovation.
10. **While Rwanda is viewed as a regional innovation leader, boasting one of the most favorable business environments on the continent¹¹ and a handful of successful digital start-ups, digital-enabled business development is nascent.** While a handful of ‘native’ platforms have emerged – predominately focusing on domestic e-commerce (retail/wholesale) and transportation –Rwanda is outperformed by many other economies on the continent, including South Africa, Nigeria, Kenya and Ghana. These economies have several things in common – the presence of vibrant a tech start-up and incubation ecosystem, and larger markets. As it stands, Rwanda’s entrepreneurial ecosystem is characterized by a number of structural constraints and weaknesses. These constraints prevent most start-ups from reaching scale and thus meaningfully contributing to productivity gains, e-services expansion and job creation. These include: the present quality and sustainability of existing support infrastructure; weak access to capital; existing digital innovation capabilities; and market size.

⁶ RURA. 2019 See: https://rura.rw/fileadmin/Documents/ICT/statistics/ICT_Statistics_report_as_of_September_2019.pdf

⁷ See: SMART Rwanda Master Plan

⁸ The national datacenter (NDC) has allowed for the expansion of cloud-based services, including the roll-out of a Government cloud (G-Cloud).

⁹ Both Government-to-person (G2P) and Government-to-business (G2B) e-services.

¹⁰ Rwanda ranks among Africa’s top 10 performers, and is outperformed only by small island states, such as Mauritius, Seychelles and Cabo Verde, as well as upper and lower middle-income countries such as South Africa, Tunisia, Ghana and Egypt in the United Nations’ Global Development Index (EDGI).

¹¹ Thanks to favorable government policies and a stable political environment etc.



Relationship to CPF

11. **While the proposed project will contribute to several objectives of the FY21-25 Country Partnership Framework (CPF), it is first and foremost aligned with CPF objective 3, focused on *expanding access to infrastructure and the digital economy*.** The proposed project will finance a series of interventions geared towards boosting digital inclusion, addressing the many barriers that hamper digital adoption, as well as leveraging digital platforms and data-driven solutions to improve the efficiency, security, usability and attractiveness of digitally-enabled public services.
12. **The proposed project will also support CPF objective 1 related to *improving human capital*, through a series of interventions that cover the full digital skills spectrum – ranging from foundational digital literacy to intermediate, advanced and highly specialized digital skills¹².** The project will also contribute to CPF objective 2, *improving the conditions for private sector development*, by *inter alia* helping to create (i) a larger market of digital savvy consumers; (ii) opportunities for private sector innovation in public service delivery, enabled by new data-driven platforms and trust services; and (iii) a stronger local entrepreneurship ecosystem capable of supporting digitally-enabled innovation and productivity-gains. By facilitating the digitalization and application of data-driven solutions and digital platforms in key sectors, such as agriculture, health and social protection, the project will indirectly also contribute to CPF objective 4 (*increasing agricultural productivity*) and 5 (*intensifying urban agglomeration*).
13. **The proposed project is also directly aligned with the World Bank’s Digital Economy for Africa (DE4A) initiative, which is supporting the operationalization of the African Union’s Digital Transformation Strategy for Africa.** The Digital Transformation Strategy for Africa sets out a bold vision to ensure that every African individual, business and government is digitally enabled by 2030; the goal is to drive the digital transformation of Africa and ensure its full participation in the global digital economy.

C. Proposed Development Objective(s)

14. **The overarching Project Development Objectives (PDO) proposed is:** To increase digital inclusion, improve the efficiency of public service delivery, and strengthen Rwanda’s digital innovation and entrepreneurship ecosystem.

Key Results (From PCN)

15. The following indicators will be considered for measuring achievement of the PDO:

Table 1: Proposed indicators (PDO-level)

Outcome	Indicator (PDO-level) ¹³
Increased digital inclusion	Broadband adoption: % of population with a broadband internet subscription (mobile+fixed) (of which, % female)
Improved efficiency of public service delivery	Use of end-to-end digitally enabled public services: Number of existing government services that can be delivered digitally, without requiring physical presence
Strengthened digital innovation and entrepreneurship ecosystem	Digital innovation capacity: Number of select firms with a developed innovation ¹⁴ (of which, % female-owned) Human capital for digital innovation: % of graduates employed post-completion of highly specialized digital skills training (funded by the project) (of which, % female-owned)

¹² Based on the DigComp 2.1 proficiency levels grouped into four broad headings—Foundational, Intermediate, Advanced and Highly Specialized.

¹³ All indicators will be disaggregated by gender, urban-rural, and age where possible.

¹⁴ According to Corporate Results Indicators, a ‘developed’ innovation will be measured as the number of businesses receiving advisory services and/or technical assistance through the Project that develop new/innovative business models resulting in the development of new products and/or processes or the enhancement of existing products and/or processes in their operations.



D. Concept Description

16. **The proposed project is designed to accelerate country-wide digital transformation, as well as facilitate Rwanda's integration in the emerging regional digital market.** The proposed project will expand digital adoption, bringing more Rwandans online by addressing the major barriers that dampen demand for digital services and spearheading a series of interventions that promote digital inclusion. The project will also enable Rwanda to leverage critical enabling digital platforms and data-driven solutions to improve the efficiency of public service delivery and expand the adoption of digitally-enabled services. Finally, the project will also increase Rwanda's capacity to support digitally-enabled innovation and productivity-gains, by strengthening the local digital innovation and entrepreneurship ecosystem, supporting tech firms to move from startups to growth and the adoption of digital technologies in key sectors.
17. **The proposed project is designed around four integrated and mutually reinforcing components:**
18. **Component 1: Digital Inclusion (US\$40 million),** focused on creating digitally-enabled citizens. This component seeks to increase participation and inclusion in the digital economy – particularly, among the poor, women and rural communities – by tackling the major barriers that hamper greater uptake of digital tools and services. This component will thus promote universal access to affordable smart devices as well as affordable, high-speed broadband access for all. This will also be achieved by expanding last-mile connectivity across Rwanda and stimulating broadband market development in support of improved access, quality, affordability and sustainability. It will equally support initiatives that bridge the large basic digital literacy gap and boost the perceived value of “being connected”.

The proposed sub-components include:

- i. **Increasing access to affordable mobile devices:** This sub-component will address the issue of mobile device affordability, with the aim of bridging the mobile phone penetration gap¹⁵ and boosting access to smart phones / 4G-compatible devices.
 - ii. **Supporting basic 'Digital Literacy for All':** This sub-component will help tackle Rwanda's basic digital skills gap, equipping all Rwandans with the foundational digital literacy needed to confidently “get connected” and gain access to digitally-enabled services.
 - iii. **Expanding last-mile connectivity and access:** This sub-component will support the expansion of last-mile connectivity for priority public services delivery locations and citizen service access points, particularly in underserved rural areas, connecting local government offices, hospitals, health centers, schools and higher education.
 - iv. **Enabling environment for broadband market development:** This sub-component will provide support for the review and strengthening of the overall legal, regulatory and policy framework governing the telecommunications sector and emerging technology in favor of increased competition, affordability, access and service quality.
19. **Component 2: Digitally-enabled Public Service Delivery (US\$30 million),** focused on creating digitally-enabled government, will strengthen government's capacity for digital service delivery, as well as create entry points for private sector innovation. This component seeks to enhance Rwanda's capacity to leverage digital platforms and data-driven solutions to expand and improve public services delivery, as well as support investment in digital public goods (such as digital identity) that can in turn unleash private sector e-service innovation. It will support investment in the building blocks and capabilities critical to the expansion of seamless end-to-end digital public service delivery – allowing citizens

¹⁵ An estimated 37 percent of the population do not own a phone



and businesses to conduct paperless, cashless and presence-less transactions online. It will also equip government to harness the power of data for public good including enhanced service quality and strategic planning.

The proposed sub-components include:

- i. **Digital ID and trust services:** This sub-component will support the roll-out of a new digital identification and authentication system, and other key trust services critical to securing digital transactions.
- ii. **Enhancing data ecosystem development:** This sub-component will strengthen government's ability to harness the power of data, by building a more vibrant and robust data ecosystem in the public sector, which can in turn spawn private sector innovation.
- iii. **Data-driven solutions in key sectors:** This sub-component will facilitate the application of data-driven solutions in key sectors, allowing Rwanda to expand its e-service offerings and support related innovation.

20. **Component 3: Digital Innovation and Entrepreneurship (US\$25 million)**, focused on supporting digitally-enabled businesses, will enhance the private sector's capacity for digital innovation and entrepreneurship. This component aims to improve the success and growth rate of digitally-enabled startups in Rwanda and position the country as a regional hub for innovation and entrepreneurship by strengthening the underlying ecosystem and talent base. Systematic market failures identified that hamper digital entrepreneurship and innovation will be addressed. This *inter alia* includes supporting better innovation ecosystem coordination, improving the quality of a select number of entrepreneurship support organizations (ESOs), expanding access to early-stage financing, and enhancing advanced digital innovation capabilities.

The proposed sub-components include:

- i. **Positioning Rwanda as a regional digital entrepreneurship hub:** This sub-component will increase the maturity of Rwanda's digital innovation and entrepreneurship ecosystem, expanding linkages with international innovation networks and markets, to position Rwanda as a 'test bed' for innovation.
- ii. **Boosting next generation capabilities for digital innovation:** This sub-component aims to boost the local digital talent base that will fuel the digital entrepreneurship and innovation ecosystem, as well as support growth of digitally-enabled jobs.

21. **Component 4: Project Management (US\$5 million)**. This component will finance project management and coordination, including but not limited to procurement, financial management, monitoring and evaluation, as well as environmental and social safeguards management. This will include funding consultancy support for the implementation of the project, and institutional strengthening of the Rwanda Information Society Authority (RISA), the main implementing agency.



Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No
Summary of Screening of Environmental and Social Risks and Impacts	

22. Combined Environmental and Social (E&S) risks are rated as moderate, based on an initial project screening. Direct E&S project risks are deemed to be predictable, reversible, site-specific, with a low probability of serious adverse effects on human health, the environment, and local communities. Risks identified relate primarily to the deployment of connectivity infrastructure, possible rehabilitation of existing facilities to make them fit for purpose (e.g. installation of IT equipment), as well as likely increase in e-waste and energy consumption (which will be actively addressed). The former could potentially also prompt the need for small-scale land acquisition, temporary economic displacement as well as community health and safety issues, in connection with infrastructure deployment. In addition to general guidelines, the project will leverage the WBG Environment, Health and Safety Guidelines (EHSGs) for telecommunication. The E&S risk screening also notes that the lingering digital divide is being actively mitigated through the project, limiting the risk of social and economic exclusion in relation to digital access and e-service design. It also notes that adequate provisions for data protection and privacy will need to be included in project design. Weak institutional capacity and familiarity with WBG procedure, including the new Environmental and Social Framework (ESF), increase inherent E&S risk in the absence of qualified E&S safeguards staff. A related institutional capacity assessment will be conducted by the WB and the Client will prepare an Environmental and Social Management Framework (ESMF) to guide screening and preparation of site-specific E&S assessments and other instruments, before appraisal.

CONTACT POINT

World Bank

Casey Torgusson, Isabella Maria Linnea Hayward
Senior Digital Development Specialist

Borrower/Client/Recipient

Ministry of Finance and Economic Planning
Gerald Mugabe
External Finance Specialist
gerald.mugabe@minecofin.gov.rw

Implementing Agencies



Rwanda Information Society Authority (RISA)

Innocent Muhizi

Chief Executive Officer

innocent.muhizi@risa.gov.rw

FOR MORE INFORMATION CONTACT

The World Bank

1818 H Street, NW

Washington, D.C. 20433

Telephone: (202) 473-1000

Web: <http://www.worldbank.org/projects>

APPROVAL

Task Team Leader(s):

Casey Torgusson, Isabella Maria Linnea Hayward

Approved By

Environmental and Social Standards Advisor:	Isabella Maria Linnea Hayward	01-Apr-2020
Practice Manager/Manager:	Michel Rogy	01-Apr-2020
Country Director:	Carlos Felipe Jaramillo	18-May-2020