



## CASE OFFERING

# Leveraging digitalisation for transformational governance



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*Cover image: Adobestock*

*Above: Effective governance depends on closing the digital divide, particularly low-income women, youth and persons with disabilities.*

*Photo: Adobestock/Confidence*

## Development context

The Government of Rwanda (GoR) recognises digital transformation as a critical pillar for socio-economic development and green development. Rwanda's ICT Strategic Plan 2018-2024 recognises three critical enablers for digital transformation: smart governance, ICT capacity development, and building intelligent and shared infrastructure. While Rwanda has already made strides towards these objectives, critical gaps persist, regarding digital literacy, access, and the capacity to deliver digital services.

To strengthen e-governance, there is a need to:

1. Strengthen the ability of public institutions to improve e-governance service delivery
2. Enhance digital literacy at school and community levels
3. Enhance digital literacy and access amongst women, youth, and persons with disabilities.



Digitalisation of the economy is a fundamental pillar for Rwanda's green and inclusive growth as highlighted in the National Strategy for Transformation and Rwanda's Vision 2050.

*Effective governance depends on closing the digital divide, particularly among low-income women, youth and persons with disabilities.*

*Photo: Adobestock/Kehinde*

## Rwanda's accelerated digitalisation

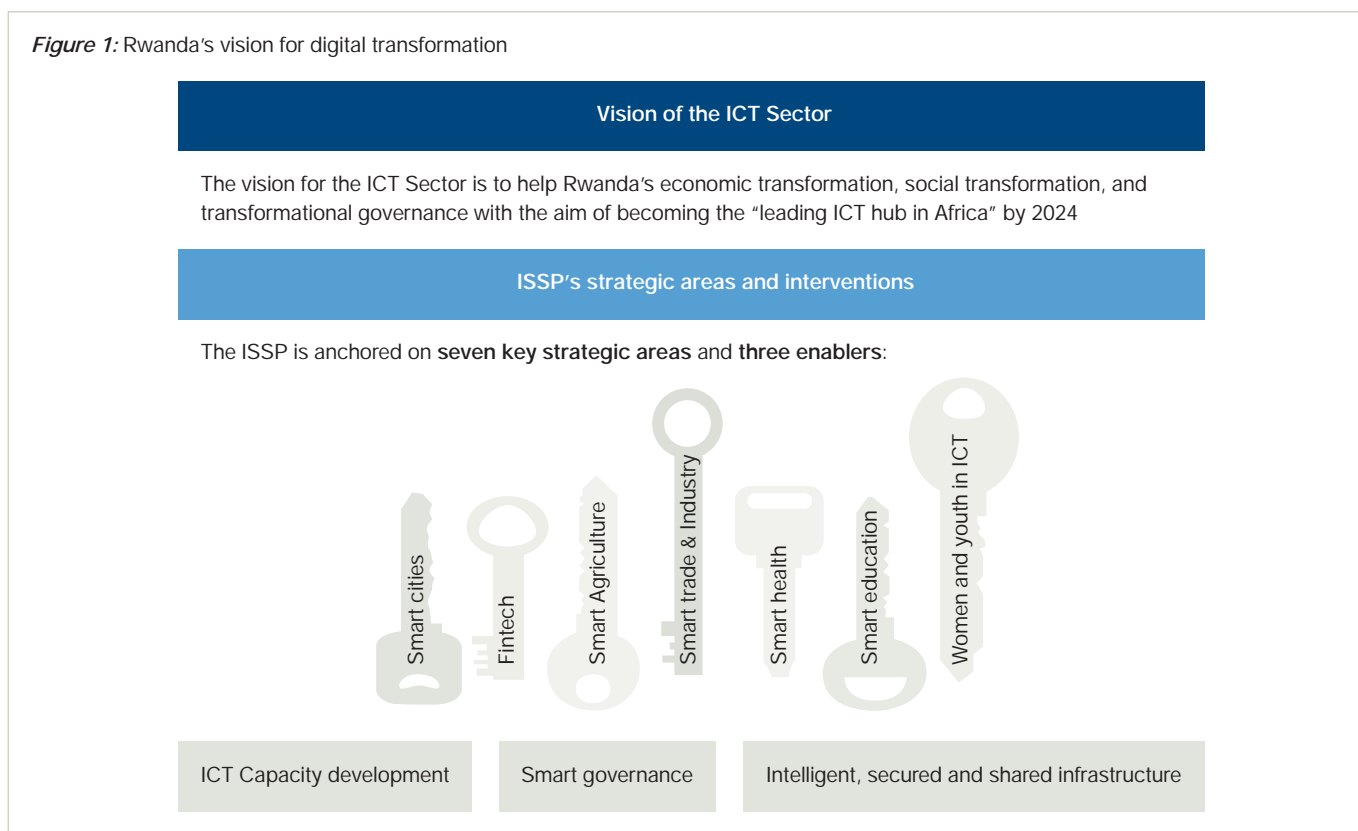
Digitalisation of the economy is a fundamental pillar for Rwanda's green and inclusive growth as highlighted in the National Strategy for Transformation (NST-1) and Rwanda's Vision 2050. Rwanda has long recognised Information and Communication Technology (ICT) as a key enabler for economic growth and livelihood transformation. To this end, the Government of Rwanda (GoR) developed three consecutive National Information and Communications Infrastructure plans, the latest being *NICI III 2010-2015*, to create a pathway for digital transformation of the economy. The NICIs focused on creating an enabling environment for ICT development, building critical infrastructure for ICT delivery, and accelerating services development through ICT. The current *Smart Rwanda* master plan and the *2018-2024 ICT Sector Strategic Plan (ICT SSP)* focus on using ICT to transition to a knowledge-based economy by driving private-sector innovations, digital skills development, and enabling technological transformations across key sectors. This will accelerate Rwanda's competitiveness globally and contribute to the creation of sustainable, green jobs for the future.

**Rwanda has already strengthened its ICT infrastructure, expanding digital connectivity and putting the country on the path of digital transformation.** In 2021, mobile phone penetration stood at 73 percent of the population from just 35 percent in 2010.<sup>1</sup> Rwanda's access to international bandwidth increased tenfold between 2014 and 2019, credited to government roll-out of a national fibre optic network. 3G network coverage stands at 93.5 percent vs. a regional average of 76 percent, while 4G network coverage impressively stands at 96 percent national coverage.<sup>2</sup> Further, 95 percent of Rwanda's population is within at least a 25 km reach of transmission networks<sup>3</sup>.

However, the divide between telephone penetration and access to Internet by citizens still remains. The number of people using smartphones for Internet access is limited compared to those using ordinary phones, especially in rural areas.

The GoR continues to lead efforts to expand digital infrastructure and to create an enabling environment to attract related investments.

Figure 1: Rwanda's vision for digital transformation



1 World Bank, Rwanda Economic Update, 2020

2 Ibid

2 Ibid

From a skills perspective, various programmes expedite digital literacy. In fulfilment of the *Digital Talent Policy*, the Ministry of ICT is implementing the Digital Ambassadors Programme. It aims to improve digital online skills among five million citizens by 2024. So far, the programme has reached 67,000 Rwandans. In primary and secondary schools, digital literacy courses are embedded in the competency-based curriculum, although implementation is uneven, and especially weak especially rural schools.

**The GoR is fostering a favourable environment for ICT businesses.** It has put new technologies at the centre of business processes, including but not limited to e-commerce, e-procurement, and e-tendering. This not only improves accountability and transparency and reduces corruption, but also creates cost savings through limiting transactions costs.

The GoR has taken steps to support local entrepreneurs and attract regional and global innovators. Key flagship projects in driving business innovation include Kigali Innovation City, KLab and Fab Lab that serve as incubators for ICT start-ups.

**Today, the private sector is a key contributor to ICT adaptation for service delivery, entrepreneurship, and job creation and has spearheaded business-to-consumer (and vice versa) digital innovations.** Private-sector investments have driven innovations in logistics, e-payment, e-hailing, and e-commerce. These service platforms connect consumers and providers, and job seekers with employers. Businesses and start-ups in the digital space are also emerging in sectors such as health, software engineering and financial services. As a result, the ICT sector witnessed growth of 12.7 percent between 2014 and 2019.<sup>4</sup> In addition, according to i2i - African Digital Platforms database, digital platforms in Rwanda are estimated to employ 24,000 people<sup>5</sup>.

**E-governance innovations have improved public service delivery and strengthened the promotion of smart governance on several levels: Government-to-Citizens, Citizens-to-Government, Government-to-Business, Business-to-Government, Citizens-to-Business and Business-to-Citizens.**

As an example of Government-to-Citizens, in 2017 the GoR launched *Irembo*, a web-based application that facilitates delivery of government e-services to people across of Rwanda. The *Irembo* portal now hosts 96 government services coordinated across six government agencies. Through its network of agents, online and USSD accessibility points, *Irembo* attracts over 90,000 users a month, and it continues to expand its services to businesses and government entities.<sup>6</sup> The GoR

also launched the Electronic Building Permit Management System, aimed at reducing transaction costs involved in the physical request of construction permits and at reducing corruption. Hundreds of Internet cafés provide citizens Internet access, enabling access to employment opportunities and e-government services in the absence of home connectivity.

UNDP was instrumental in establishing the Rwanda Integrated Electronic Case Management System (IECMS), which allows all Justice, Reconciliation, and Law and Order sector institutions easy and secure access to individual cases for their ongoing management. The IECMS automates judicial processes and provides each institution with a customized interface.

The COVID-19 pandemic has prompted even more investment in e-governance. Initiatives such as e-courts, e-tendering and e-procurement have been among the critical tools to respond to the pandemic.

Due to these innovations, Rwanda is ranked among Africa's top ten performers in global e-Government rankings. The 2021 Rwanda Governance Scorecard has revealed that the use of new technologies has contributed to the first ever good performance on service delivery.

**These innovations in e-Governance improve accountability, transparency, efficiency and convenience in transacting with citizens and businesses and reduce incidences of corruption. This promotes inclusive societies in which citizens can benefit from basic services and participate actively in society.**



*UNDP Rwanda was instrumental in setting up the Integrated Electronic Case Management System for the Rwandan justice system.*

*Photo: Alice Kayibanda/UNDP Rwanda*

4 NISR, Rwanda Labour Force Survey, 2019 -2020

5 ResearchictAfrica, After Access Survey, 2018

6 Irembo

## Persistent challenges and opportunities

### Digital access and low literacy levels

Despite the progress, gaps in access to digital services persist, particularly among low-income women, youth, and persons with disabilities (PWD). While access to Internet and mobile connections has increased, broadband remains unaffordable to the average consumer in Rwanda. While mobile penetration is close to 80 percent countrywide, smartphone penetration is only at 14.6 percent. A 3G monthly Internet subscription costs more than 38 percent of the median monthly income of 26,000 RWF (US\$25.42), and the cheapest smartphone is double the median monthly income. Mobile ownership among women is only 50.9 percent vs. 68 percent among men. The rural/urban divide is also deep, fueled by limited Internet coverage in rural areas: twelve percent of rural households have Internet access vs. 38 percent of urban households; 40 percent of rural youth own a mobile device vs. 71 percent of urban youth.

**The digital divide is exacerbated by low digital literacy levels.** National digital literacy was last recorded at 8.9 percent<sup>7</sup>, hampering usage of even the most basic digital devices and applications. This falls short of national ambitions to achieve a 60 percent digital literacy rate by 2024<sup>8</sup> among all adults. While GoR's national digital talent policy and other flagship projects have advanced digital literacy, progress is slow. Achieving the NST-1 target of a 60 percent digital literacy level by 2024 from the 2019 levels requires an annual increase of 10.2 percent.

**Digital literacy among women, the elderly and persons with disabilities is even lower.** For instance, young women's enrolment in ICT courses in higher education is at 38 percent compared to 62 percent for men. Additionally, only 44 percent of students studying ICT in Technical and Vocational Education and Training are women.<sup>9</sup> Five percent of Rwanda's population live with some form of disabilities and have little or no representation in digital and digitally enabled jobs, with ~80 percent of employed PWD working in agriculture. Further, unless platforms and tools are appropriately adapted, blind and deaf citizens find it difficult to use digital services. Digital literacy among elderly people and low-income youth is also low. Only 2 percent of youth in the lowest wealth quintile are computer literate compared to 30.9 percent of youth in the highest wealth quintile.<sup>10</sup>

### Capacity gaps for e-governance delivery

Over the last year, uptake and demand of e-government services has grown, as increasing volumes of public service requests

(for health, permits, registrations etc.) moved online during the COVID-19 pandemic. The need for online service delivery systems became especially important during lockdowns to avoid disruptions. In a global survey of 23 countries' responses to COVID-19, Rwanda fields the highest number of government-led measures to support e-commerce businesses since the start of the pandemic.

**The resultant rapid digitization of key services further brought to light, and at times exacerbated, the digital divide, including in access to technology, connectivity, and digital literacy.** There is a danger that as an increasing number of services become purely digital, sections of society that are not already digitally connected and skillful could lose access to these services, from access to basic utilities, to justice and business services. It is important to anticipate and plan for such unintended consequences.

**Other capacity gaps at local and national levels continue to slow government service delivery and implementation.** This is partly due to technology issues: the lack of appropriate devices, poor Internet, and system failures, especially at the municipal and district levels.

Digital literacy and technical capacity amongst national and local government staff also needs improvement. In a recent International Computer Driving Licence skills survey administered among 2,000 public sector staff, only 2 percent scored above the 70 percent pass rate.<sup>11</sup> Relatedly, the integration of old and new systems can be slow, delaying adaptation and implementation of e-governance services.

Funding is a critical barrier to develop and maintain strong ICT infrastructure, train, and hire experienced personnel to strengthen e-governance service delivery. The lack of adequate ICT infrastructure, both hard and soft, also hampers e-governance service delivery, including for the e-courts system in the justice-sector. ICT-based infrastructure requires regular upgrade of existing platforms based on new ICT development. This goes with the need for skills upgrade for systems users.

Experience has shown that progress in digitalization goes hand-in-hand with increased digital security risks. There has been a recent increase of cybercrimes cases that will require strengthened capacity of national justice institutions, in particular the Rwanda National Police, the Rwanda Investigation Bureau and the National Public Prosecution Authority to prevent, investigate and prosecute cybercrimes.

7 EICV 5

8 NST

9 MINEDUC, 2019, Education Sector Statistics

10 NISR, Rwanda Household Survey Youth Thematic Report, 2017

11 ICDL Africa

## Looking ahead

Going forward, UNDP Rwanda will place emphasis on 1) strengthening capacity for improved e-governance through e-courts, 2) improving digital literacy and skills amongst vulnerable populations, 3) providing hardware and infrastructure support (i.e., e-court equipment for correctional services, Rwanda Investigations Bureau, and the Judiciary), and 4) assessing unintended consequences.

### Key outcomes:

This work will generate an understanding of unintended consequences from digital transformation, and recommend strategy refinements as appropriate.

1

### Strengthen capacity for improved e-governance through e-courts

A targeted capacity development program,e is needed to overcome existing barriers in implementation of smart e-court services. In addition, relevant public institutions and non-state actors must have the required ICT infrastructure and skills to provide high quality e-court services. Development partners can help equip governmental institutions with the required tools and expertise. This will expedite service delivery and expand reach to isolated and marginalised populations.

#### Key activities include:

1. **Supporting the GoR in developing and delivering a streamlined capacity building programme** for relevant public institutions at local and national level for e-court services
2. **Develop user experience tracking and monitoring systems, assess customer feedback, and design response interventions** to address highlighted challenges
3. **Resource mobilisation to address critical infrastructure barriers at local and national levels**
  - a. Support the acquisition of ICT equipment and tools for increased e-services by relevant national institutions (justice sector, local government, Civil Society Organisations, etc.)
  - b. Assess digital needs and support the required upgrades on e-governance platforms

Photo: Adobestock



### Key outcomes:

The designed interventions will enhance e-court service delivery and contribute to Rwanda's path towards smart governance; people will benefit from high-quality service delivery.



2

## Digital literacy development for marginalised communities including rural youth, the elderly, women and PWD

To address low levels of digital literacy, UNDP Rwanda will play a critical role in developing, funding and providing the technical expertise to:

- 1. Pilot and scale community-centred digital literacy training programmes in less-developed regions for youth and women**, including the use of accessible tools such as mobile classrooms and radio programming
  - a. Establish partnerships with co-ops, Civil Society Organisations (CSOs) and financial institutions for curricula development and implementation
  - b. Provide training in technical capacities and skills to youth and women entrepreneurs in e-commerce (e-tendering, e-procurement, etc.)
- 2. Implement an enhanced digital literacy programme for persons with disabilities**. Programmes can be channelled through CSOs and PWD cooperatives.
- 3. Raise funds and identify adapted hardware and software to support blind and deaf citizens with e-service access**

### Key outcomes:

This will contribute to skills development for the future and adaptation of technology for greater use of ICT-based services, improved service experience and therefore greater transparency and accountability.

Photo: Adobestock





### 3

## Providing hardware and infrastructure support

To improve access to the justice system, UNDP and the GoR have rolled out the Integrated Electronic Case Management System (IECMS). This system greatly simplifies the processing of documents and communication. While the IECMS system has helped change the landscape of justice delivery in Rwanda, it is not yet fully operationalised. Additional modules are needed to include the entirety of the judiciary system, from investigation departments to court orders enforcement. In addition, both the general public and justice sector staff need training to use the system. UNDP will continue to support the justice sector in the following ways:

1. **Make additional investments** in providing adequate hardware, software and infrastructure to expand system coverage and usage
2. **Translate the IECMS** into Kinyarwanda
3. **Training users of the IECMS**, including the Rwanda Investigations Bureau, professional and non-professional bailiffs

*Photo: Adobestock*



### Key outcomes:

The IECMS can become an even more effective tool, bringing justice closer to the people, reducing costs, distance and time, especially for the poor, remote and vulnerable. As demonstrated since its inception, the IECMS also holds huge potential to further reduce the high rate of case backlogs.



## Comprehensive assessment of unintended consequences

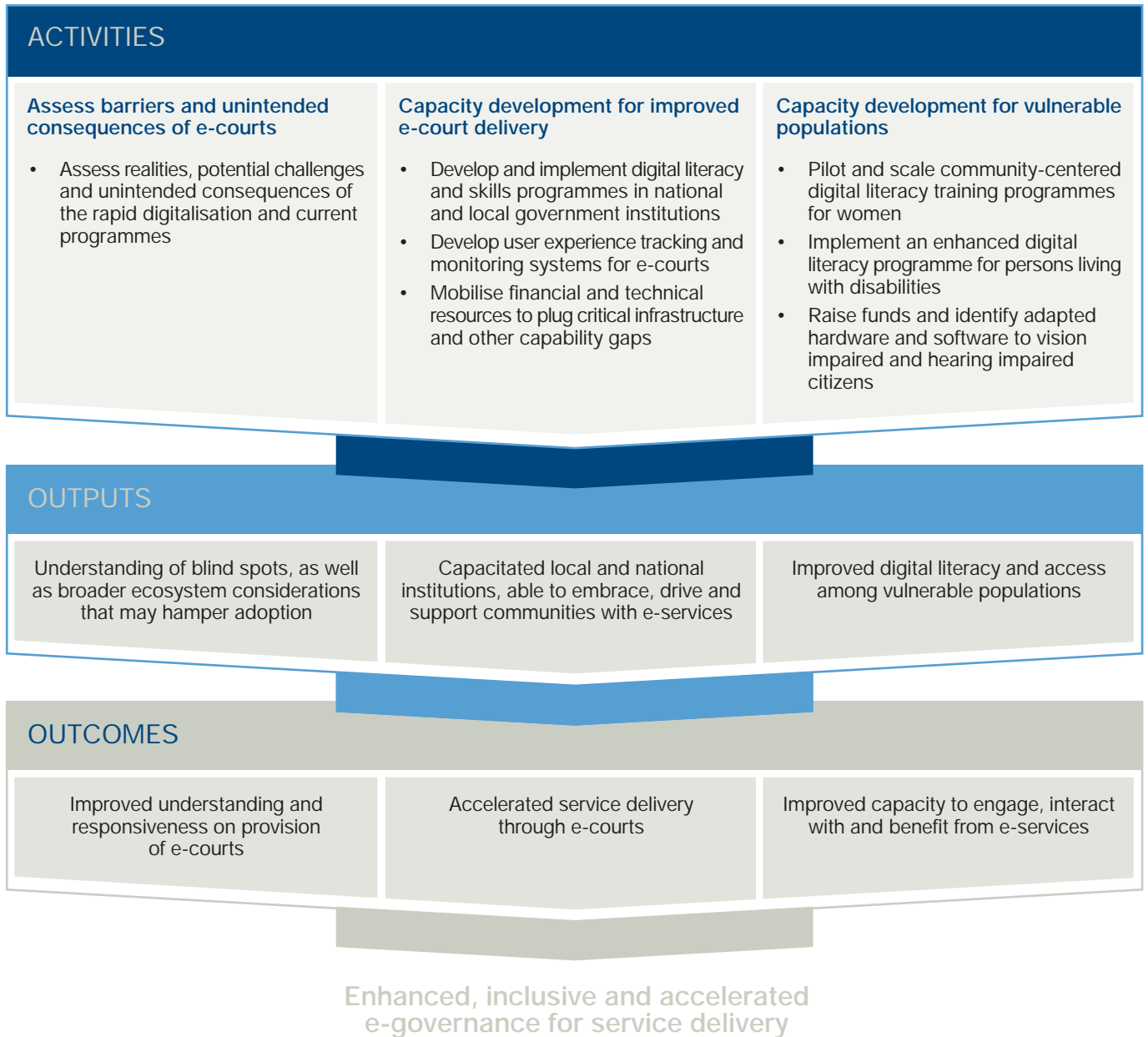
To date, addressing the digital divide has centred on increasing access, and on programs aimed at broader digital literacy. While these are critically important, the sheer volume and pace with which public- and private-sector services are converting to digital technology requires taking a step back to understand potential unintended consequences, to help shape how programmes are designed and rolled out.

A thorough assessment of realities, potential challenges and mitigants for flagship programmes such as e-courts offers a key starting point to help shape Rwanda's digital transformation framework in governance.

In focusing on this sector, UNDP will build on its prior work supporting digitalisation of Rwanda's justice system. During the COVID-19 pandemic, UNDP supported Rwanda to establish e-courts in seven prisons to facilitate virtual case hearings. UNDP also helped to improve access to justice through such initiatives as the Integrated Electronic Case Management System (see more on the IECMS below).

# Theory of Change

The outlined interventions will contribute to Rwanda’s digital transformation of governance and its vision of inclusive and green growth, as outlined below.



## Key implementation partners

The table below outlines an initial list of key partners. As conversations are conducted, revisions will be made accordingly.

Category	Key implementation partners
Government	<ul style="list-style-type: none"><li>• Ministry of ICT</li><li>• Ministry of Local Government</li><li>• Rwanda Information Society Authority</li><li>• ICT Chamber</li><li>• Ministry of Finance and Economic Planning</li><li>• Ministry of Justice</li><li>• Rwanda Correctional Services</li><li>• Rwanda Investigation Bureau</li><li>• Judiciary</li><li>• Prosecution</li><li>• Rwanda National Police</li><li>• Rwanda Governance Board</li></ul>
Civil Society	<ul style="list-style-type: none"><li>• Rwanda Civil Society Platform</li><li>• Umbrella CSOs</li></ul>
Development Partners	<ul style="list-style-type: none"><li>• Smart Africa Alliance</li><li>• Korea International Cooperation Agency</li><li>• Deutsche Gesellschaft für Internationale Zusammenarbeit</li><li>• Enabel</li><li>• Mastercard Foundation Rwanda</li><li>• United Nations Children's Fund</li><li>• Deutsche Gesellschaft für Internationale Zusammenarbeit</li><li>• United Nations Population Fund</li><li>• United Nations High Commission for Refugees</li><li>• World Bank</li><li>• World Economic Forum</li></ul>

## Budget

Implementation of this programme is forecast to cost US\$1,910,000

INTERVENTION	ACTIVITIES	BUDGET (US\$)
Comprehensive assessment of unintended consequences (\$90,000)	• Conduct thorough assessments of realities, potential challenges and mitigants for flagship programmes like e-courts	\$50,000
	• Dissemination of the findings of the assessments to policy makers, CSOs and the public	\$40,000
Local and national capacity development for improved e-governance delivery through e-courts (\$1,250,000)	• Support the GoR and CSOs in developing and delivering a streamlined capacity building programme for relevant public and private institutions at local and national level on key e-courts	\$350,000
	• Develop feedback mechanisms / user experience tracking on key e-government services, assess and design response interventions to address highlighted challenges	\$150,000
	• Resource mobilisation to address critical infrastructural barriers at the local and national levels	\$750,000
Digital literacy development for marginalised communities including rural youth, the elderly, women, and persons with disabilities (\$400,000)	• Pilot and scale community-centred digital literacy training programmes for youth and women. The use of accessible tools e.g., mobile classrooms, radio programmes will be explored	\$200,000
	• Implement an enhanced digital literacy programme for PWD. Programmes can be channelled through civil society organisations and PWD cooperatives	\$120,000
	• Support Cooperatives of PWDs by providing crucial equipment that supports access to e-services	\$80,000
Project Management and Oversight (\$210,000)	• Provide quality assurance services for the project	\$120,000
	• Project monitoring and evaluation	\$50,000
	• Advocacy and communication on results	\$40,000
<b>TOTAL</b>		<b>\$1,950,000</b>



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