“DIGITALIZATION, TECHNOLOGICAL CONVERGENCE AND INCLUSIVE & SUSTAINABLE DEVELOPMENT – HOW TO FACILITATE TRANSFORMATION”

THE CASE OF RWANDA

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ABOUT RWANDA

Population size: 12.1 million

Official languages: Kinyarwanda, French, English, Swahili

Literacy: 68%
Unemployment: 16%

Currency: Rwanda Francs (RWF)
Exchange rate: RWF 875/USD1

Govt. & Parliament: Presidential Republic, Bicameral parliament

GDP per capita: USD 774 (3.8x since '02)

GDP (10 yr growth): USD 9.1bn (7.5% p.a.)

Ratings: B+, “stable” - Fitch
B, “stable” - S&P

GLOBAL FACTS

- Fast growing
- Low risk
- Well governed & business friendly

- 2nd fastest growing economy in Africa (7.5% p.a. since 2007)
- Most improved nation in human development in the world
- Young and growing population (~70% < 30)

- 5th safest country to walk at night worldwide
- Lowest debt ratio in region & stable credit ratings
- Stable currency

- 2nd in WB “Doing Business’ in Africa
- 1st for Government transparency in Africa
- Most women in Parliament and in a gender-balanced Cabinet in the world (respectively 61% and 50%)

Sources: UN (UN-HDI), World Bank, WEF, Global and Africa Competitiveness Report, ICCA, Global Gender Gap report, Gallup, ICCA, RDB, BSC (majority 2017)
Strong African hub potential; highly connected African airline
3rd MICE ranking in Africa; +18 ranks in 3 years
Growing bilingual, educated workforce (~50k tertiary grad./yr)

1st in the world for network readiness
2nd in the world of ICT promotion
95% 4G LTE network coverage; 7,000km fibre

Sources: UN (UN-HDI), World Bank, WEF, Global and Africa Competitiveness Report, ICCA, Global Gender Gap report, Gallup, ICCA, RDB, BSC (majority 2017)
SUMMARY OF RWANDA’s ICT SECTOR

3 priority areas

Business Development
1. Attract Foreign technology companies through KIC
2. Support and incubate local tech start ups companies

Nt’l Digital Transformation
1. Service digitization to achieve 100% self service by 2024
2. Drive skills development programs to empower citizens & produce top world class IT talents
3. Drive cyber security programs and create a safe digital economy
4. Build a broadband infrastructure and reach the last mile

Technology innovation
1. Prepare Rwanda to adopt the emerging technologies of the 4th Industrial Revolution
2. Promote local technology innovations

Interventions

Future orientation

Create 100 Tech Start ups by 2025 @ valued at $50M
90% services satisfaction by 2024
Technology innovative led economy
II DIGITAL TRANSFORMATION JOURNEY & STATUS
EVOLUTION SINCE 2000

- 2001-2005: NICI – 1: Enabling Environment
- 2006-2010: NICI – 2: Infrastructure Development
- 2011-2015: NICI – 3: Service Sector Development
- 2016-2020: NICI – 4: Knowledge Based Economy

Smart Master Plan
1. Focus on business and innovation:
   - Rwanda to become Africa’s ICT Hub
   - Private sector/knowledge driven economy

2. National economic digital transformation:
   - Government Digital Transformation by 2018
   - Broadband for all by 2020
   - Digital Literacy for all

3. Future planning:
   - R&D for exports and economic digital transformation (Internet of Things, Big Data and Analytics, Cyber Security Research, Creative Industries, Mobility)
KEY SECTOR POLICIES

- Broadband Policy
- ICT Sector Strategic Plan
- Data Revolution Policy
- Broadcasting Policy
- National ICT Policy
- Digital Talent Policy
- ICT Content Strategy
- E-Waste Policy
- ICT Hub Strategy
- Smart Rwanda Master Plan
Research and Innovation for Industrial Growth.
BACKGROUND

Why does Industrial Growth matter?
• Reduce the trade deficit & diversify our export base;
• Create more high-value jobs for the youth;
• Accelerate GDP growth by creating more formal enterprises.

NIRDAS’ focus?
• Achieve industrial competitiveness in existing priority value chains
• Create new knowledge based value chains in new fields
• Leapfrog to access new domestic and international markets with better products.
NIRDA’S STRATEGY

Mission

Enabling a generation of industrial innovators to become competitive through Technology monitoring, acquisition, development and transfer & applied research

NIRDA recognised as a centre of excellence in the provision of technology support services to increase the competitiveness of the nation’s industries.

Increased competitiveness of Rwandan industries in order to increase exports and production to serve domestic consumption.
NIRDA’S STRATEGY

• Spirit of “service provision”

• Prioritizes Private Sector at the heart of all its interventions. No more “public sector ONLY initiative” with no private sector partner.

• NIRDA acts as a “middle man” to support the Private Sector. **Create value** for them through outsourced services.

• Focusses on **young innovators** on Manufacturing of IT products “A generation of makers” (4th industrial revolution) – Ecosystem for start ups

• Anchor institution for “green industrial growth” agenda
FOCUS AREAS

1. Knowledge Management & Operational Monitoring

2. Technology Acquisition, Commercialisation and Transfer

3. Industrial Business and Technical Advisory Services

4. Applied Research and Technology Foresight (Industry 4.0)
1. KNOWLEDGE MANAGEMENT & OPERATIONAL MONITORING

How do we choose value chains? -> thorough analysis to guide prioritization

How do we choose interventions bringing tech to real economy? -> Technology audits

How do we avail information to industrial enterprise to guide their choice?
   -> Open knowledge management e-platform
   -> Support for Industrial Property Rights registration

How do we know what to scale up or if we messed up? Contracts with
2. TECHNOLOGY ACQUISITION, COMMERCIALIZATION & TRANSFER

• Open calls program focused on existing industries (Garments and banana wine – done: 12 companies selected):

  • Firm level intervention by value chain
  • Supports Equipment purchase – de-risking tech adoption
  • Support industrial skills training + commercial advisory services
3. BUSINESS & TECHNICAL DEVELOPMENT ADVISORY SERVICES

• Hand holding of firms through Advisory services & capacity building – building firm capability
  • How to be better organized (managerial)
  • How to make more money (commercial)
  • How to be more resource efficient (technical)
  • How to develop a better brand/product (technology options & marketing)
4. APPLIED RESEARCH & DEVELOPMENT

Focus on 2 Modern labs for start ups support for product development: J-Life Sciences/Huye & J-STEM/Kigali

- Industrial Knowledge Management/ mentoring
- Design labs for hardware and software
- Prototype and modelling labs
- Support for commercialization & access to finance
- Foresight Incubation
KEY CHALLENGES TO BE ADDRESSED FOR SUSTAINABLE TRANSFORMATION

• Doubling GDP per Capita by 2024 based on ↑ industrial growth
• The Mindset
• Human Capital and Skills for industrial development
• Access to finance
• Institutional Linkages
OPPORTUNITIES FOR PARTNERSHIP

Financing for:

• Infrastructure development & equipment for the industrial product facilities.

Capacity Building for:

• Technical assistance to hire expertise, mentors and training facilitators to improve firm capabilities.
• B2B partnerships for knowledge and technical transfer

Research partnerships with the EU private sector and academia.
THANK YOU