



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

**THE CASE OF RWANDA**

**KAMPETA SAYINZOGA**

# 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

**2<sup>nd</sup> 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)



...low risk

**5<sup>th</sup> safest** country to walk at night  
worldwide

**Lowest debt** ratio in region & **stable**  
**credit ratings**

**Stable currency**



...well  
governed &  
business  
friendly

**2<sup>nd</sup> in WB “Doing Business”** in Africa  
**1<sup>st</sup> for Government transparency** in  
Africa

**Most women in Parliament and in a**  
**gender-balanced Cabinet** in the world  
(respectively 61% and 50%)

# GLOBAL FACTS



...a  
regional  
platform

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)



...IT  
ready

**1<sup>st</sup>** in the world for **network  
readiness**

**2<sup>nd</sup>** in the world of **ICT  
promotion**

**95% 4G LTE network  
coverage; 7,000km fibre**

# SUMMARY OF RWANDA'S ICT SECTOR



3 priority areas



Interventions

Future orientation

Business Development

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

Create 100 Tech Start ups by 2025 @ valued at \$50M

Nt'I 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

90% services satisfaction by 2024

Technology innovation

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

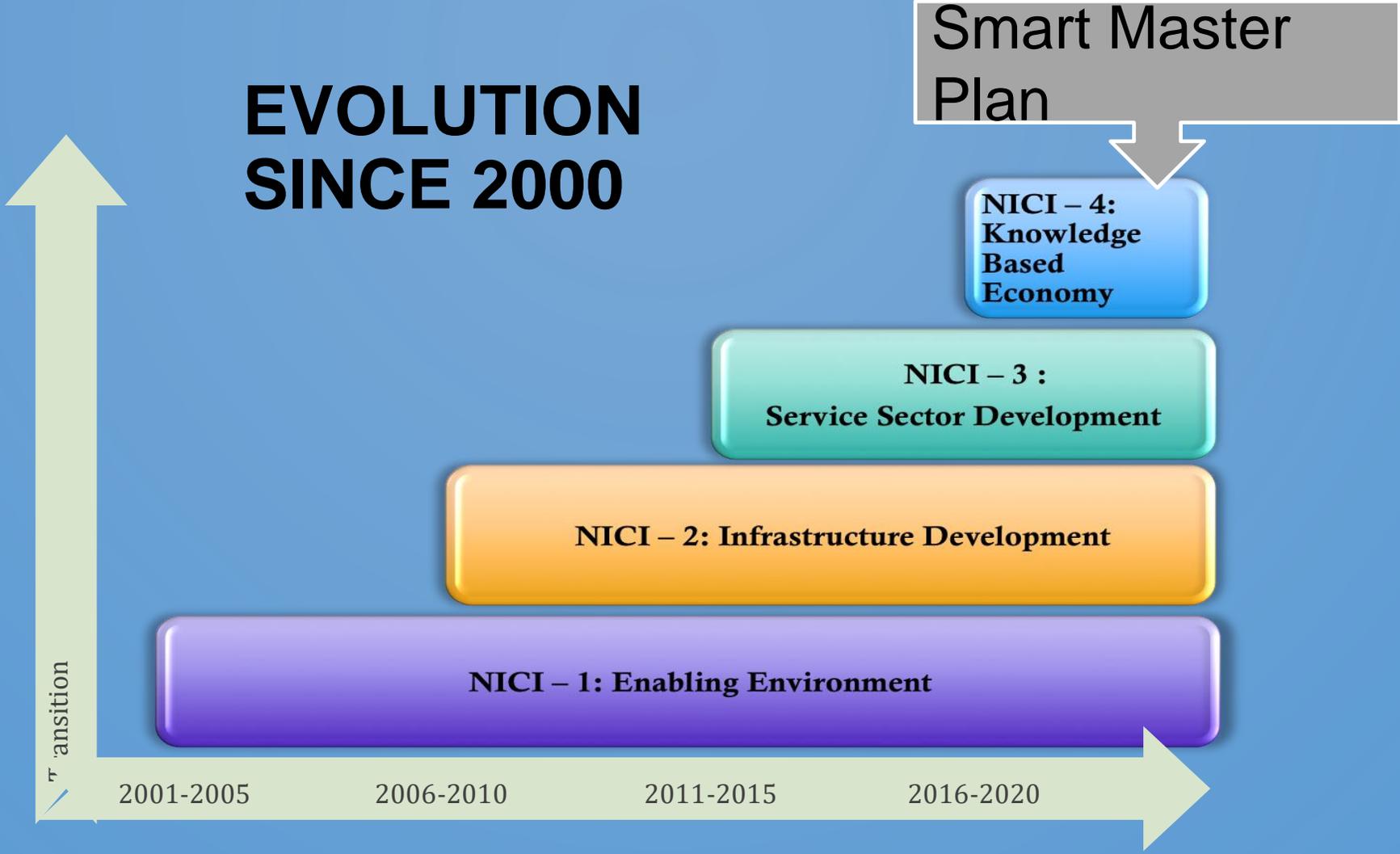
Technology innovative led economy



II

## DIGITAL TRANSFORMATION JOURNEY & STATUS

# EVOLUTION SINCE 2000



# THE SMART RWANDA MASTER PLAN

## 1. Focus on business and innovation:

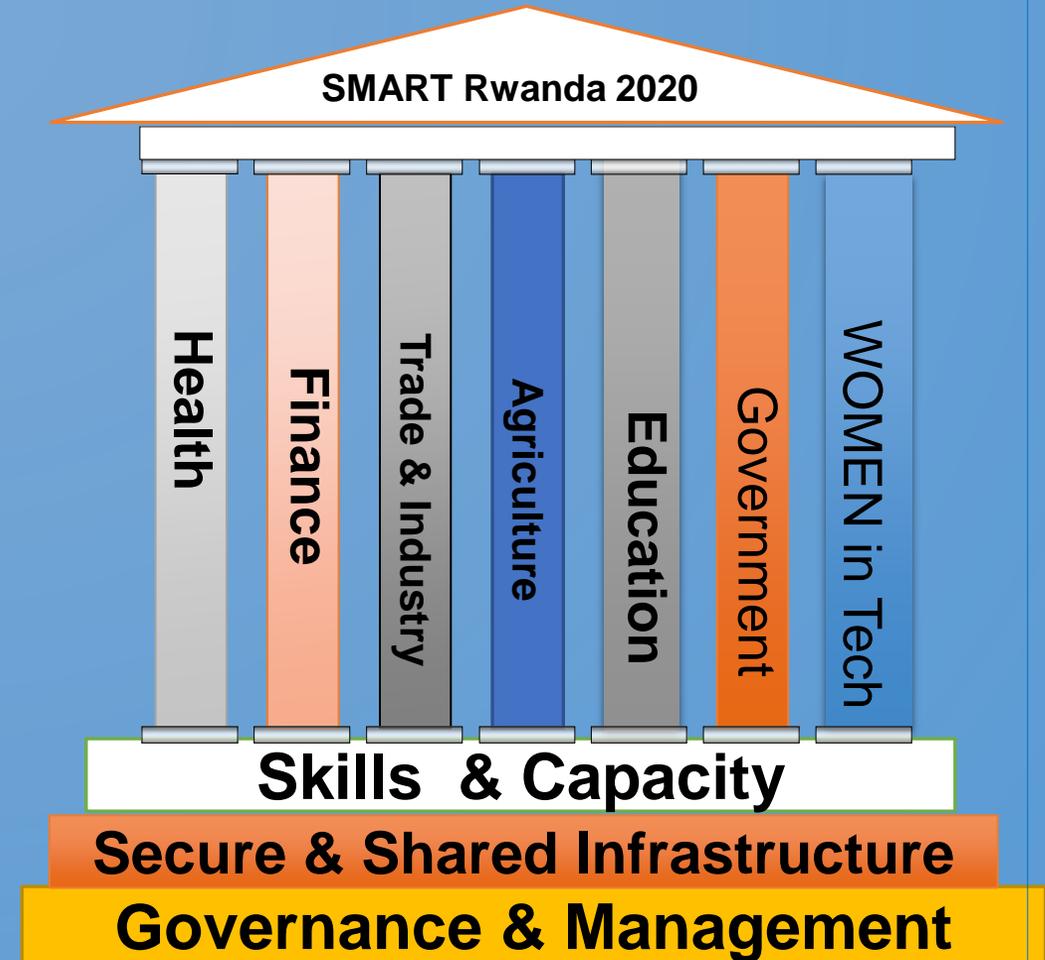
- Rwanda to become Africa's ICT Hub
- Private sector/knowledge driven economy

## 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,



# KEY SECTOR POLICIES



National ICT Policy



Broadband Policy



Digital Talent Policy



ICT Sector Strategic Plan



ICT Content Strategy



Data Revolution Policy



E-Waste Policy



Broadcasting Policy



ICT Hub Strategy



Smart Rwanda Master Plan





**NIRDA**

National Industrial  
Research and Development  
Agency

# THE NATIONAL INDUSTRIAL RESEARCH AND DEVELOPMENT AGENCY

**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” (4<sup>th</sup> industrial revolution) – Ecosystem for start ups

# 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.

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**THANK YOU**