



“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

1. As of 27 Oct. 2018 | Sources: World Atlas, World Bank, Fitch, S&P

GLOBAL FACTS



...fast
growing

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)



...low risk

5th safest country to walk at night
worldwide

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

Stable currency



...well
governed &
business
friendly

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%)

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

1st in the world for **network
readiness**

2nd 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

The background is a solid blue color. In the four corners, there are decorative line art elements resembling circuit boards or neural networks. These consist of thin black lines that branch out and terminate in small white circles. The lines are more dense in the bottom-left and top-right corners, while the top-left and bottom-right corners have fewer, more sparse lines.

II

DIGITAL TRANSFORMATION JOURNEY & STATUS

EVOLUTION SINCE 2000

Smart Master
Plan

NICI – 4:
Knowledge
Based
Economy

NICI – 3 :
Service Sector Development

NICI – 2: Infrastructure Development

NICI – 1: Enabling Environment

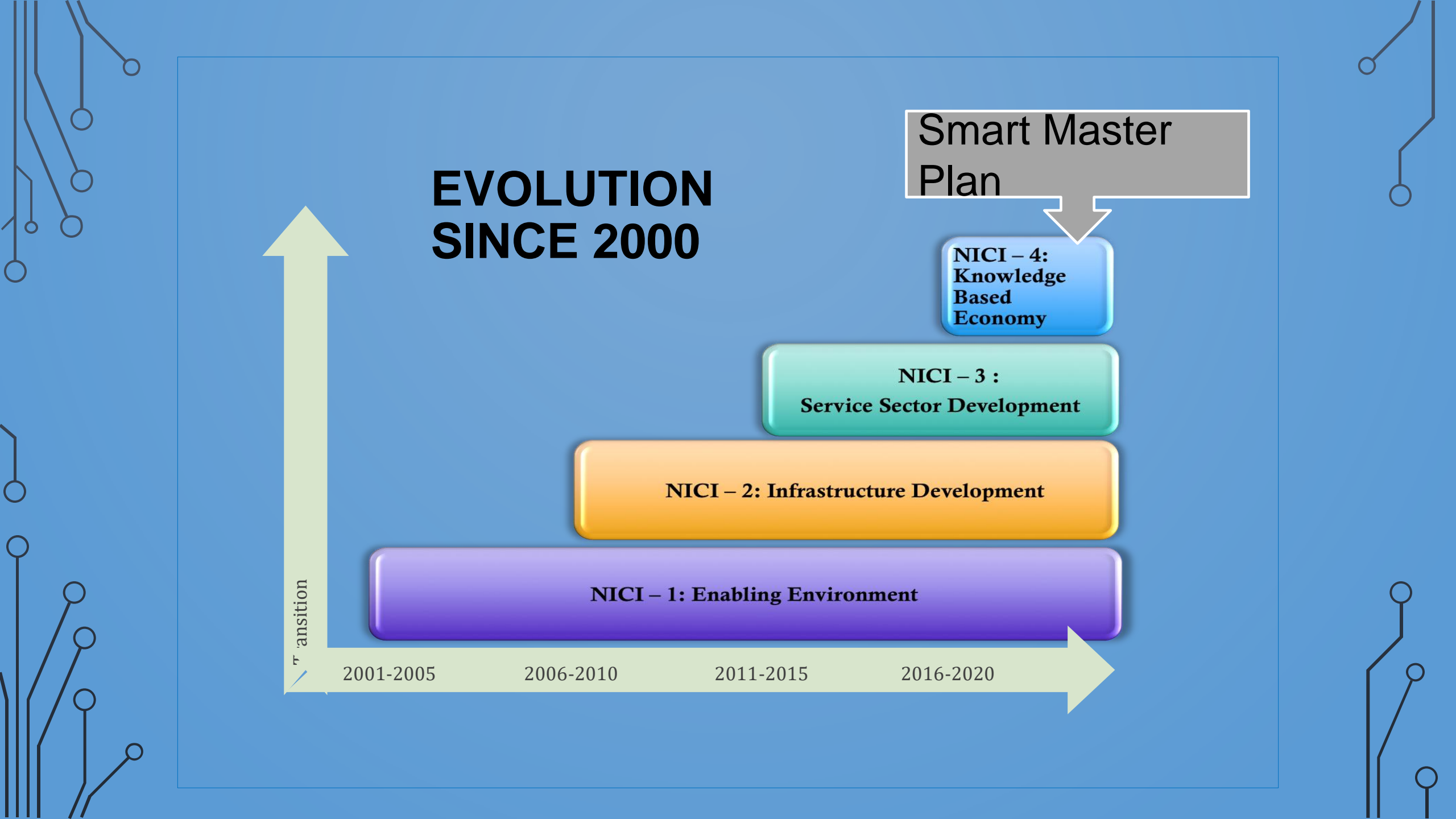
Transition

2001-2005

2006-2010

2011-2015

2016-2020



THE SMART RWANDA MASTER PLAN

1. Focus on business and innovation:

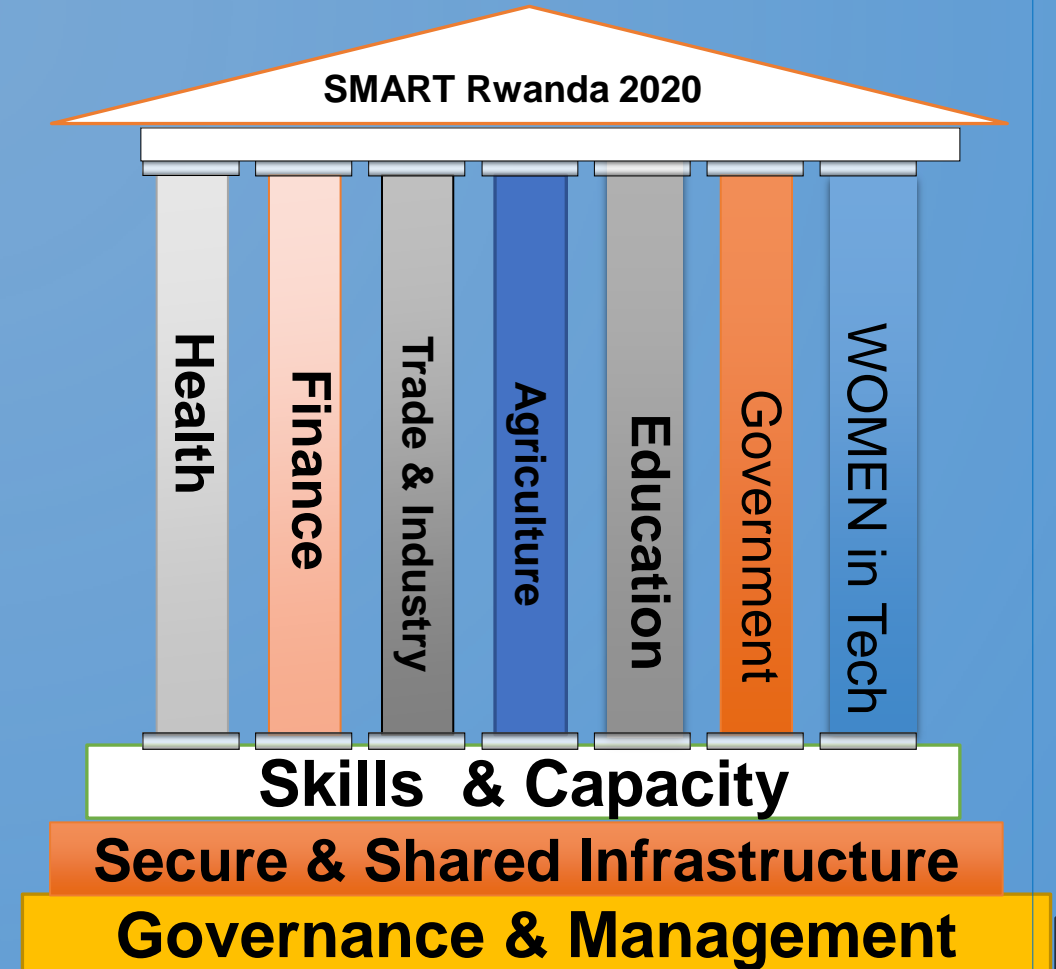
- Rwanda to become Africa's ICT Hub
- Private sector/knowledge driven economy

2. National economic digital transformation:

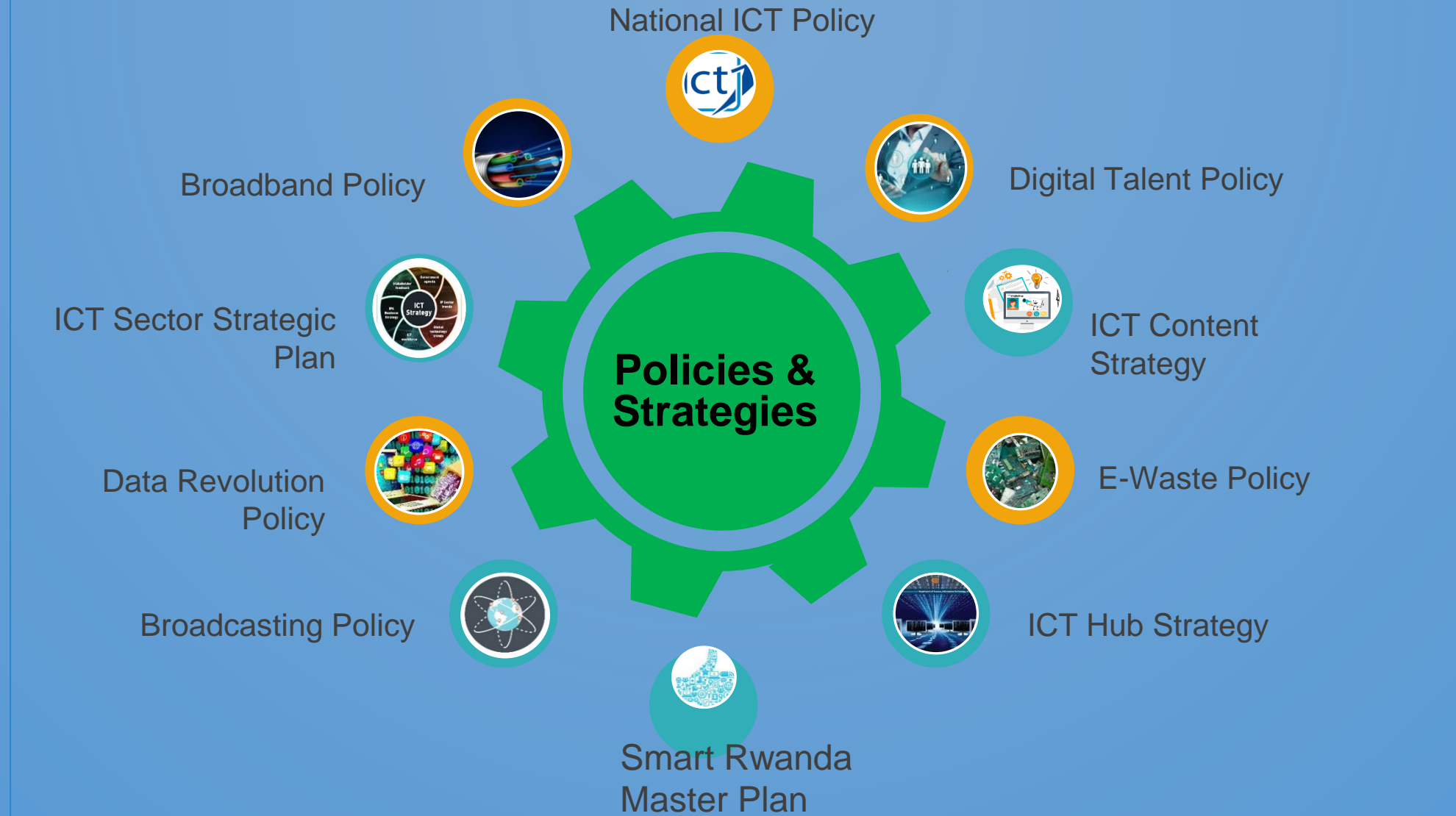
- Government Digital Transformation by 2018
- Broadband for all by 2020
- Digital Literacy for all

3. Future planning:

- R&D for exports and economic digital transformation (Internet of Things, Big Data and Analytics, Cyber Security Research,



KEY SECTOR POLICIES





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” (4th 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.

The image features a solid blue background with decorative circuit-like line art in the corners. These lines, in a dark grey color, form various geometric shapes and paths, some ending in small open circles, resembling a stylized electronic circuit board. They are positioned in the top-left, top-right, bottom-left, and bottom-right corners, framing the central text.

THANK YOU