The European Commission’s science and knowledge service

Joint Research Centre

Dr Mafini DOSSO
Joint Research Centre (JRC), Dir. Growth & Innovation, Unit B3. Territorial Development

Project Coordinator “Smart Specialisation in Innovative and Informal African Economies

STI roadmaps for SDGs: Smart Specialisation for Territorial and Industrial Development in Rwanda - Kigali, January 9th–10th 2020
Smart Specialisation in Sub-Saharan Africa: industrial & technological opportunities for localized sustainable development

OUTLINE

1. Policy Background: Industry & Innovation for sustainable development in Africa

2. What are Smart Specialisation Strategies?: priority domains and entrepreneurial discovery

3. Smart Specialisation Strategies for industrial innovation and technological development

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Industry & Innovation for sustainable development in Africa (1/2)

1. Background
2. Smart Specialisation Strategies: priority and discovery
3. Smart Specialisation for industrial innovation & tech. development

3rd Industrial Development Decade for Africa, UN
- AIDA, STISA 2024
- SMEs Strategy
- BIAT
- AfCFTA

Regional Economic Communities (RECs)

“Africa-EU Alliance for Sustainable Investments and Jobs”

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Regional Economic Communities (RECs)

“Africa-EU Alliance for Sustainable Investments and Jobs”

- R&D and Innovation Ecosystems
- Sustainable agricultural/industrial/manufacturing processes and competitiveness
- Industry diversification and value-added
- Transformative capabilities and activities
- Industrial, technological and managerial knowledge/skills; Skilled Human Capital

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Industry & Innovation for sustainable development in Africa (2/2)

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Value Added/GDP (CIP data 2018)

Inward Foreign Direct Investment (FDI) Greenfield projects to Africa (2017/2018)
Jobs creation & Capital


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2. What are Smart Specialisation Strategies?*

priority domains and entrepreneurial discovery

**Smart Specialisation Strategies are place-specific/localized transformation agendas** enabling

- to match limited STI resources with societal and business challenges
- to prioritise innovation and industrial domains with high and long term welfare returns
- to identify collectively the trajectories for achieving Sustainable territorial competitiveness

* Foray et al (2012); Foray (2015); UNCTAD (2018); Dosso et al (2020)
Smart Specialisation: key building Blocks

Source:
Dosso, Kleibrink & Matusiak (2020), *Smart Specialisation in sub-Saharan Africa: opportunities, challenges and initial mapping for Côte d’Ivoire*

*African Journal of Science Technology, Innovation and Development, South Africa*
SMART

• Own strengths and comparative assets (place-based)

• Inclusive and participatory (not top-down)

• Not only technological innovation

• Innovation Ecosystem; change-enabling environment
STRATEGIC

- Differentiation: competitive advantage, niche market
- Few priorities to reach critical mass for innovation
- Governance synergies and cross-sectoral links
- Socio-Economic transformation plans (including revamp traditional activities and techniques via higher value-added activities)
Building Multi-Stakeholders coalitions/dialogues

Collective Discovery of new innovation and industrial domains and priorities identification

The EDP is a participatory process for local decision-making

1. **Background**

2. **Smart Specialisation Strategies: priority and discovery**

3. **Smart Specialisation for industrial innovation & tech. development**
Identification of Smart Specialisation priorities

New priorities based on regional/local concentration of knowledge, competence and market potentials (dynamic)

Smart Specialisation is NOT to be understood as a sector-specialised

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Modernisation Transition Diversification Radical change

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Partnerships on common Innovation & Industrial priorities

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Thematic Platforms:
Industrial Modernisation
Agri-food
Energy

Source: http://s3platform.jrc.ec.europa.eu/home
3. Smart Specialisation Strategies for industrial innovation and technological development
Smart Specialisation for market-creating innovations *(examples)*

**Modernization/Diversification**

![Diagram]

**Radical Change**

- Improvement of the traceability and variety of green children food supply chains through techno-organizational and marketing innovations

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@MafiniDosso
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Smart Specialisation for market-creating innovations *(examples)*

**Modernization/Diversification**
- Improvement of the traceability and variety of green children food supply chains through techno-organizational and marketing innovations

**Radical Change**
- Develop critical masses of local firms and networks with unique complementary capabilities towards high-tech industrial services in remote (and mountainous) or disconnected areas.
## 1. Background

## 2. Smart Specialisation Strategies: priority and discovery

## 3. Smart Specialisation for industrial innovation & tech. development

### Modernization/Diversification

**Improvement of the traceability and variety of green children food supply chains through techno-organizational and marketing innovations**

### Radical Change

**Develop critical masses of local firms and networks with unique complementary capabilities towards high-tech industrial services in remote (and mountainous) or disconnected areas.**

**The new areas should rely on unique mixes of (constructed) local firms’ capabilities and address societal challenges**
Beyond Transformation → new local/regional Value Chains

New agro-industrial activities

Extension Services - AgriTech
Interactive plantation map
Crop evolution tracking & remote monitoring
Virtual Tour & Geographic information system

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Source: https://www.shutterstock.com/es/g/nivens?searchterm=technology%20agriculture
Beyond transformation → New cross-sectoral domains?

"Attiéké" (Cassava couscous)
- Trademark & registered designation in progress (Appellation d’Origine Contrôlée)
- Production in CIV still mainly traditional & women-led
- Relevant Exports item in sub-region/Africa

Microbiology research pole - Institut Pasteur of Côte d’Ivoire - : regional & international reference Laboratory
→ Skills/research applied to fermentation for Attiéké
→ Waste from production process → circular economy

These targeted activities should primarily address local people challenges (e.g. food-producing, waste, energy), enable to generate a critical mass of Quality human capital to better leverage on own resources and outside

Dosso, Kleibrink & Matusiak (2020), Smart Specialisation in sub-Saharan Africa: opportunities, challenges and initial mapping for Côte d’Ivoire

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THANK YOU FOR YOUR SUSTAINABLE ATTENTION

Contact at Mafini.DOSSO@ec.europa.eu

http://s3platform.jrc.ec.europa.eu

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