



Innovation ecosystems in Sub-Saharan Africa:  
the path towards localised STI for SDGs roadmaps

# STI performances and SDGs achievement in pilot Sub-Saharan African countries

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12 July 2022



BUSINESS  
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RESEARCH UNIT

**Slide 1**

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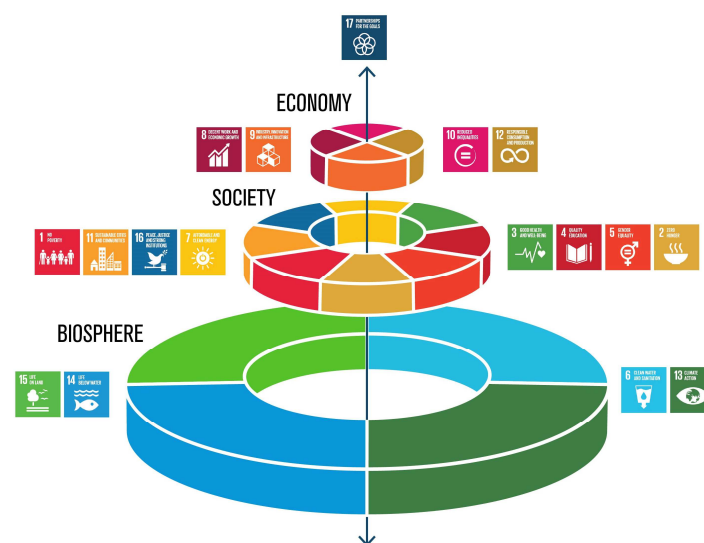
**ASP(2)**

Maybe I will mention: " in pilot" Sub-Saharan African countries

ARRANZ SEVILLANO Paula (JRC-SEVILLA), 11/07/2022

# Outline

1. Background to STI for SDGs Roadmap and progress
2. Innovation ecosystems in Sub-Saharan Africa (SSA)
3. STI Performance and SDGs achievement in selected SSA countries
4. Pathway towards localised STI for SDGs roadmaps in SSA
5. Next steps: further application of STI for SDGs roadmaps in SSA



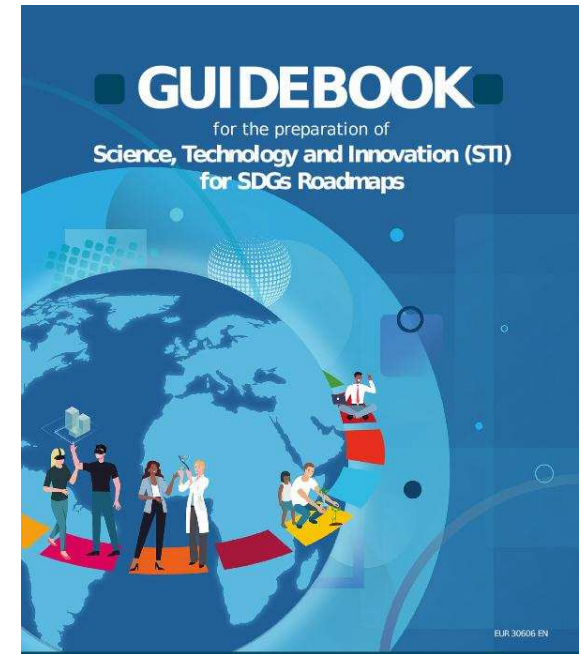
Graphics by Sinter Labs



HIGH-LEVEL POLITICAL FORUM  
ON SUSTAINABLE DEVELOPMENT

# Background to STI for SDGs Roadmaps

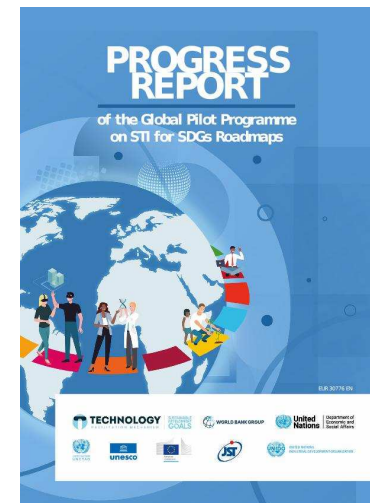
1. The UN Agenda 2030 highlights the key role of STI
2. The STI for SDGs roadmaps is a recognised instrument for achieving the SDGs
3. The Guidebook encapsulates the steps to be taken in the preparation of STI for SDGs roadmaps
4. STI for SDGs roadmaps are practical and actionable
5. And useful in strengthening STI systems for SDGs, resource mobilisation, capacity strengthening...



**HIGH-LEVEL POLITICAL FORUM  
ON SUSTAINABLE DEVELOPMENT**

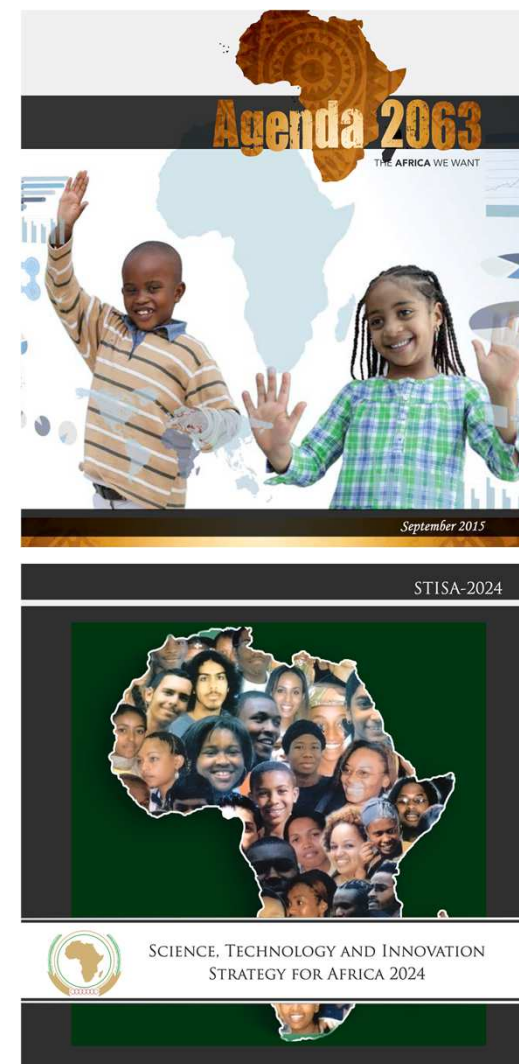
# Progress on STI for SDGs Roadmaps - The Global Pilot Programme

1. The Global Pilot Programme was launched in 2019
2. Countries: Ethiopia, Ghana, India, Kenya and Serbia
3. Ukraine joined in February 2021
4. Lessons: the need for greater stakeholder involvement and participation, coordination and collaboration, linking SDGs to the development of national plans and the STI for SDGs roadmaps, improvements in data, capacities, and dedicated budgets
5. Background papers: existing methodologies for STI mapping, and collaborations and investments for SDGs



# Innovation ecosystems in SSA: context

1. African Union Agenda 2063 – Africa’s long-term development priorities
2. STI Strategy for Africa (STISA 2024), AfCFTA, AIDA...
3. National STI and Digital policies and frameworks
4. Exponential growth in digital techs, hubs, FDIs
5. Multiple SDGs challenges remain – poverty, unemployment, inequality, biodiversity loss...
6. Pathways towards localised STI for SDGs roadmaps



# STI for SDGs Roadmap: SSA pilot countries selection

A three-step process:

1. Overview of potential candidates: 49; 10 “promising”
2. Application of Objective Criteria > 14 Countries. Next step: STI Ecosystem mapping and expression of interests
3. Final Selection: 4-5 countries

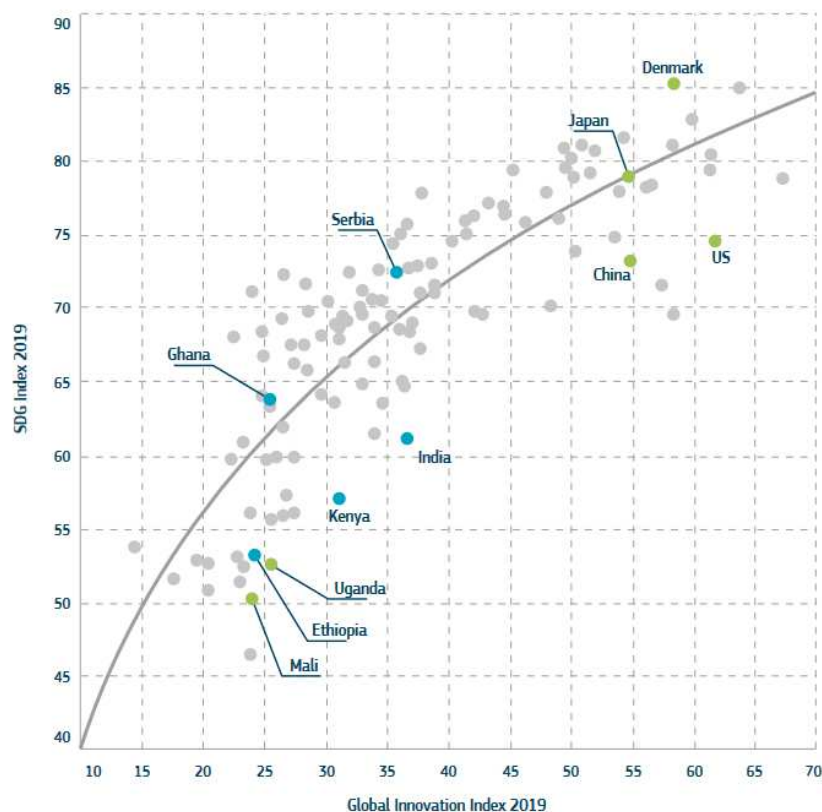
Basic objective criteria include:

- Security and Rule of Law
- Internationally comparable R&D data (UNESCO’s UIS data) - R&D expenditures, R&D personnel...
- Existence of national or regional STI policy framework, adopted
- Existence of Voluntary National Review for SDGs
- Expressed institutional commitment
- And more... involvement in UN-led STI activities, pro-active approach to STI initiatives...



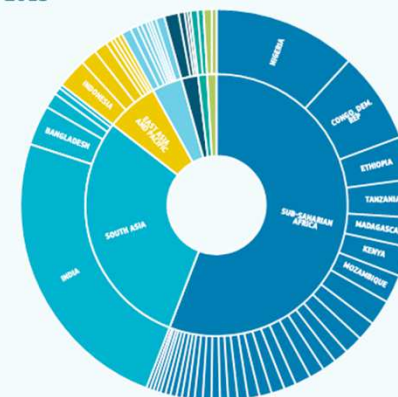
# STI Performance and Achieving SDGs 1

West Africa	East Africa	Southern Africa
Gambia	Mauritius	Namibia
Senegal	Rwanda	South Africa
Benin	Madagascar	Malawi
Cape Verde	Seychelles	
Côte d'Ivoire	Tanzania	
Togo		

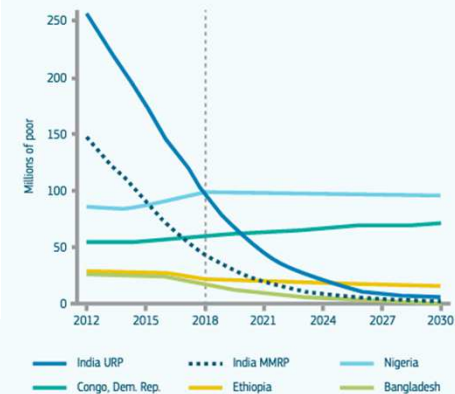


NOTE: Blue dots are the pilot countries;  
green dots are some outliers as reference points  
Source: Guidebook

GLOBAL DISTRIBUTION OF THE EXTREME POOR 2015



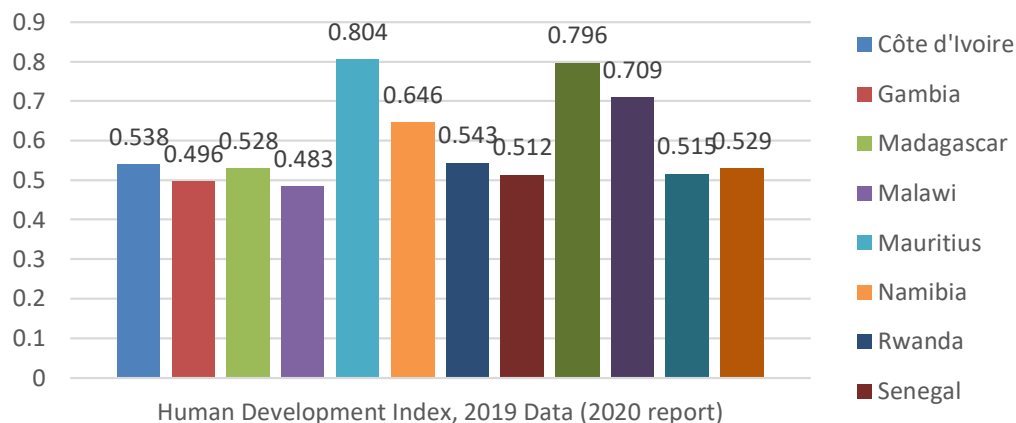
RECENT AND PROJECTED POVERTY REDUCTION 2015 TOP 5 COUNTRIES



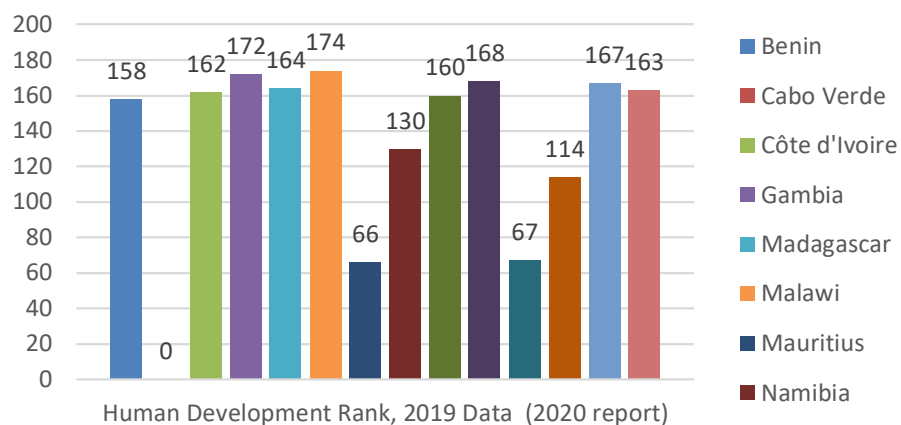


## STI Performance and Achieving SDGs 2

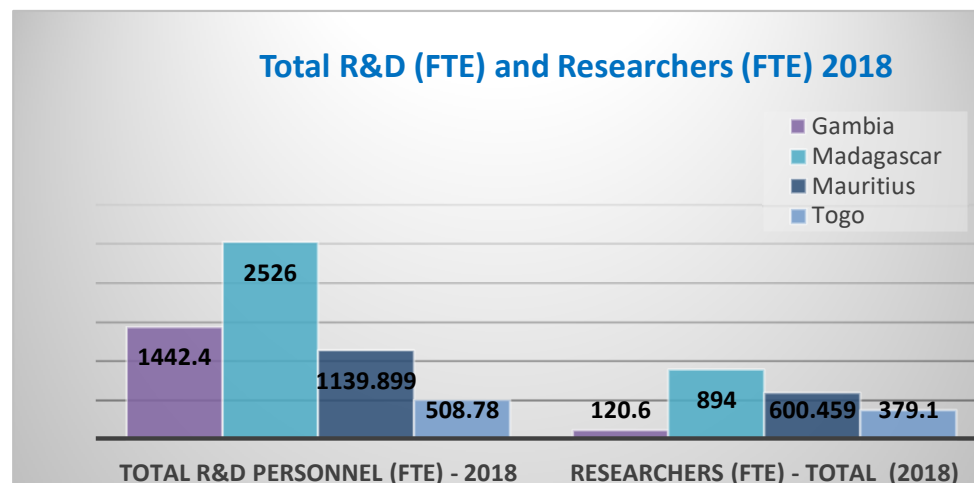
Human Development Index, 2019 Data (2020 report)



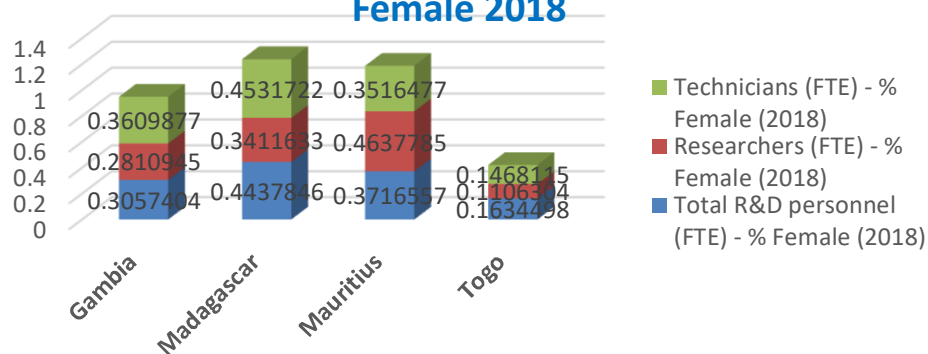
Human Development Rank, 2019 Data (2020 report)



Total R&D (FTE) and Researchers (FTE) 2018



Total R&D , Researchers and Technicians % Female 2018



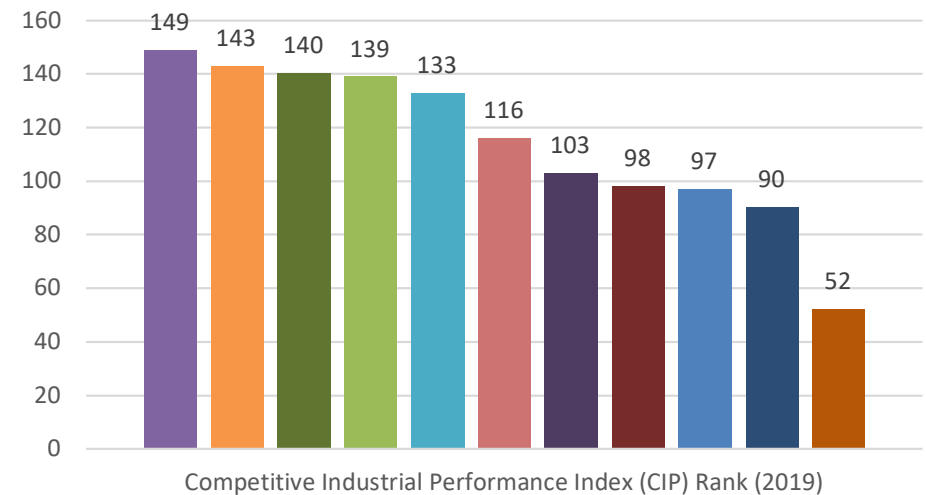
# STI Performance and Achieving SDGs 3

Economic Complexity Index (ECI)

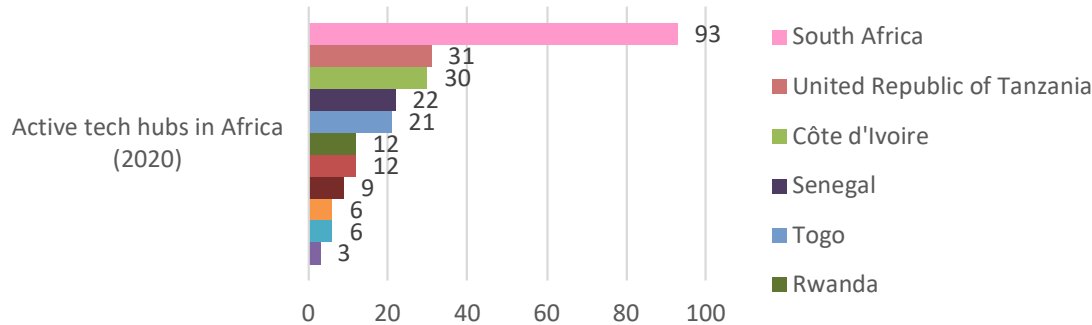


Economic Complexity Index (ECI)	
■ Côte d'Ivoire	-1.172
■ Madagascar	-1.242
■ Namibia	-0.663
■ Senegal	-0.703
■ Togo	-0.867
■ United Republic of Tanzania	-0.653

Competitive Industrial Performance Index (CIP) Rank (2019)

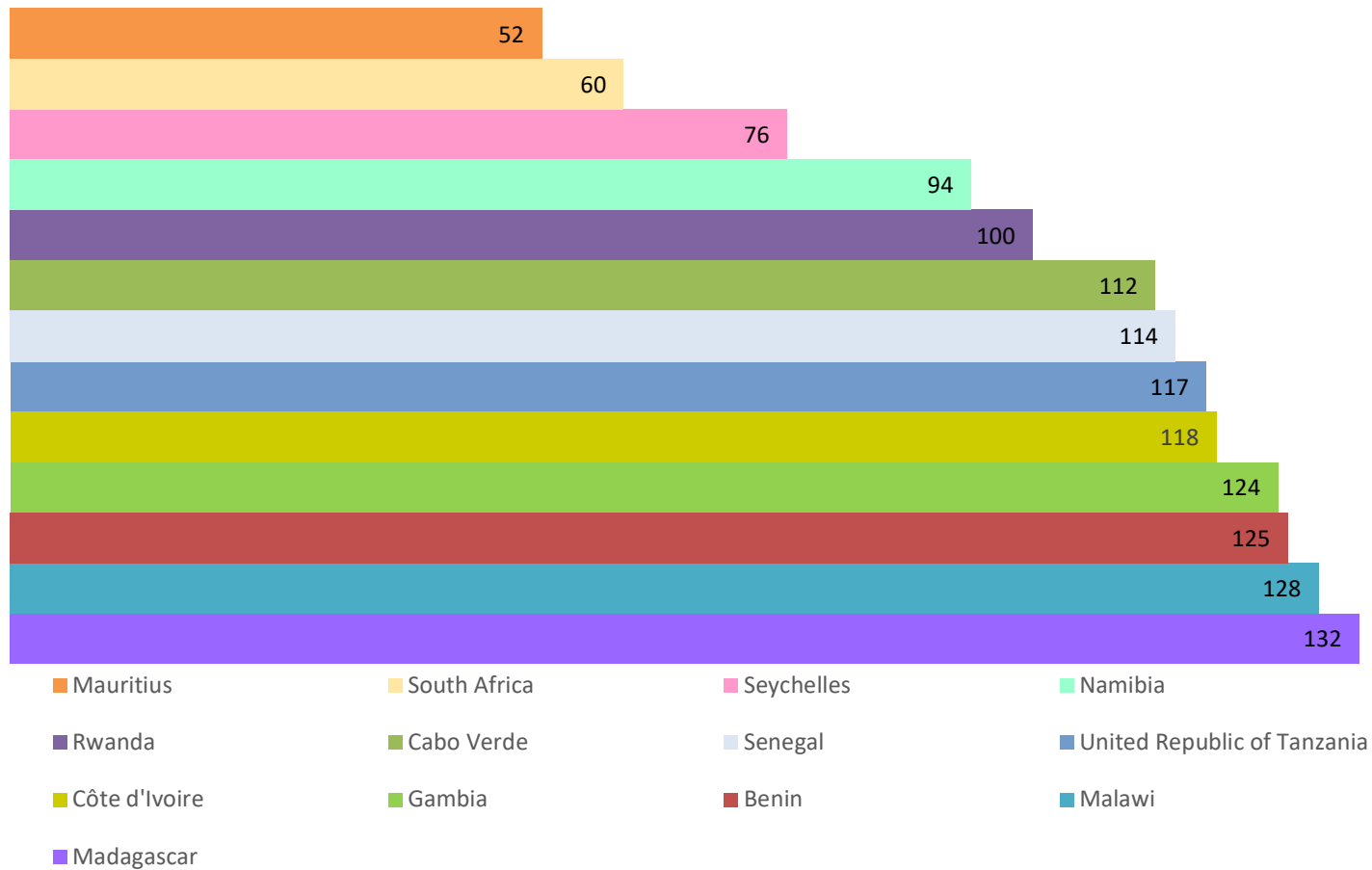


Active tech hubs in the pilot countries (2020)

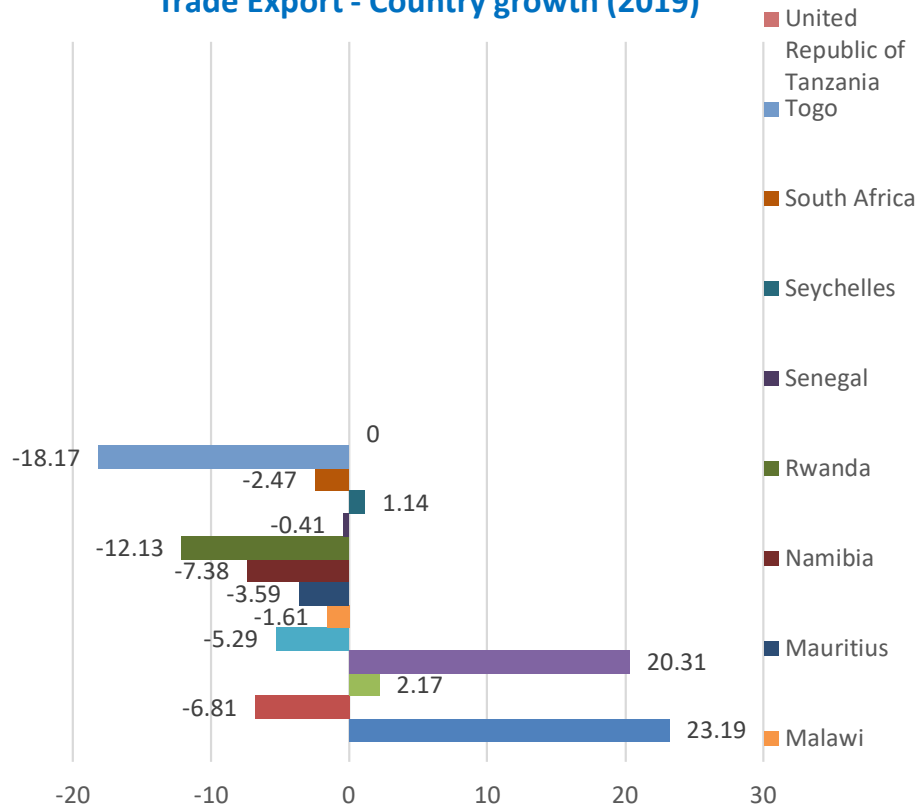


- Gambia
- Malawi
- Rwanda
- Cabo Verde
- Madagascar
- United Republic of Tanzania
- Senegal
- Namibia
- Côte d'Ivoire
- Mauritius
- South Africa

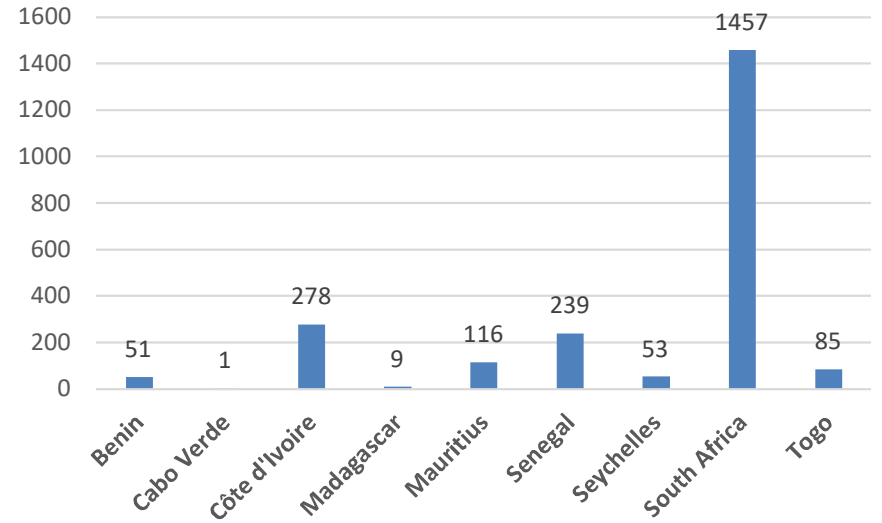
## Global Competitiveness Index Rank 1/ 141 (Performance Overview 2019)



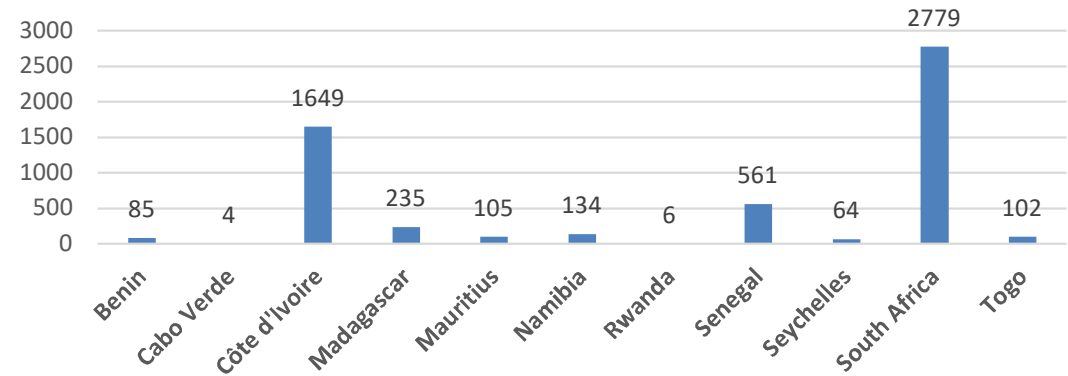
### Trade Export - Country growth (2019)



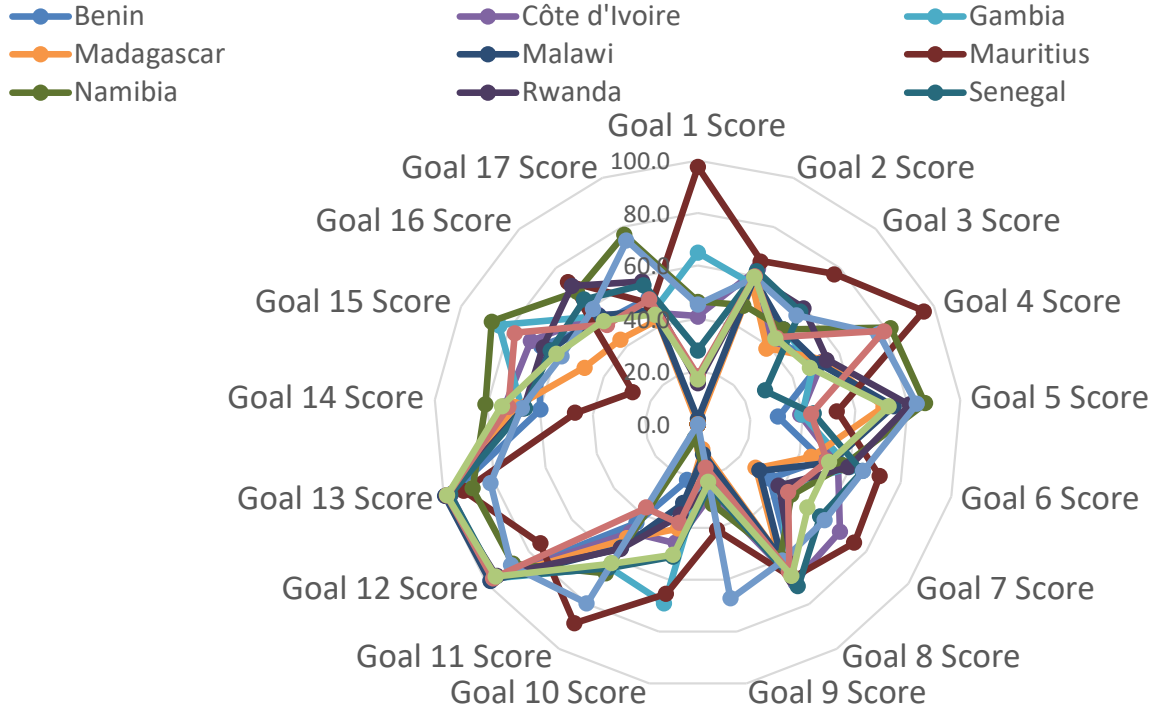
### Patents (2020)



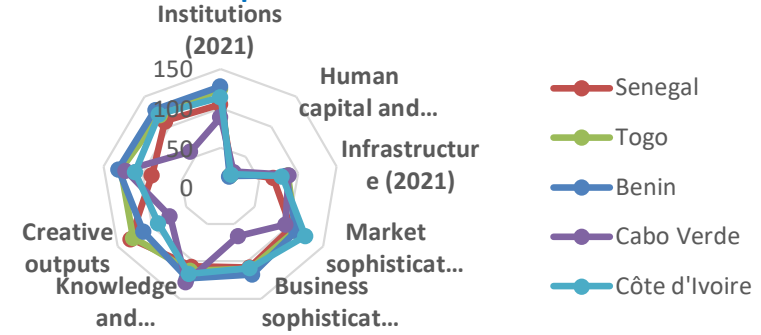
### Industrial design applications (2020)



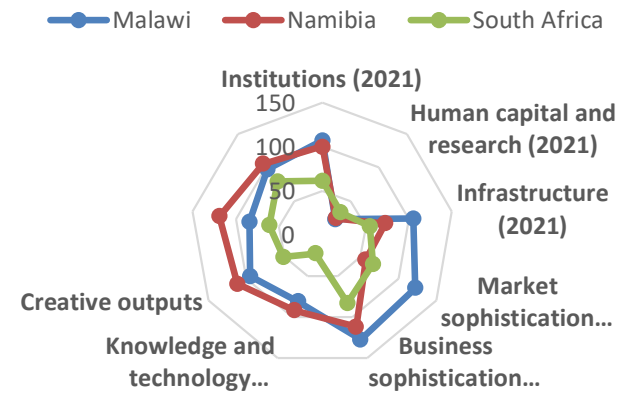
### SDG Index 2021



### Innovation Components West African countries



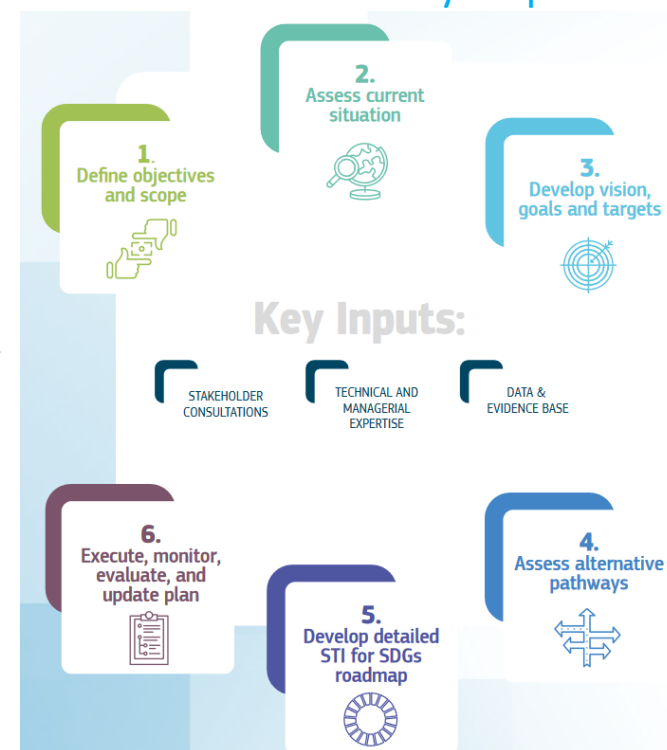
### Innovation Components South African countries



# Pathways towards localised STI for SDGs Roadmaps in SSA

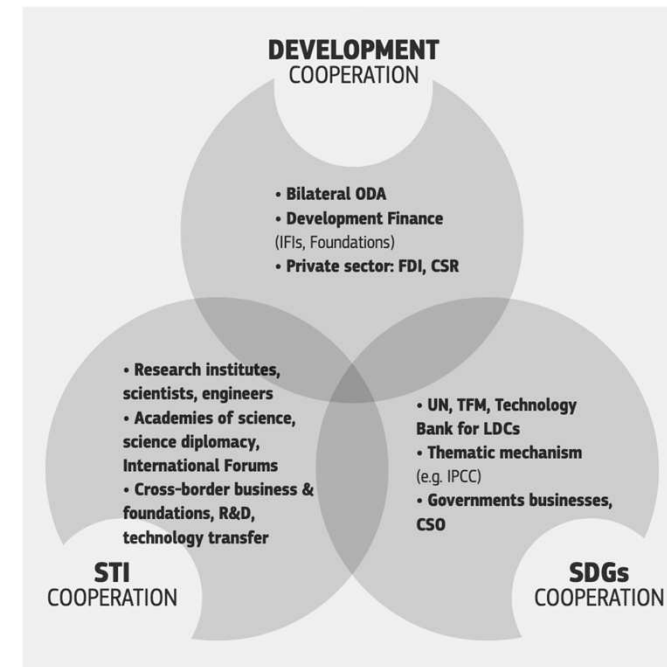
1. Initiate the development of STI for SDGs Roadmaps
2. Intensify support for STI for SDGs Roadmaps in SSA
3. Foster innovation, learning and experimentation
4. Mainstream STI in SSA's broader SDGs work
5. Strengthen STI and policy capabilities, policymaking
6. Mobilise resources
7. Stimulate, strengthen and support international STI Partnerships in Action

## STI for SDGs Roadmaps: Flowchart of six key steps



# Next steps in STI for SDGs Roadmap: Partnership in Action

1. Complete country selection
2. Initiate the development of STI for SDGs Roadmaps
3. Contribute to strengthening STI ecosystems in SSA
4. Support improvements in STI Performance and SDGs achievement in the selected SSA countries and SSA
5. Implement agreed activities outlined in the pathway towards localised STI for SDGs Roadmaps
6. Support further application of STI for SDGs roadmaps



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- Thanks for listening
  - Thanks to Paula Arranz and Angela Sarcina for the data

Let's stay in touch!

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