



United Nations
Economic Commission for Africa

A global and regional context on the business and the science of policy making

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*STI Policy Making Workshop
Namibia*

Agenda 2063

7 Aspirations; 34 Priority Areas, 20 Goals & 174 Targets

Aspiration 1: Prosperous Africa based on inclusive growth and sustainable development

Goals (Priority areas)

(2) Well Educated Citizens and Skills revolution underpinned by Science, Technology and Innovation (**Education and STI skills driven revolution**)

(3) Healthy and well-nourished citizens

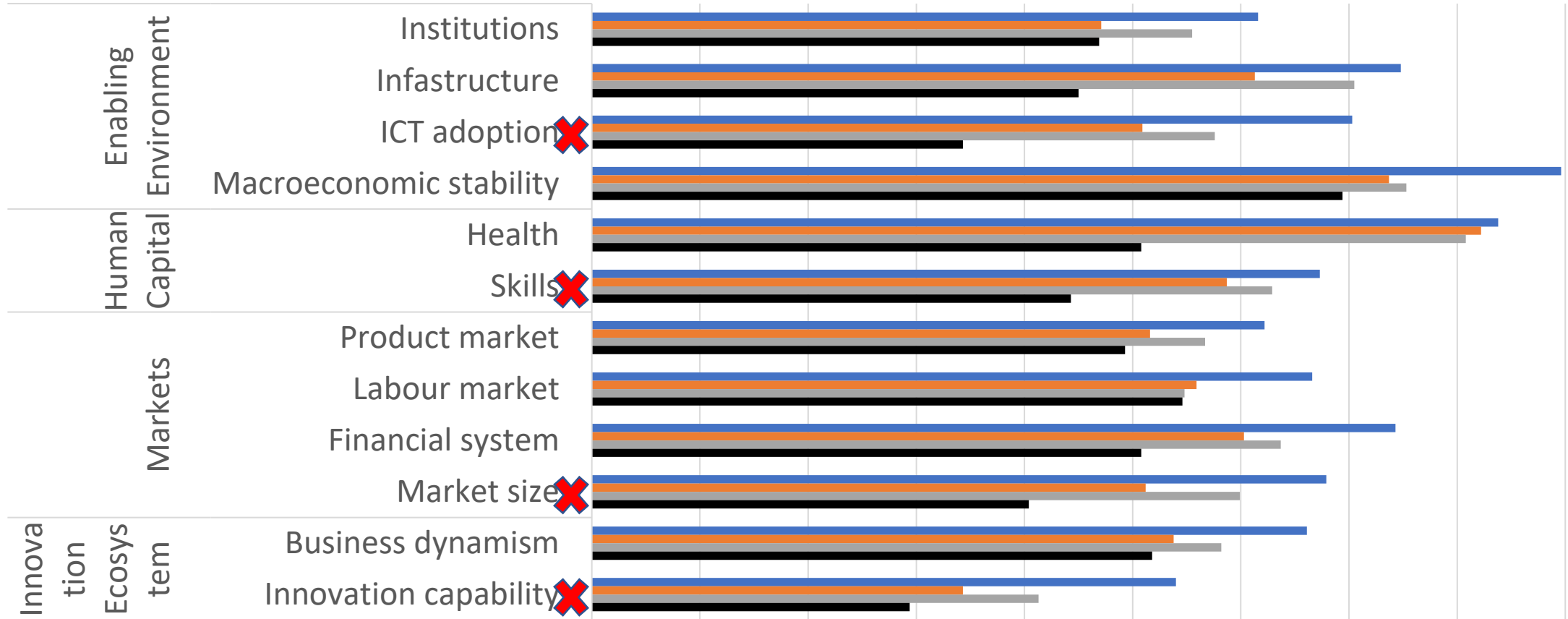
(4) Transformed Economies (**STI driven Manufacturing / Industrialization and Value Addition**)

(5) Modern Agriculture for increased productivity and production

(7) Environmentally sustainable and climate resilient economies and communities

Regional Global Competitiveness

0 10 20 30 40 50 60 70 80 90



■ East Asia and the Pacific

■ Latin America and the Caribbean

■ Middle East and North Africa

■ Sub-Saharan Africa

The 2030 Agenda – “Leave no one behind”

- ✓ 169 targets of which 14 targets explicitly refer to technology, 34 relate to STI (improvement, universal access and effective innovation system).
- ✓ Technology and/or innovation is not necessarily inclusive
- ✓ Science, technology and innovation, can open up new opportunities and challenges that may narrow or increase inequalities.

SDGs: STI supply and opportunity

- The Goals

Level of STI
(high impact tech)

Business Opportunities
Total of \$12 trillion

2-Food; 3-Health; 7-Energy

High
(60 tech)

\$6t

4-Education; 8-Jobs, Growth;
9-Industry, Innovation; 11-
Cities

Very high
(15 tech)

\$5t

6-Water; 13-Climate;
14-Oceans; 15-Forests

Medium
(7 tech)

\$0.5t

1-Poverty; 5-Gender;
10-Inequalities; 16-Forests

Low
(4 tech)

\$0t

- Source: IATT-STI 2017

Overall - Africa is failing behind?

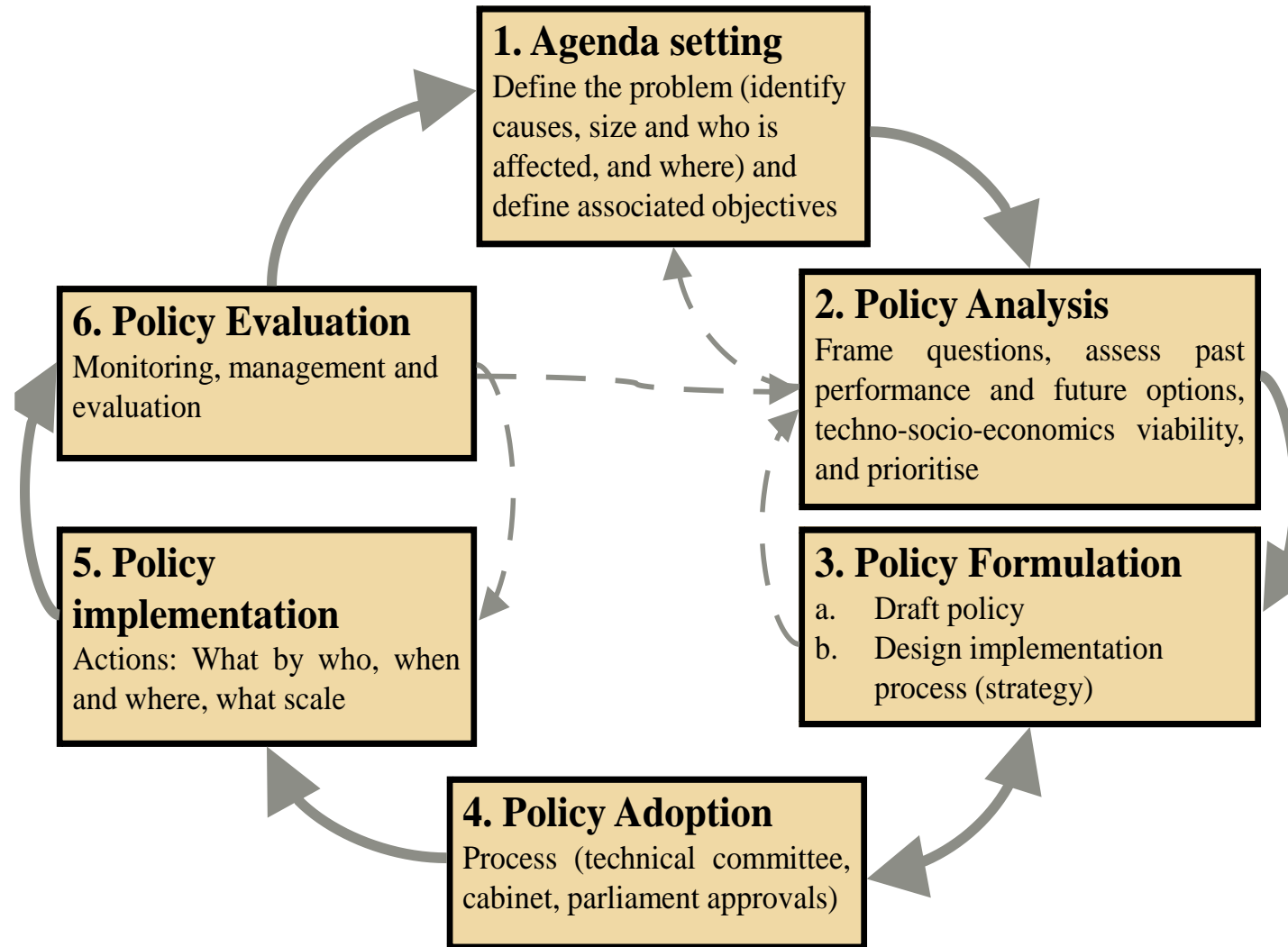
- 2% of global researchers – largely unchanged
- 1% of global expenditure on R&D – largely unchanged
- 0.3% of global \$2.3 trillion high-tech exports value
 - Agenda 2063 target 50% of manufactures- estimate= 10-15%
- 0.2% of global \$423 billion payment (BoP) for IP
 - Low tech acquisition
- 0.07% of global \$380 billion receipts (BoP) for IP
 - Low tech export

It has implications on ability to catchup or leapfrog.

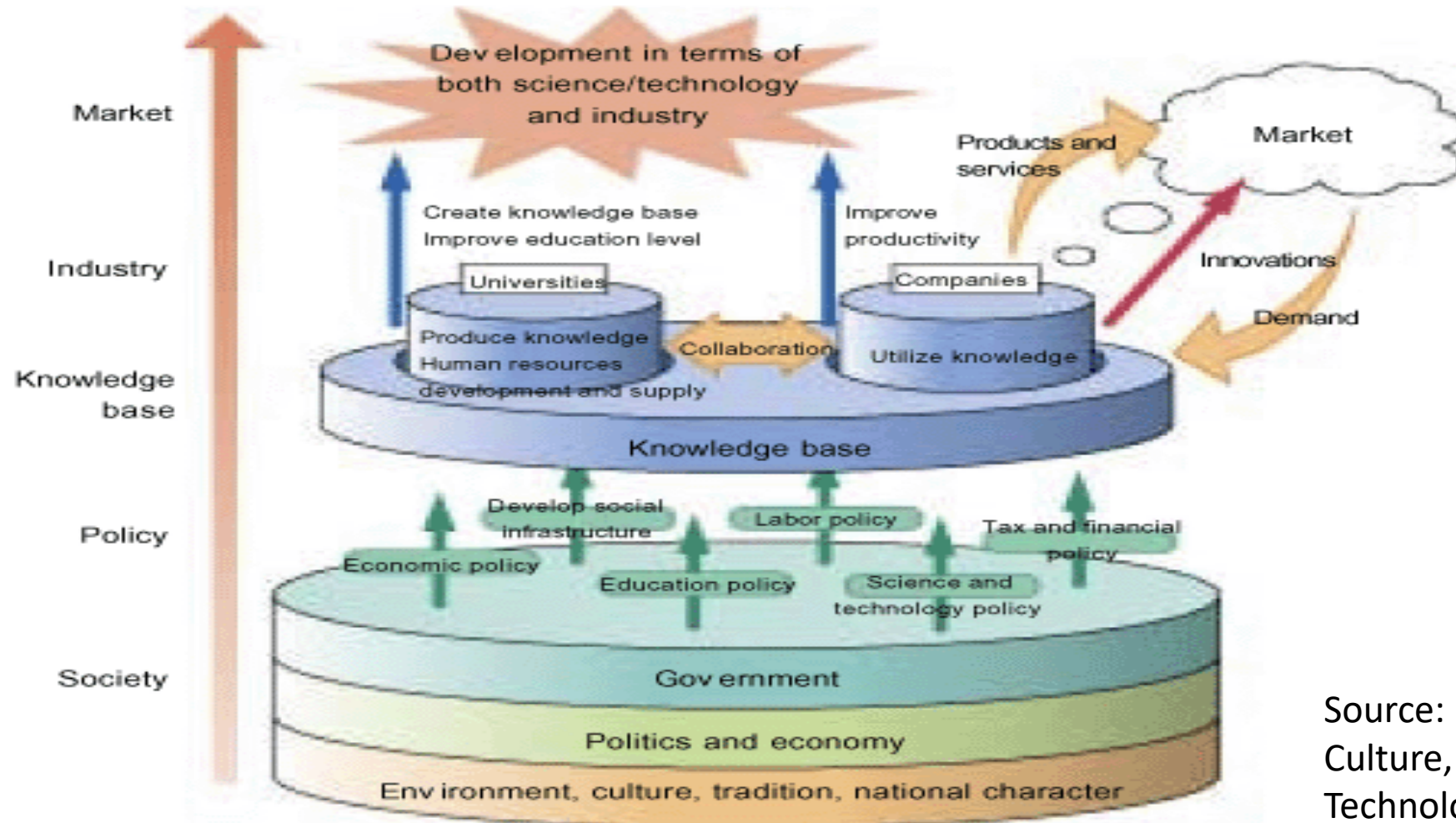


Message 1: From a policy making basis: where and what size of opportunities does STI present? It informs policy making

The Science of STI Policy Making



The Business of STI Policy



Source: Ministry of Education, Culture, Sports, Science and Technology , Japan.

Examine broadly held assumptions on STI policies in Africa

- Lack of policy encourages inactions
 - Codified or uncodified?
 - Is policy action needed?
 - A 'me too' or a true policy investment?
- Fantastic policies but poorly implemented
 - Are the policies good if they could not be implemented?
 - No political will, Lack of funding etc but policy was approved and institutions built?
- Stakeholder engagement very poor?
 - Do they have any stake and which stake, how large or how small?
 - Key ministries uninterested in STI – what was their roles
 - Fragmentation of efforts or competition which is needed to drive innovation

Improving STI Policy Making – ECA-effort

- Countries have mastered the process of how to make policies but:
- ...should be MASTERS of their countries (sovereignty in STI)
 - Helps fix disconnects and fragmentation
- ...learn successes in policy making and not just outcomes
 - what made Korea, Ireland or Cuba invest heavily in STI? How when they were poor?
- ...STI is about national development – how to maximise winners, minimize losers, build partnerships for growth and deliver impact at scale etc
-policy making is divorced from implementation, monitoring and evaluation (i.e. we make policies for others not ourselves)

ECA is developing a guide that countries can use with or without our support

Other potential partnerships

- STI Roadmaps – Ghana, Kenya and Ethiopia (UNESCO, UNCTAD etc IATT on STI)
- Working Group on Capacity Building – IATT
- NEPAD on STI measurements (R&D; CIS)
- ECA/AUC STISA 2024 implementation and monitoring tools
- ECA & AUC Africa Education, Science, Technology and Innovation Scoreboard
- ECA and member States – Fourth Industrial Revolution

A lesson from the past:

- The Presidents letter:

“The Office of Scientific Research and Development...represents *a unique experiment of team-work and cooperation in coordinating scientific research and in applying existing scientific knowledge* to the solution of the technical problems paramount in war. ...The information, the techniques, and the research experience developed [your office] and by the thousands of scientists in the universities and in private industry, should be used in ... the improvement of the national *health, the creation of new enterprises bringing new jobs, and the betterment of the national standard of living ..*”

- (White House Letter of 17 November 1944 by FRANKLIN D. ROOSEVELT, President, United States of America to the Director- OSRD)

Lesson from “Science The Endless Frontier”

- The response:

“The Government should *accept new responsibilities for promoting the flow of new scientific knowledge and the development of scientific talent in our youth.* ..The time has come when such support should be extended to other fields (beyond agriculture).

The effective discharge of these new responsibilities will require the *full attention of some over-all agency devoted to that purpose.* ..I recommend that a new agency for these purposes be established....It should be *fully responsible to the President and through him to the Congress* for its program.” (Science - The Endless Frontier, 25 July 1945, Dr, Vannevar Bush)

- NSF was formed 1950 - \$8.3 billion in 2020- for that purpose



Thank you.

Ideas
to
Action