MINISTRY OF HIGHER EDUCATION, TECHNOLOGY AND INNOVATION PRESENTATION TO THE CAPACITY BUILDING WORKSHOP ON POLICY FORMULATION AND SGD ACCELERATION

PRIORITIES AND KEY CHALLENGES IN THE STI SECTOR

27 April 2021

KEY DEFINITIONS

Research and development (R&D): Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge—including knowledge of humankind, culture and society—and to devise new applications of available knowledge.

Innovation: Introduction and/or application of new and novel products, processes, practices and ideas to create value in an economy or enterprise.

National System of Innovation (NSI): The network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies (Freeman, 1987).

BACKGROUND

- A lot of attention and dedication was invested in the last two (2) decades in developing science and technology policies, as well as assisting in the creation of Ministries and Departments of Science and Technology in the SADC region.

- This is evident with the work in cluster countries producing Science, Technology and Innovation policies in countries such as Botswana, Lesotho, Malawi, Namibia, Mozambique, South Africa, Zambia and Zimbabwe.

BACKGROUND (CONTINUED)

- Namibia is one of the few countries that had not reviewed its science and technology policy since the first policy was developed in 1999.

- The review is needed for alignment and harmonization with new dynamics and treaties such as the Millennium Development Goals, World Summit on Sustainable Development recommendation, NEPAD Science and Technology Plan of Action and SADC protocol on Science, Technology and Innovation.

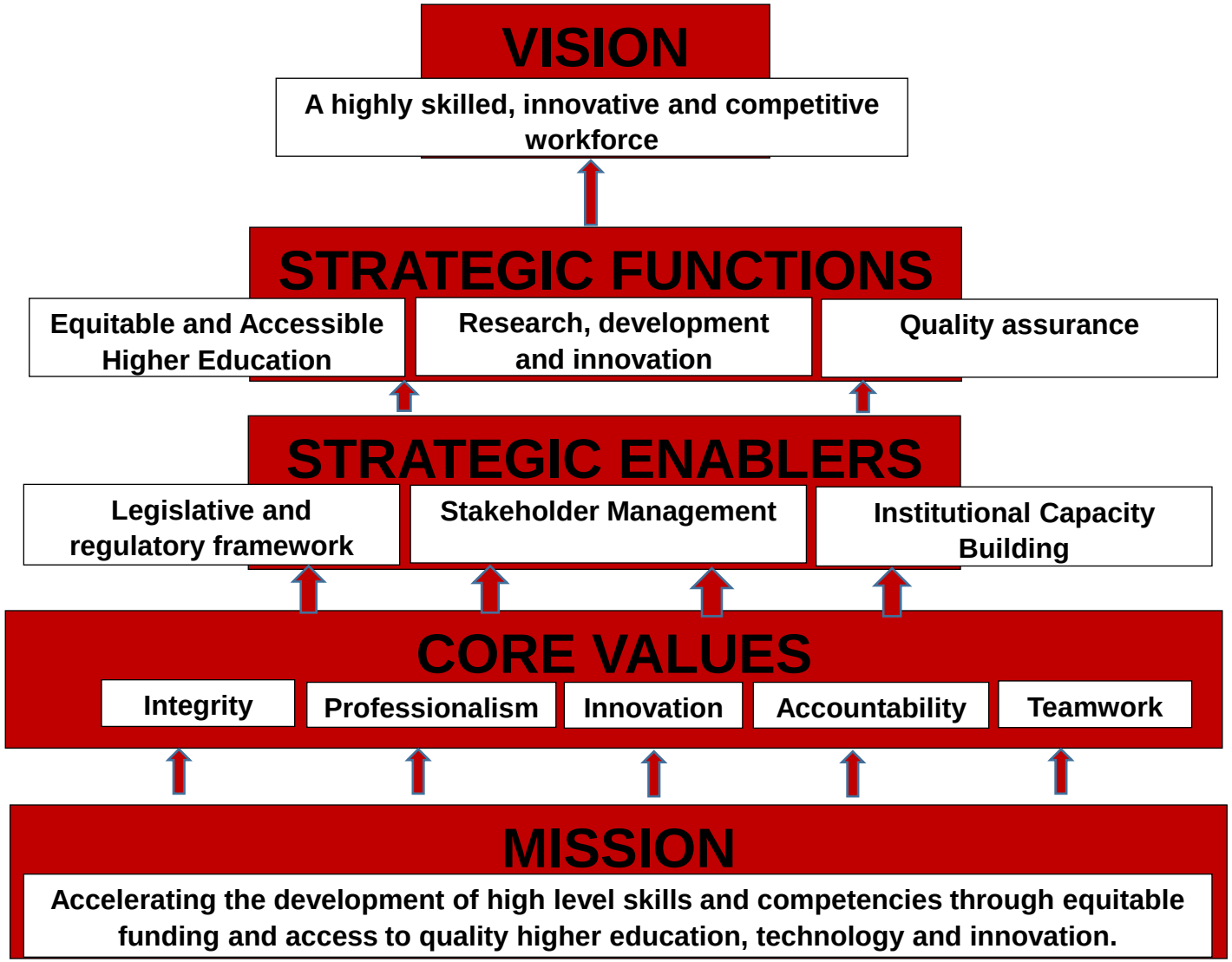
MHETI'S MANDATE

- The Ministry of Higher Education, Technology and Innovation (MHETI) was established in March, 2015 and renamed in March 2020.

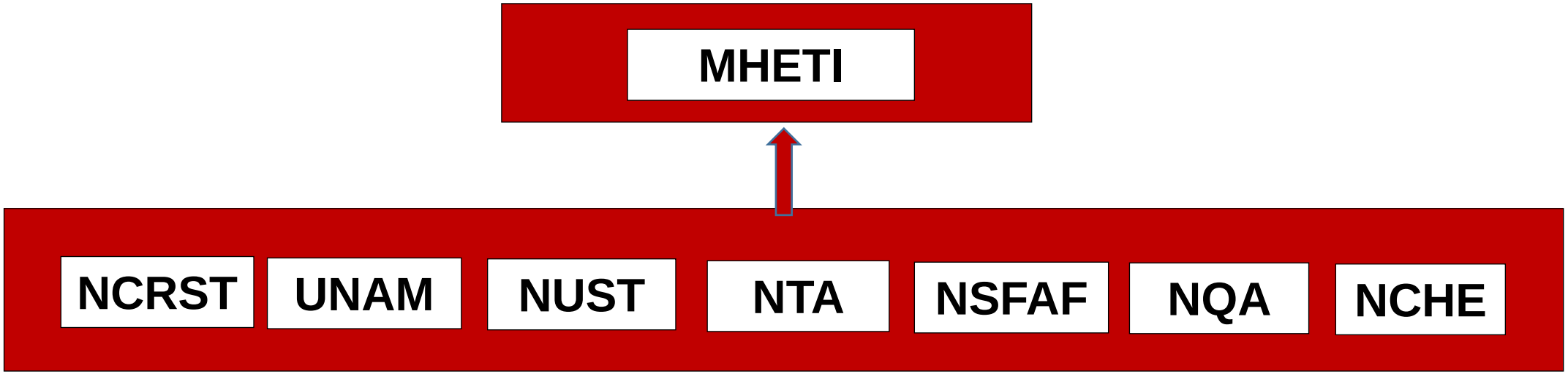
- The Ministry is premised on three pillars, namely:

  - Higher Education,
  - Technical and Vocational Education, and
  - Science, Technology and Innovation

MHETI STRATEGIC VALUE MAP



LINE INSTITUTIONS



The National Commission on Research, Science and Technology

NCRST
National Commission
On Research Science & Technology

Act No. 23, 2004 **RESEARCH, SCIENCE AND TECHNOLOGY ACT, 2004**

ACT

To provide for the promotion, co-ordination and development of research, science and technology in Namibia; to establish the National Commission on Research, Science and Technology and the National Research, Science and Technology Fund; and to provide for incidental matters.

National Programme on Research, Science , Technology and Innovation (NPSTI)

National research, science and technology programme

18. (1) Subject to subsection (2), the Commission, once in every three years, or at such other intervals as the Minister may determine, must prepare a national programme for research, science and technology for the following three years, or such other period as the Minister may determine, which programme must -

(a) set out the national direction on research, science and technology for Namibia;

(b) review the state of research, science and technology in Namibia for the previous three years or such other period as has lapsed between the current national programme and the previous national programme;

(c) identify shortcomings and priorities for research, science and technology;

(d) set out the research, science and technology projects (other than those contemplated in paragraph(e)) and requirements for such projects of every research, science or technology organisation, institution or body in receipt of moneys from the Fund, and includes the Commission's observations and recommendations on such projects and requirements in view of the national policy for research, science and technology;

Strengths and opportunities of Namibia's National Innovation System

- **The emergence and growth of public R&D institutions, including universities and sectoral R&D institutes**
- **The existence of institutions for STI policy, particularly the NCRST and the MHETI as well as the sectoral ministries dealing with trade and industrialization, agriculture, health, water, mining and the environment**
- **Increased Gross Expenditure on R&D (GERD) as a percentage of GDP from about 0.04% in the 1990s to about 0.35% in 2015/2016**
- **Increased number of SMEs in various economic sectors;**
- **Relatively good infrastructure associated with ICTs**
- **Surge of interest in STI and new efforts at improving policy conditions for scientific research and technological innovation**

OVERVIEW OF STI CHALLENGES

- **Poor focus or targeting of R&D on national priorities and spreading of funding thinly across institutions and projects**
- **Weak institutional linkages between universities and between industry and universities**
- **Level of GERD below the recommended target of 1% of GDP**
- **Poor R&D infrastructures in general and facilities in particular**
- **Few fulltime equivalent researchers and relatively low scientific productivity as manifested in a small number of scientific publications in international journals**
- **Relatively low inventive and innovative capacities as manifested in relatively few patents (8 patents as of 2016) filed and acquired by Namibian nationals**
- **Weak or low levels of private sector engagement or investment in R&D**
- **Poor policy coherence and coordination, and weak policy effectiveness due to poor implementation**

SOURCE: (UNESCO, 2016 & NCRST, 2017)

STI PRIORITIES FOR 2021/22 TO 2023/24

Desired outcomes:

By 2023/24, Namibia is an innovation-driven and knowledge based economy characterized by:

1.GERD increased from 0.35% in 2015/2016 to at least 1% of GDP.

2.Research and innovation output increased by 50% from the current level.

3.Namibia's ranking in the Global Innovation Index (GII) improved to among the top 70 innovative countries in the world. (**2020 ranking: 104 out of 131 countries**)

Strategic objectives of the NPSTI 2021/22 to 2023/24

- Improve policy, legislative and regulatory environment;
- Improve research and innovation infrastructure;
- Strengthen scientific and technical competences in Science, Technology, Engineering and Mathematics (STEM);
- Strengthen the intensity of strategic STI partnerships;
- Increase the utilization of scientific and technical knowledge for societal advancement; and
- Increase scientific productivity and technological output.

Strategic programmes

Programme 1: Enabling policy, legislative and regulatory environment

Programme 2: Research and Innovation Infrastructure

Programme 3: Research and Innovation Competencies

Programme 4: Strategic STI partnerships

Programme 5: Research and Innovation (R&I) for societal advancement (**Management of communicable diseases e.g. HIV/Aids and COVID-19**)

Programme 6: Research and Innovation (R&I) for manufacturing and industrialization

RESOURCE MOBILISATION

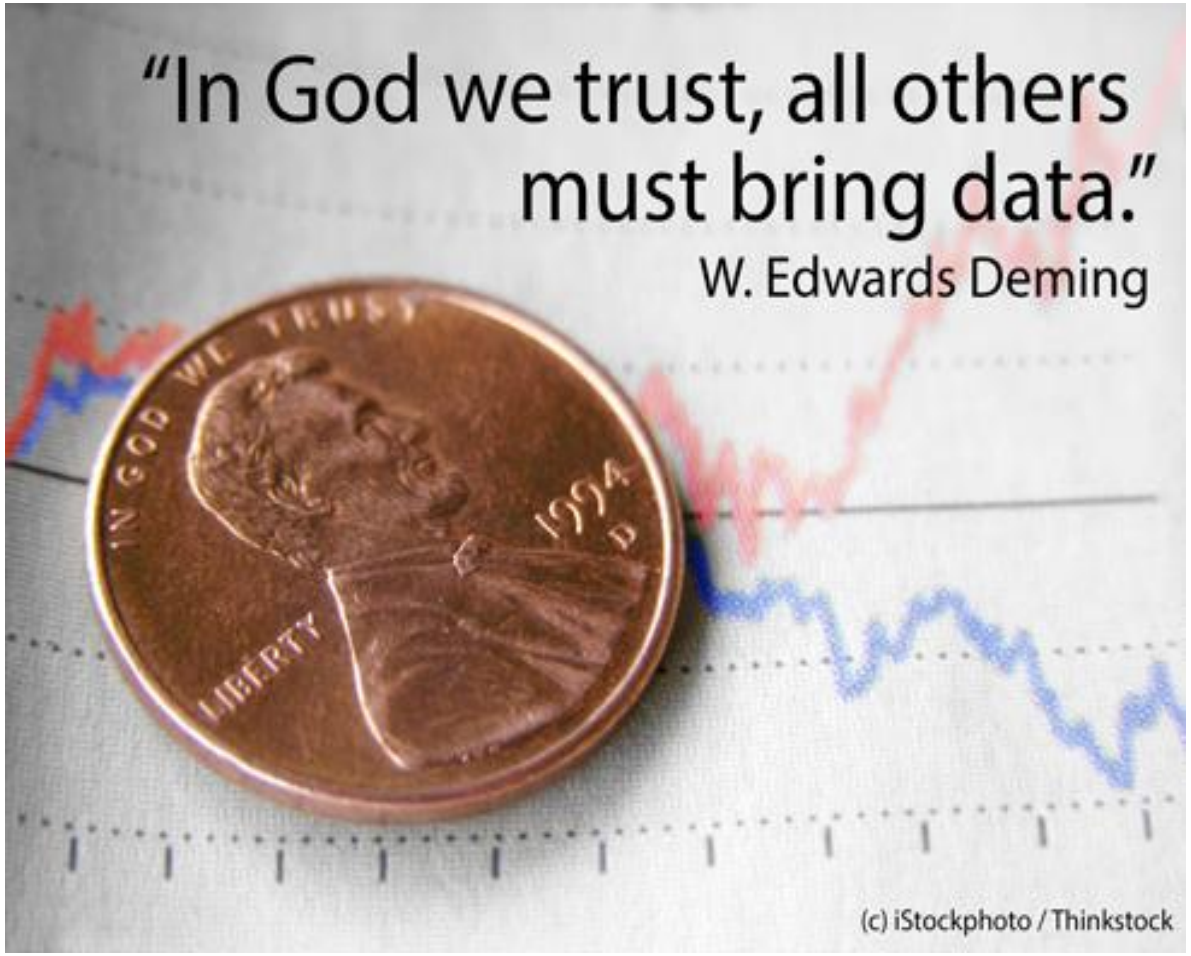
2019: Korean International Cooperation Agency (KOICA) – NAIC, **"Forging a National Consensus on Innovation"**

2020-2021: SAGA PROJECT, **"Strengthening Methodological Approaches in Monitoring and Evaluation of STI indicators"**

2021-2022: UNESCO-SIDA FUNDED PROJECT, "**Strengthening STI Systems for Sustainable Development in Africa**"

Beneficiary African countries:

Namibia, Republic of Congo, Tanzania, Ghana, Sierra Leone, Zimbabwe



THANK YOU FOR YOUR ATTENTION