



Open Science in Tanzania

**Tanzania Commission for Science
and Technology (COSTECH)**



VISION AND MISSION

Vision

To be the prime driver of science, technology and innovation for sustainable development in Tanzania

Mission

To drive technology advancement, high-value research, evidence-based decision making and large-scale innovation and entrepreneurship for rapid sustainable socio-economic development



ROLE OF THE COMMISSION

- Mandate:
 - Principal advisory organ of the government on scientific research & technology development in the country (Section 5(1) of the Act No. 7, 1986)
- Functions:
 - Advise on formulation of policy on S&T
 - **Promotion** and **coordination** of scientific research,
 - technology development and **technology transfer**
 - Popularization of S&T and **dissemination** of scientific and technological information.
 - Foster regional & international cooperation



COSTECH Strategic Objectives

1. To strengthen evidence-based decision making culture
2. To promote wider application of technologies with high impacts
3. To increase strategic research with national impact
4. To strengthen science, technology and innovation culture
5. To strengthen COSTECH institutional capacity



To strengthen science, technology and innovation culture

- Making scientific research, data and dissemination accessible to all over ICT and Analogue platforms



TanBIF portal

“To promote, co-ordinate, Design and implement the **compilation**, linking, **standardization**, digitization and **dissemination** of the country’s biodiversity data and information for policy and decision making on national multi-sectoral issues for **sustainable socio-economic development**”



TanBIF is **Government initiated** (CEPDEC), and **participant. funded**, in response to societal needs in biodiversity information access and management

A national node of GBIF



Tanzania Biodiversity Information Facility



**Biodiversity
Information
management**

Bioinformatics

**Biodiversity
informatics**

Ecoinformatics



Biodiversity Informatics Process

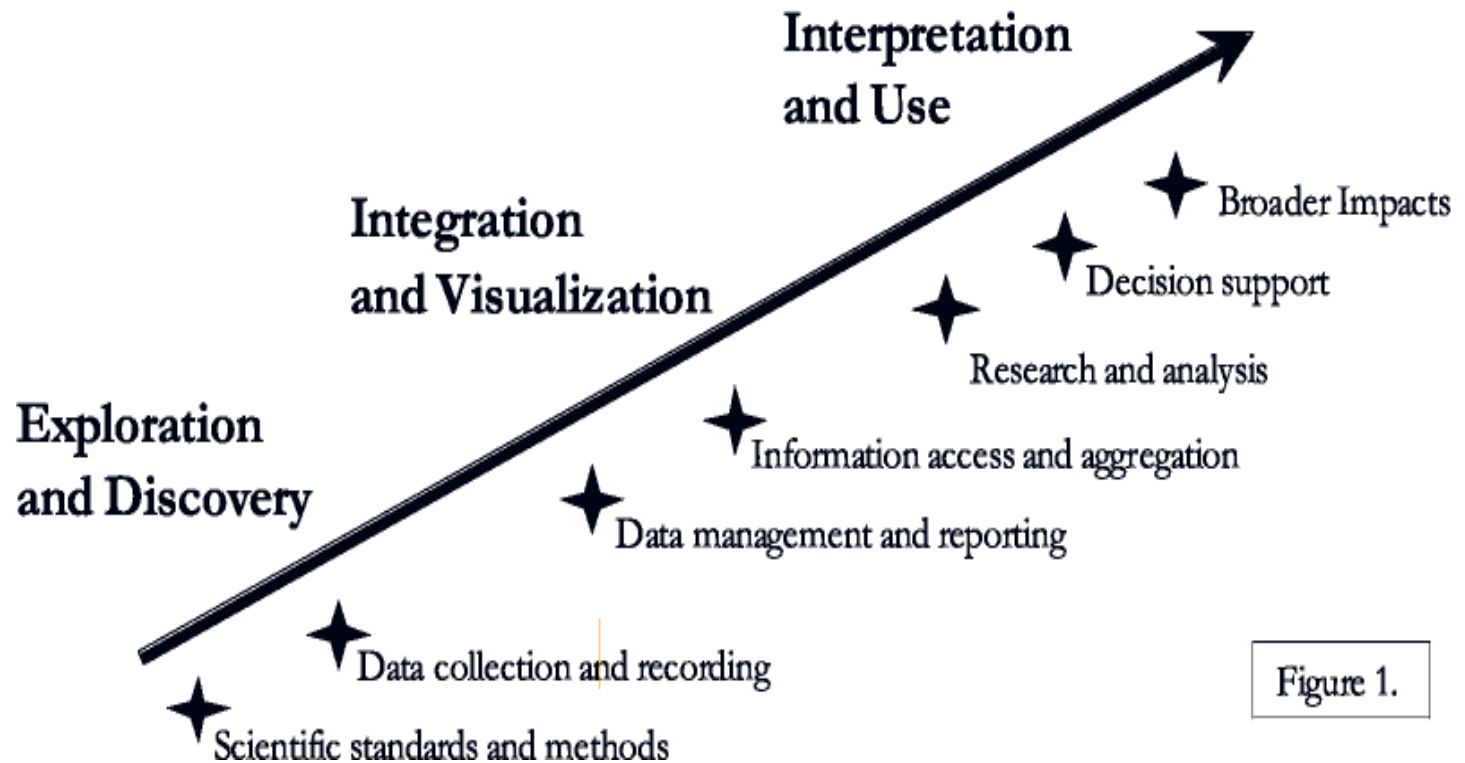


Figure 1.

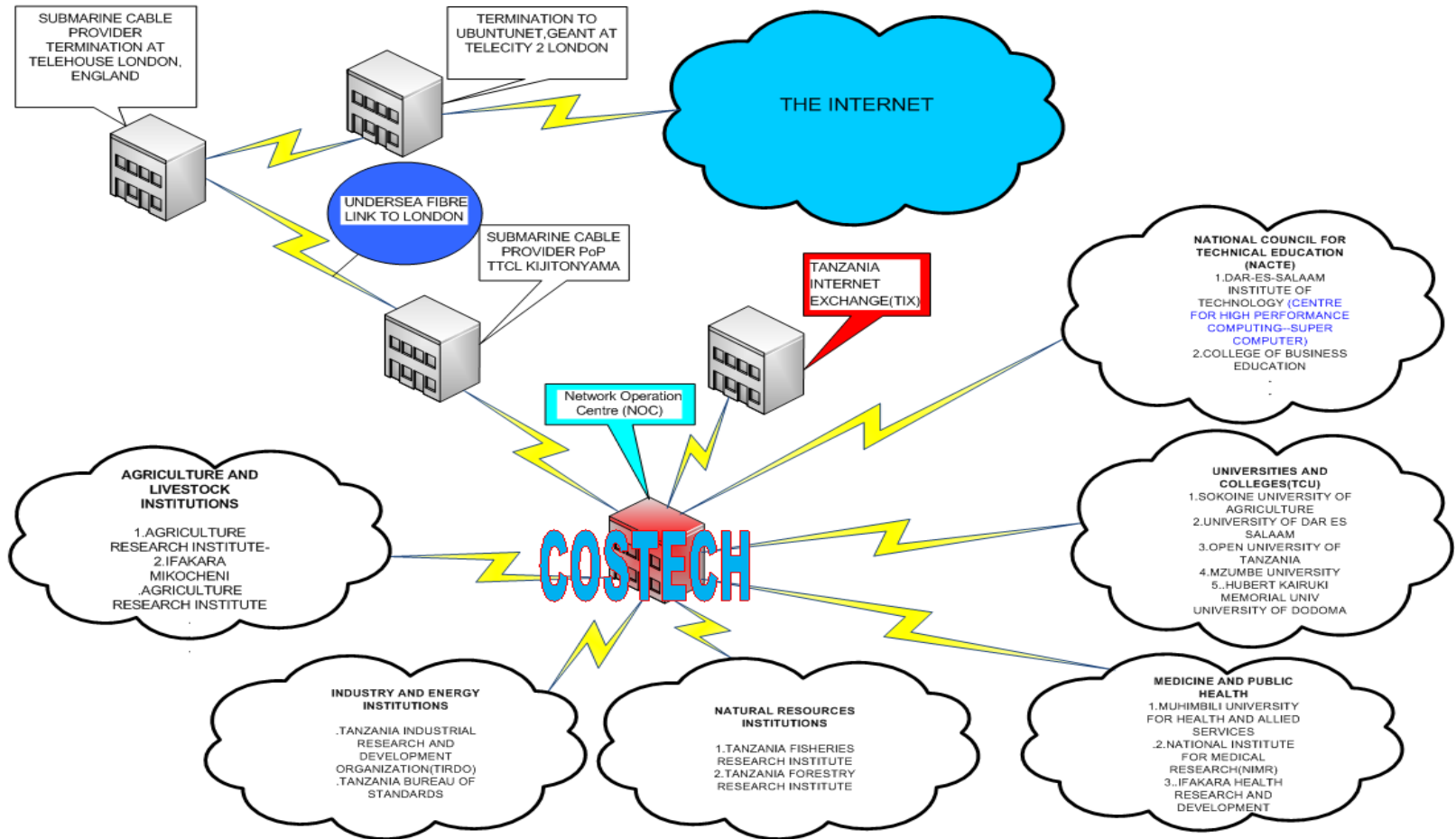


Platform for data acquisition, processing and sharing

- Exploration and discovery – mobilization and digitization (standards e.g. Darwin Core)
- Integration and visualization – availability and accessibility (GBIF IPT)
- Interpretation and Use - Analysis and Packaging (TanBIF QGIS, Catalogues)



Network of Research and Academic Institutions





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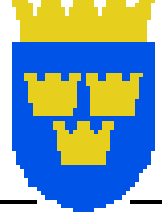


- Community-based mapping project in Dar Es Salaam, Tanzania.
- Capacitating university students and community members to use the OpenStreetMap platform to create sophisticated and highly-accurate maps
- Outcomes - start up opportunities (BUNI Hub), engaging other MDAs (MoLHS)



IST Africa (2014-2015)

- Partners IIMC (Ireland) and Ministries and National Councils responsible for Information Society, ICT and/or STI (Science, Technology & Innovation) adoption, policy and research
- Focus - International Innovation, Research and Policy Cooperation; Knowledge Sharing and Skills Transfer between IST-Africa Partners; Collaborative Innovation, Entrepreneurship & Adoption of Living Labs; Africa - EU Strategic Partnership (Information Society, ICT, Innovation)



Research management

- In 2016/2017 – COSTECH intends to ensure research and innovation outputs) are translated into knowledge products and disseminated
- In-house technology hubs in collaboration with SPIDER-DSV are to provide ICT solutions and expertise



Research Communication

- Consortia of Tanzanian University Libraries (COTUL) that provide journal access with support from INASP to universities.
- Development of a portal with filtering capabilities and training for administrators on how to manage and trouble shoot the portal.



Other OS initiatives

- The Environment Portal – VPO
- Open Government Initiative



Research Communication

- WIPO/ ARDI - ensuring access to patent databases for technologies
- HINARI
- AGORA
- AOL



Going forward

Opportunity

- ICT Acceptance
- Price of PC and maintenance

Strategy

- In collaboration with partners e.g. Tanzis, Sida, HDIF, EU promote ICT opportunities to public
- Demonstrate the use of ICT in daily operations, start up culture, governance, STI policy
- Government remove importation TAX
- Training HERIs IT staff on maintenance of network infrastructure



Opportunity

Power Availability

Bandwidth Price

Software

Strategy

- Installing backup power for COSTECH NOC; Renewable energy

Working with the ministry to get education tariffs for HERIs

- Collaborating with Microsoft, Nokia, Google on development of apps (mobile & desktop)
- Hosting & Sponsoring software development competition (i.e. Hackathon)



Opportunity

Human Capital

Sustainability

Strategy

- In collaboration with partners e.g. MCC, Sida, EU, HDIF, WB build skills for data mining, cleaning, science, informatics
- Use of CC4 licensing, privacy – fees for access, linkages between public and private sector



Questions.... Comments....?

Thank You!