



The African Science, Technology and Innovation Indicators (ASTII) Initiative

-An Introduction-

**Presentation at
The East/North Africa Regional STI Policy Reviews Workshop**

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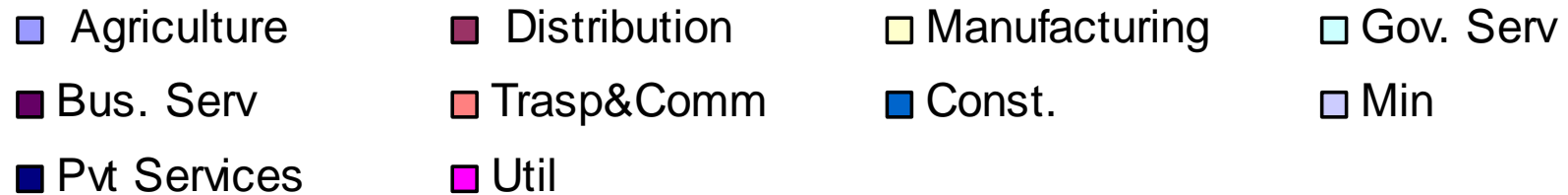
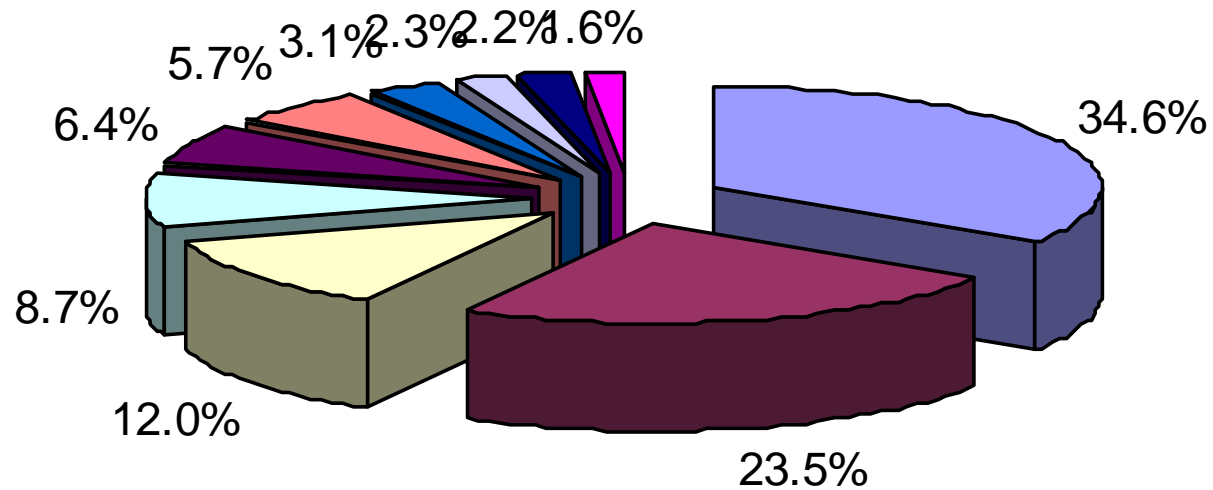
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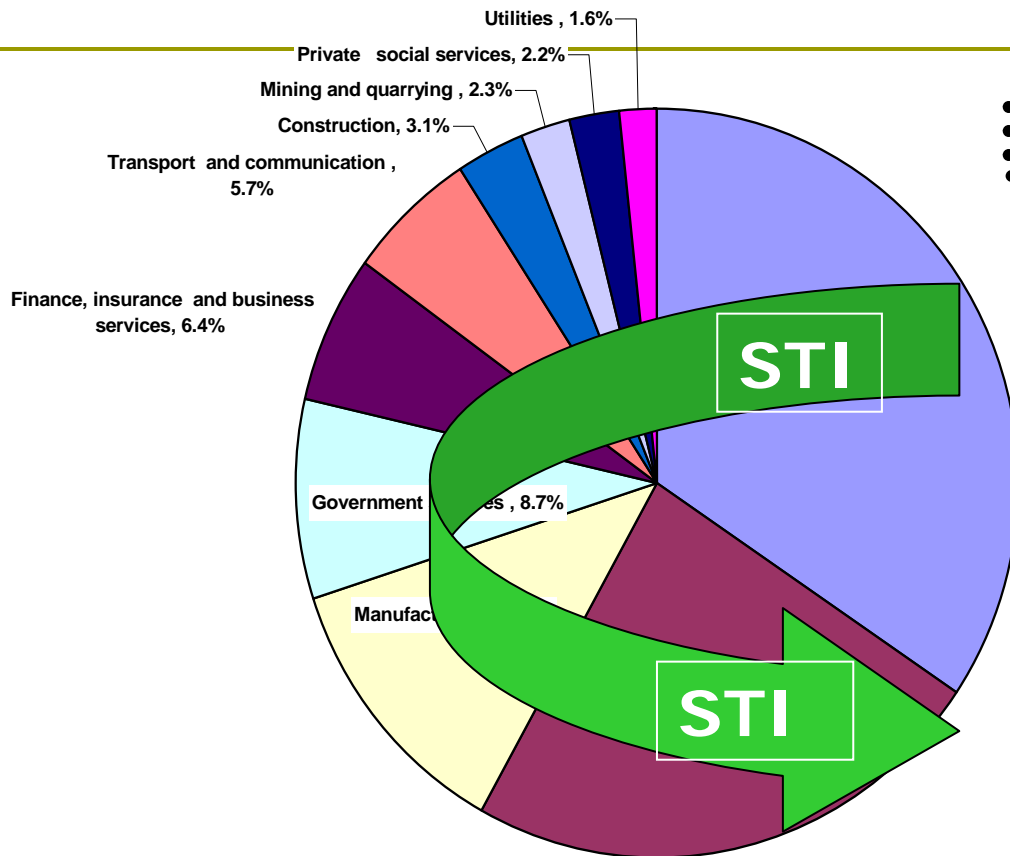
Consider the following scenario

GDP and Sectors of Economic Activities

-Information in the Public Domain-



STI for Socio-Economic Development

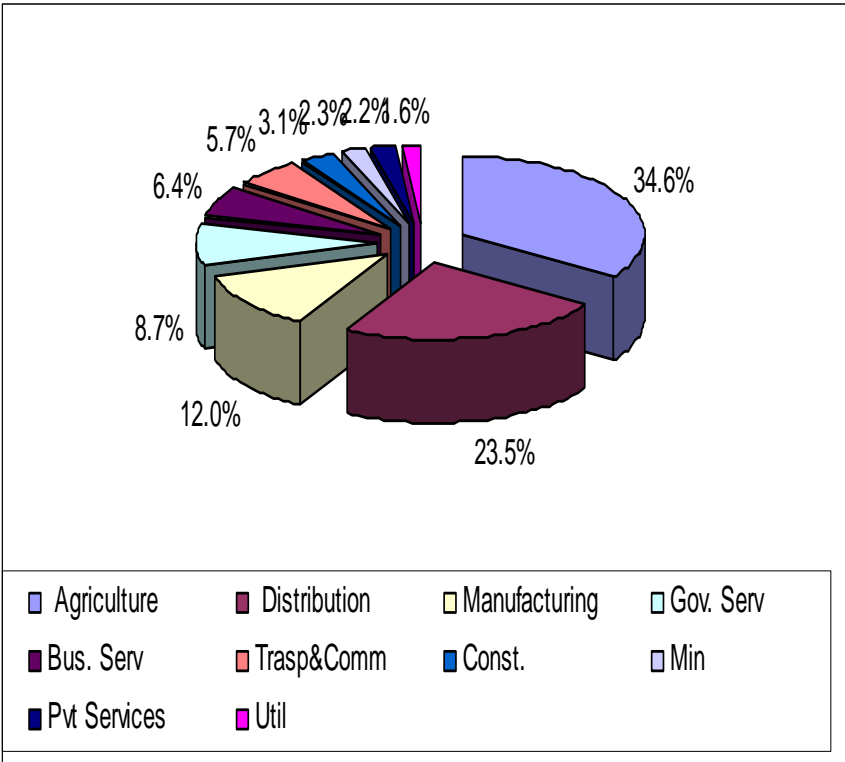


Question of interest?
Role,
impact,
of
STI

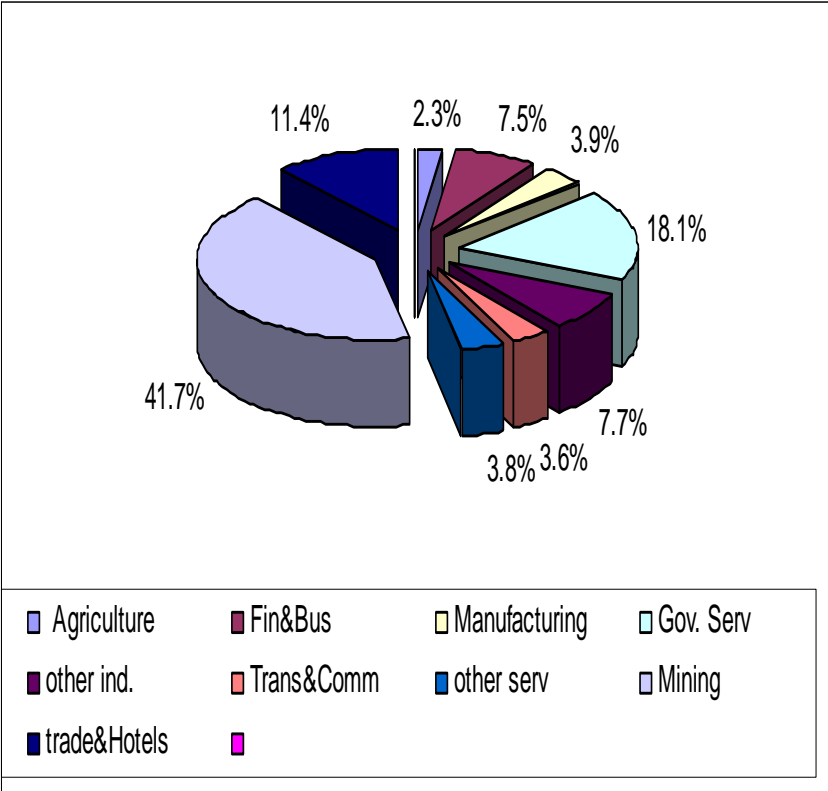
Rationalise structures, institutions and actors in STI to dare social and economic development needs

Local Circumstances Matter

Country XZ



Country ZX



What are we talking about

- ❑ Can we provide decision makers (i.e. **Parliamentarians, Minister in charge of STI**) with indicators and policy advice **comparable to that** received by the **Minister of Finance, Governor of Central Bank**?
- ❑ How can we present **complex** science, technology and innovation (STI) indicators in a way that is **accessible** to the policy community?
- ❑ What dialogue between **indicator producers** and the **users**?
- ❑ Use STI indicators to communicate the 'big picture' to civil society?

Genesis

AMCOST 1- Nov. 2003, Johannesburg. African countries endorsed the compilation of indicators for scientific research, technological development and innovation activities

AMCOST 2 -Sept. 2005, Dakar. Creation of African Intergovernmental Committee (**AMCOST Steering Committee**) on African Science, Technology and Innovation Indicators initiative with mandate to:

- i. spearhead a better understanding of national and regional science and innovation systems among African countries;
- i. enhance skills for science, technology and innovation policy review and development;
- i. improve the quality of science, technology and innovation policies;
- ii. promote the **exchange of experiences, expertise and information**;
- i. strengthen regional cooperation.

AMCOST 3 - Nov 2007, Mombasa – Facilitate implementation

NEPAD OST is facilitating and coordinating this AMCOST Call

The ASTII Initiative

Overall Goal

contribute towards the improvement of the quality of science, technology and innovation policies at national, regional and continental levels

Purpose

To strengthen Africa's capacity to develop and use Science, Technology and Innovation (ASTII) Indicators.

Specific Objectives

- i. To develop and cause the adoption of **internationally comparable STI indicators**;
- ii. To build **human and institutional capacities for STI indicators and related surveys**;
- iii. To enable African countries **to participate in international programmes for STI indicators**;
- iv. To **inform African countries on the state of STI in Africa**

ASTII Phase-one :milestones

- Maputo Platform (Sept. 07)
- Training Workshop [March 08](#) - Frascati and Oslo Family of manuals as guidelines to conduct R&D and innovation surveys
- Harmonisation of Survey Instruments ([March 09](#)) – taking stock of work undertaken thus far.
- Harmonisation of Survey Outcomes ([Q4 2009](#))
- Publication and dissemination of the outcomes of Phase one ([Q1 2010](#))- [Towards an African Innovation Outlook](#)

The Maputo Platform –September 07

- **Applicability and/or Access to the Frascati & Oslo manuals and guidelines** African countries shall use the existing internationally recognized STI manuals and/or guidelines, particularly the Frascati and Oslo Manuals to undertake R&D and innovation surveys respectively.
 - National Coordination (ASTII Focal Points)
 - **Thinking ahead** : African countries may gradually use these manuals and experiences gained in undertaking surveys to develop African STI manuals or guidelines and address issues of:
 - Entrepreneurs** (informal economy?); **Drivers other than the market** :Indigenous Knowledge; Biodiversity and Biotechnology; Health; Security and Connectedness; Measurement of Rare Events — **Comparing the incomparable!!**

Harmonisation of Survey Instruments **March 2009**

- ❑ **Survey Details** (**sampling** (frame, sample, size, how selected); **how the survey was conducted** (mail, telephone, interview, web, ...) ; **response rate** by sector and size of non-response; **etc**)
- ❑ **Questionnaire Design** (Topics covered (R&D in Business enterprise, Government, High education, not-for profit, etc.. ; Innovation; ...); **Consultation during question development** (government departments, industry associations, firms, ...); **Questionnaire design** (respondent guides, ...); **Questionnaire testing and results** (final version?).
- ❑ **Reporting Plans** (Descriptive statistics ; Analysis of key issues; International comparisons (Neighbouring countries, comparable economies, ...)
- ❑ **Principal Findings**
- ❑ **Resource Allocation**

Core indicators (R&D and Innovation)

<ol style="list-style-type: none">1. GERD by source and Sector of performance: Higher education, Government; Business; Non-Profit organizations; Abroad2. R&D Personnel by level of formal qualification and occupation, gender (headcount (HC) & full-time equivalent (FTE)) :Higher education; Government; Business, on-Profit organizations3. Researchers by gender and field of study/research4. Expenditures in development areas identified by the CPA5. Outputs: publications, patents (not core but to be collected).	<ol style="list-style-type: none">1. General information about the enterprise, business, company or firm2. Product (goods or services) innovation3. Process innovation4. Ongoing or abandoned innovation activities5. Innovation activities and expenditures6. Sources of information and co-operation for innovation activities7. Effects of innovation during the last two years8. Factors hampering innovation activities9. Intellectual Property Rights10. Organization and marketing innovations
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Country specific Questions

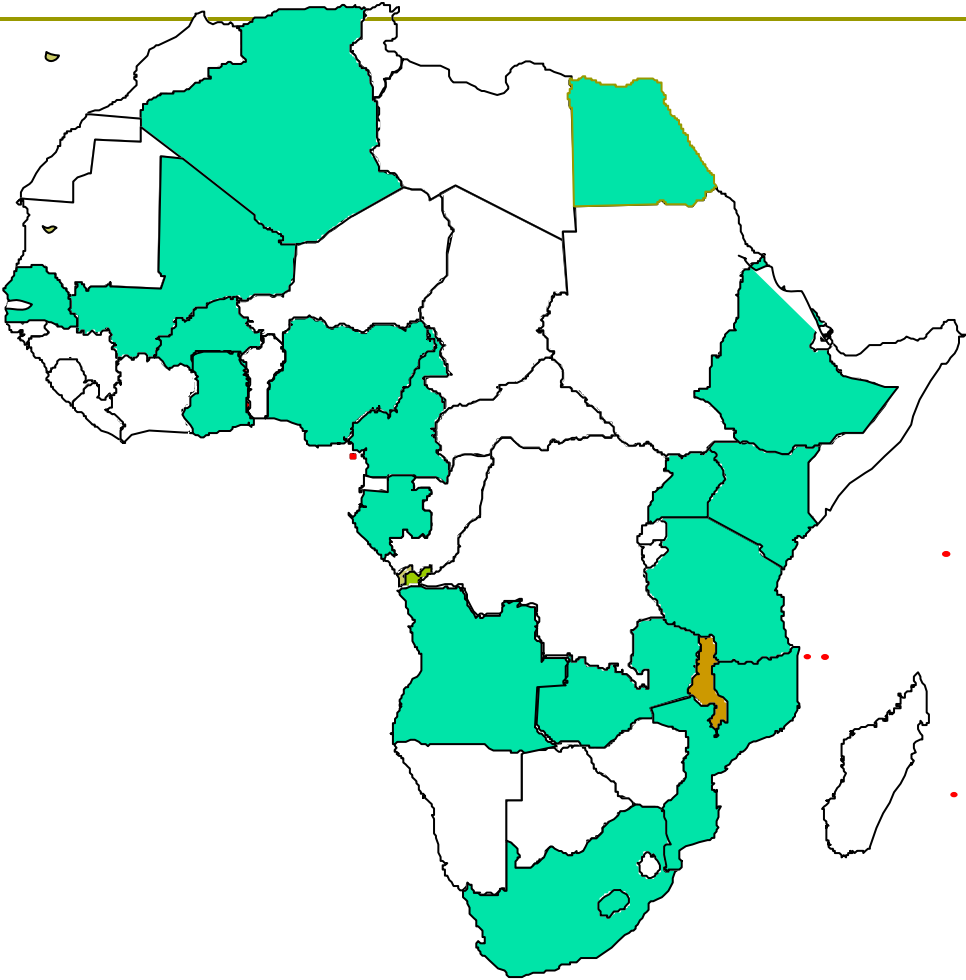
Partnership and Collaboration

- **MOUs signed with**
 - the University of Pretoria in South Africa;
 - the Research Policy Institute of the University of Lund, Sweden;
 - the UNESCO Institute for Statistics;
 - the Southern African Regional Universities Association (SARUA).

- **Collaboration with**
 - the Statistics Department of the African Development Bank;
 - the OECD National Working Party on Science and Technology Indicators (NESTI)
 - the Centre for STI Indicators CeSTII of South Africa;
 - the African Regional Centre for Technology in Dakar.

- **STI Experts** (African and non African) are called in as resource persons to contribute with their know-how.

Phase 1: Countries participating in ASTII Initiative



On the UIS and NEPAD ST collaboration

- ❑ To cooperate in increasing the **availability and improving the quality of international comparable science, technology and innovation statistics in Africa**;
- ❑ To support NEPAD in facilitating the conduct of national science, technology and innovation surveys and the development of related indicators;
- ❑ To develop and offer joint training courses in science, technology and innovation policy to African government officials;
- ❑ To collaborate in supporting African governments to review and/or develop national science and technology policies and strategies;
- ❑ To collaborate in order to develop an African manual for science, technology and innovation surveys;

Challenges and core values

- Data credibility
- Suitability, accountability and ownership
- Overcoming the myths of “deja vue et entendu”

- Maintaining Confidentiality
- Protecting privacy
- Use of sound methodology



African STI Observatory

Thanks



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