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The African STI Knowledge Hub (Observatory)

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Overview of STI indicators and observatories in Africa

- NEPAD led-ASTII initiative – muted in 2004, fully operationalized 2009.
- AUC/AMCOST??? STI Observatory - $3.6 million from Equatorial Guinea
- EA University S&T Observatory- seeking support from UNECA, muted in 2009
- UNECA R&D Observatory, operationalizing 2010

Why a knowledge Hub

- Basic STI policy information is scanty or absent
- Enable informed and fact-based policy making
- Promote open innovation
- Facilitate creation of a competitive and innovation culture

Africa in knowledge creation

Total patent applications by country of origin (in the USPTO)

	1965-1987	1988-2008			1965-1987	1988-2008
Algeria	10	15		Mali	4	3
Benin	0	2		Mauritania	4	0
Burkina Faso	0	1		Mauritius	3	11
Cameroon	1	9		**Morocco**	**37**	**52**
Congo	70	2		Namibia	3	4
Egypt	**52**	**275**		Niger	2	0
Ethiopia	4	4		**Nigeria**	**33**	**50**
Gabon	4	2		Senegal	13	3
Ghana	0	15		**South Africa**	**3795**	**4505**
Cote d'Ivoire	7	2		Sudan	8	0
Kenya	**24**	**95**		Swaziland	4	29
Korea, South	***1008***	***160800***		Tanzania	5	4
Lesotho	0	1		Tunisia	19	34
Libya	7	0		Uganda	11	11
Liberia	5	1		Zambia	17	0
Madagascar	4	5		**Zimbabwe**	**53**	**27**

Africa: STI policy making creation

- Only a handful of explicit innovation policies- mostly Southern and Northern African countries
- STI sub-policies (e.g. ICTs, biotech, nanotech) few or do not focus on innovation
- STI in other policies (e.g., investment, industry, trade) limited to traditional sectors – health, agriculture etc)

Trends in technology use

Regional US trade in business professional and technical services

	Receipts			Payments		
	1986	**1996**	**2005**	**1986**	**1996**	**2005**
Europe	1,203	6,005	16,805	467	2,634	5,979
Africa	188	752	1,289	12	155	562
East Asia and Pacific	1,319	5,929	10,627	334	1,625	2,986
Latin America & Carib	807	2,916	5,640	70	342	1,208

About 55% of Africa's payments are management and construction related services compared to only 22% for LAC and 32% for Asia.

The aim of the STI knowledge Hub

- Facilitate policy making
- Promote quality research
- Encourage development of favourable environment for innovation
- Enable STI policy research

The core: STI Observatory

- Track R&D trends in Africa
- Track STI policies in Africa
- Network R&D, STI Experts and Institution
- Capacity building of national STI statistical institutions
- Disseminate information on innovation performance, outputs, activities, projects
- Highlight opportunities for public and private investors and vice-versa

Track R&D trends

- Trends in R&D investment and resources
- Trends in R&D performance
- Trends in R&D commercialization
- Trends in R&D support and policies
- Trends in R&D partnerships and alliances

Trends in STI policies

- Trends in national STI policies
- Trends in national STI sub-policies (ICTs, biotechnology, nanotechnology etc)
- Trends in R&D organization and R&D management policies

Network of experts

- Create a network of experts by:
  - Key R&D centres
  - Main technology areas
  - Regional projects
  - Taskforces as may arise

Build capacity of national institutions

- Undertake surveys
  - Use similar methodologies, periods and indicators
  - Use online forms/questionnaires
  - Face to face interviews
  - Create a local network of firms and institutions to participate
- Maintain and analyse data
- Produce annual reports on R&D

Information resource and platform

- Share information online through a database
- Disseminate international and regional R&D projects and announcements
- Feature leads and good practices in R&D performance, commercialization
- Create a platform for open innovation and learning

Sharing opportunities

- International R&D collaborative opportunities
- Showcase R&D projects and outputs of interest to the private sector
- International R&D investment projects
- Track international R&D of benefit to Africa

The implementation- 1st Phase

- Undertake national three pilot studies
  - (Ghana, Kenya & Zambia)
- In each country look at:
  - University R&D
  - R&D performance in research centres
  - R&D performance in industry
  - Policy comprehensiveness assessment
- Data will be complemented with NEPAD STI Indicators (Ghana, Kenya & Zambia)

Second phase

- Identify useful indicators and assessment tools/components
- Create a network of STI watch experts
- Create online forms and database
- Generate a system for profile R&D projects, good practice policies and measures
- Design a platform for technology exchange, offers and challenges

Third phase

- Expand the number of countries
- Launch the database
- Arrange annual meeting of STI watch experts
- Launch promotion of Knowledge Hub
- Put in place a filtering and management systems
- Create a membership team

Main outputs

- R&D data at national level
- National innovation policy survey reports
- National STI policies
- Profiles of institutions and their projects
- Technology exchange and investments

just means to an end?

- National STI indicators and policy assessments are important but not enough
- The aim:
  - Which institutions are innovative and why?
  - Are bottlenecks at national or institutional levels?
  - How do we encourage innovation at all levels?
  - Getting the private sector to invest in STI (Africa Science to Business Challenge & the African STI Endowment Fund – speared headed by UNECA)

Just a means to an end

- Increased productivity
- Competitive firms
- Increase employment
- Economic growth
- Better quality of life
- Individual prosperity

Concluding remarks