



# Establishment of an ICTP Partner Institution in Rwanda:

“East Africa Institute for  
Fundamental Research”

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# Rwanda's Vision

- The vision for Rwanda's future is enshrined in the Vision 2020 for Rwanda which looks towards the achievement of “a modern and Prosperous Nation, strong and united, worthy and proud of its fundamental principals”
- Science and technology has a key role to play and the target is to strengthen and integrate into the countries strategies and policies to underpin the Vision
- The following Slides give some background related to the Current Status of Development in Rwanda





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# Rwanda | *Unique Propositions*

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**Risk Mitigation | *Bilateral Investment Treaty with the United States***

**Rwanda Development Board | *Open 24 Hours***

**S & P Country Credit Rating | *B with a Positive Outlook***

**Fitch Competitiveness Rating | *B with a Stable Outlook***

**Best Global Reformer Since 2005 | *World Bank Doing Business 2014***

**2<sup>nd</sup> Most Competitive Place to Do Business in Africa | *World Bank Doing Business 2014***

**Positioned 32<sup>nd</sup> out of 185 Countries | *World Bank Doing Business 2014***

**Cabinet Performance Contracts | *Imihigo***



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# Rwanda | *Vital Statistics*

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**Integral Member of the East African Community  
*Uganda, Kenya, Tanzania and Burundi (tentative Southern Sudan)***

**At the Heart of COMESA  
*19 Eastern and Southern African Countries | Well linked with neighbours***

**Aim: To be Information Technology Hub of East Africa  
*Electronic Payments | Online Access***

**Exports Grew 500% | 2004 - 2013  
*Imports Grew 300% | 2004 - 2013***

**GDP Growth: 8% | GDP per Capita: US\$ 644  
Population: 11.5M**

**[www.gov.rw](http://www.gov.rw)**



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# Transparency International

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**‘Remarkable progress has been made ...  
Rwanda has gone through a painful process of reconstruction.  
Institutions are now in place with the objective of fighting corruption.  
These efforts seem to have yielded results, with the country  
performing better than many other African countries in terms of  
control of corruption on most governance indicators ...’**

**Transparency International | 2011**

# Rwanda's Vision and the Role of Science, Technology and ICT

- To transform our currently Agriculture based economy to a knowledge based economy by year 2020.
- To use science, technology and ICT as a key enabler of this transformation
- Two key strategies support the adoption of science, technology, innovation and ICT in Rwanda:
  - the National Policy on Science, Technology and Innovation currently being revised and
  - the NICI Plan (National Information and Communications Infrastructure), a 20 year strategy, now in it's third phase NICI III (2010 – 2015).







# Science, Technology and Innovation Policy

## Specific Policy Objectives

- **Knowledge Acquisition** – to reinforce Science and Technology teaching and resources at all levels of education
- **Knowledge Creation** – Develop Research Capability in all priority sectors of the economy
- **Knowledge Transfer** – To reinforce Science and Technology Capability in all priority sectors of the economy
- **Innovation Culture** – To encourage Innovation at all levels to help stimulate economic growth



**Some examples related to ongoing STI Initiatives follow:**

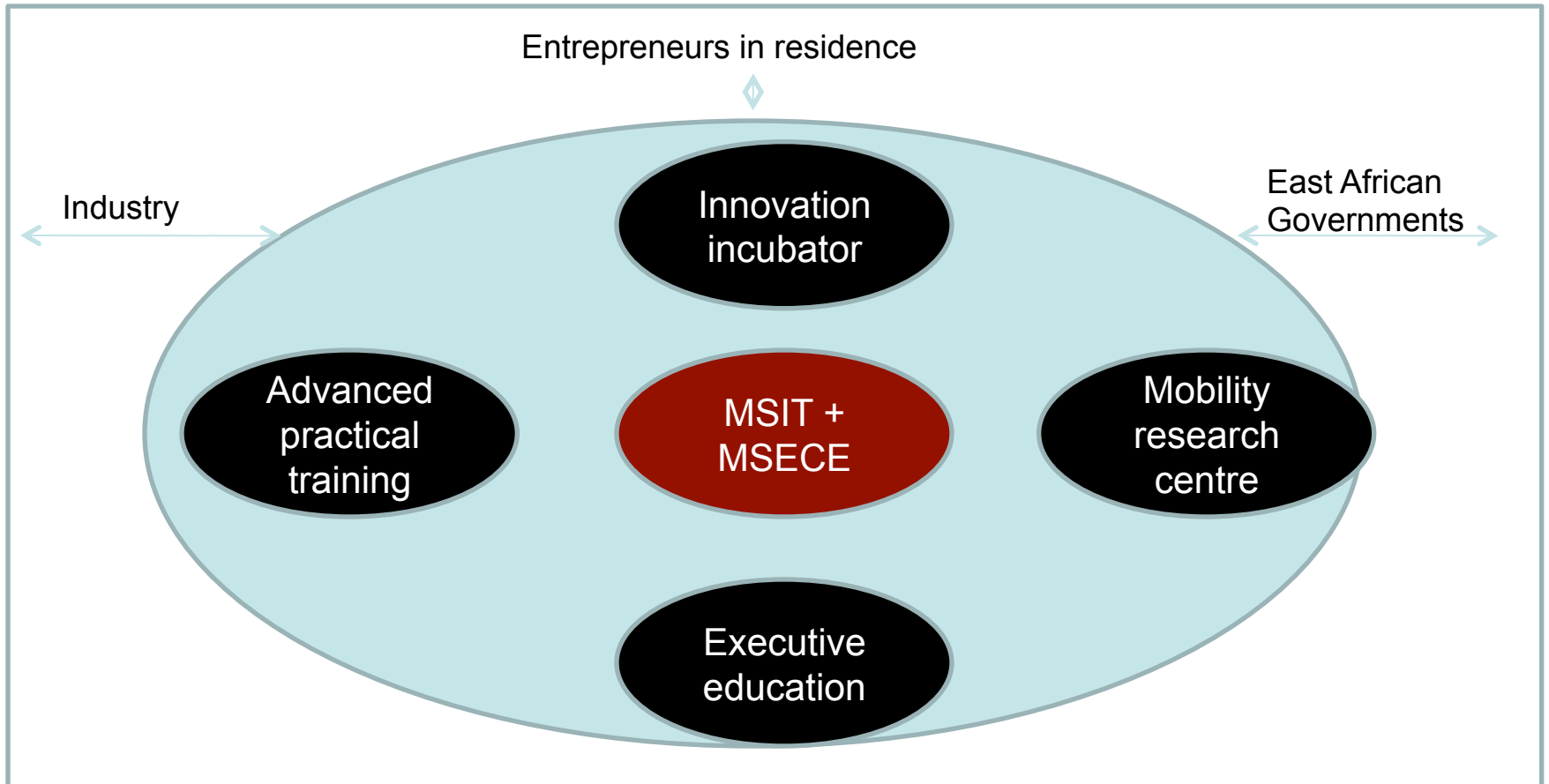






# Regional Centre of Excellence in ICT

- Partnership with Carnegie Mellon University (CMU) and African Development Bank
- Regional Centre of Excellence (CoE) in ICT-related fields.
- The Campus works to the same Standards as CMU of the US



# Examples of Regional (& International) Science Initiatives

## Technology Applications

- Broadcasting, Climate Change, CNS/ATM
- Tripartite Agreement: Virunga National Park Conservation

## Technology Applications

- Energy (Methane / Geothermal)
- Joint Discussions DRC Rwanda



## Technology Applications

- Fibre Optic Comms
- Joint Agreements Rwanda / Uganda / Kenya / Tanzania

## Technology Applications

- Conservation
- Rwanda / Burundi: Nyungwe National Park Conservation

# Background to Establishment of ICTP Partner Institution in Rwanda

- The Director of ICTP, Professor Fernando Quevedo, visited Rwanda in July 2013 to assess the potential for establishing an ICTP Centre in Rwanda for the African region.
- Rwanda offers an ideal setting to host such an institution:
  - the country is well located and easy access to scientists regionally
  - Has science and technology as a top priority and
  - has been investing in infrastructure, such as telecommunications, and high level academic institutions
- ICTP has well-established contacts with local scientists and institutions including the recently founded branch of Carnegie Mellon University.



# Proposed Structure for the Rwanda Branch

## Rwanda Obligations

- The Ministry of Education is the ICTP partner and University of Rwanda the host institution: provide infrastructure & science and technology facilities.
- Targeted for 50 students entering each year from different countries. A number of those students finishing the masters degree will be selected to continue for PhD.
- The Government of Rwanda will put in place: permanent scientific staff, tutors and key administrative staff. A recognized senior scientist shall be appointed as the director.

## ICTP' s obligations

- ICTP shall provide the scientific expertise and time of its scientific staff in organisation / delivery of courses and one of its scientists to act as a co-director for the first two to three years.
- ICTP will fund some of the activities organised at the institute as part of its yearly conferences abroad. The Government of Rwanda and ICTP will jointly apply for funding/support/partnership from varied sources.

# Current Status for Rwanda Partner Institution

- Rwanda Cabinet approved the proposal for Rwanda to host the Centre.
- Site to host the Centre has been identified in the UR College of Science and Technology and refurbishment is underway.
- Formal request issued to UNESCO Director General for the Centre to be established as a UNESCO Category 2 Centre.
- Working Group established with members from Ministry of Education and University of Rwanda.
- One of the important activities for the Centre will be to host international / regional schools in partnership with ICTP. Schools already hosted by University Rwanda 2014:
  - **Space Science Summer School in June / July**, Title: “An African School on Space Science Related Applications and Awareness for Sustainable Development of the region” - 63 participants including from USA, Europe and 14 African countries
  - **Geophysics School September**, Title: “Geophysical Monitoring and Modelling for Sustainable Energy and Geohazard Solutions” more than 70 participants from USA, India, and Europe and 13 African Countries



**Building to be re-furbished for ICTP Partner Institution in Rwanda**



**Space Science School Group**



**Geo-Physics School Group**

# Conclusion

- The ICTP partner institution in Rwanda promises to build capacity of Rwandan and regional scientists. Graduates of the ICTP programme will gain the high level skills necessary that can enable them to support the Education system at University level in:
  - Mathematics or Physics teaching or to undertake careers and / or research in key sectors of the economy.
- Additional benefits include the capacity building for Rwanda Academic staff who will be running the programmes alongside their ICTP International counterparts..
- Rwanda will benefit from being able to take part in the research areas currently being undertaken by ICTP including:
  - Theoretical High Energy Physics, Condensed Matter, Statistical Physics and Material Science, Pure and Applied Mathematics, Earth System Physics and ICT for development,
- Partnership with ICTP is thus a very important component in Rwanda's ambitions to build science, technology and research capacity in the furtherance of Rwanda's and the Regions Economic Growth and Social development.

**Thank you**