



# UbuntuNet After AfricaConnect: Looking Ahead to Maintaining Relevance in an Evolving World

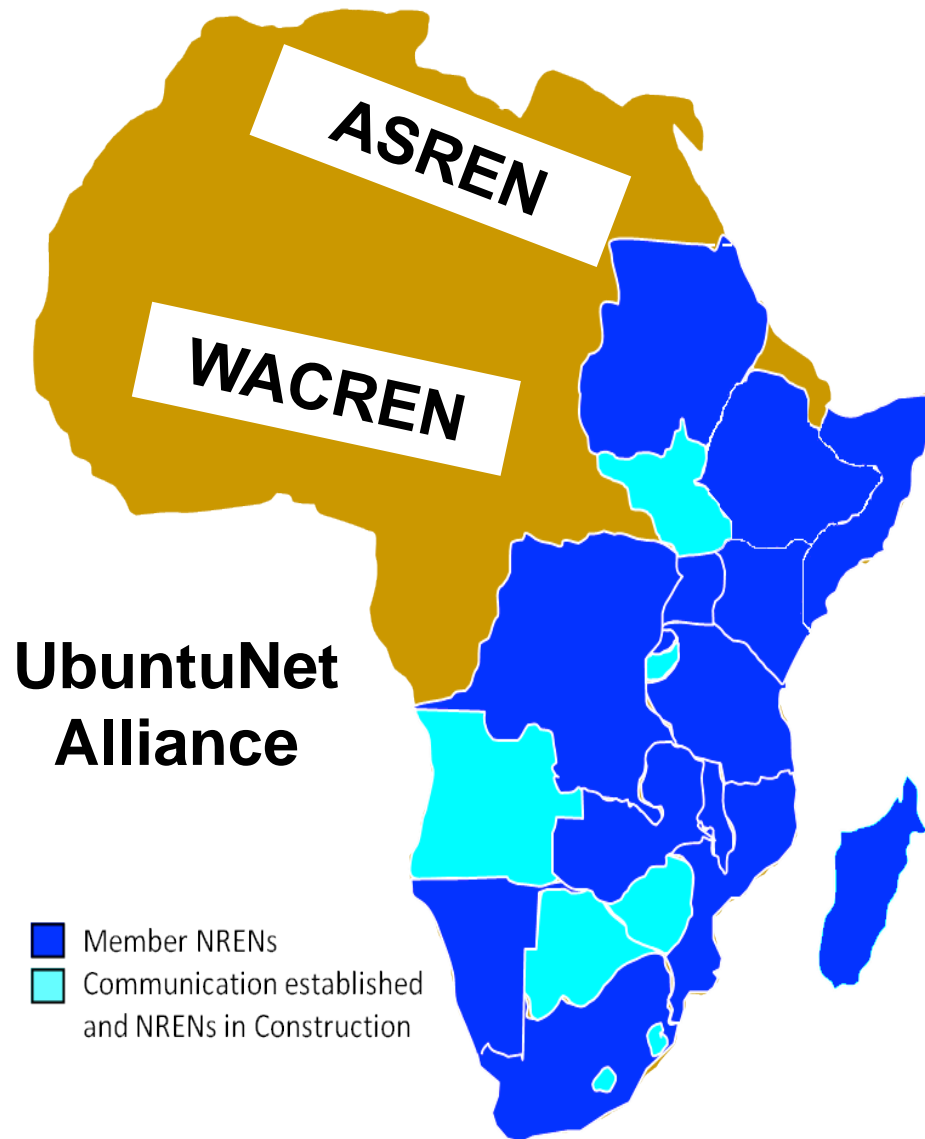
[www.ubuntunet.net](http://www.ubuntunet.net); [www.africaconnect.eu](http://www.africaconnect.eu)

UbuntuNet-Connect 2013,  
14 – 15 Nov 2013, Kigali, Rwanda  
Tusu Tusubira, CEO, UbuntuNet Alliance



The Research and Education Network  
for sub-Saharan Africa

# Where are we? (1): Our Members



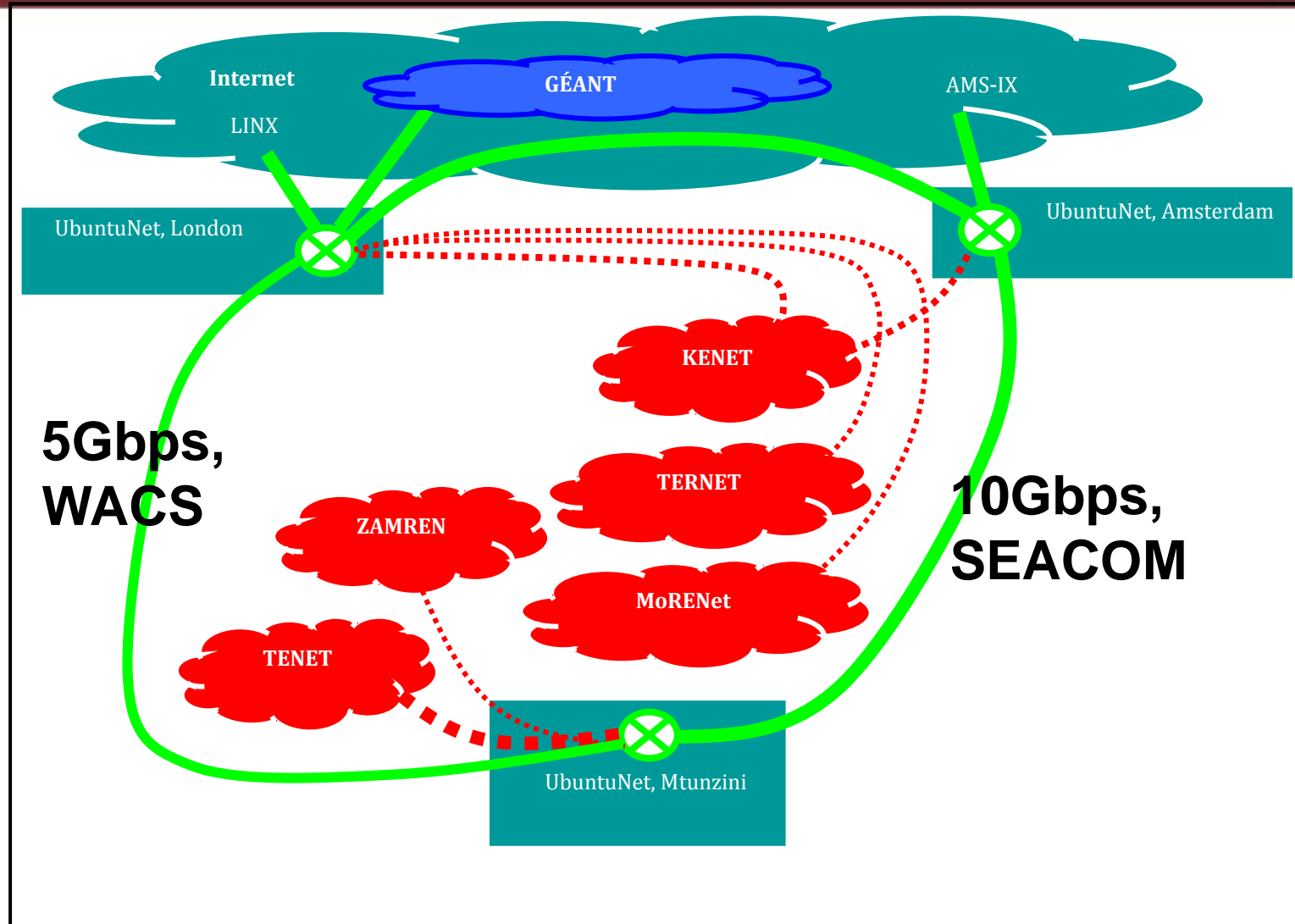
**UbuntuNet  
Alliance**

- Member NRENs
- Communication established and NRENs in Construction

**Alliance Membership (14)**

- Eb@le, DRC**
- EthERNet, Ethiopia**
- iRENALA, Madagascar**
- \*KENET, Kenya**
- \*MAREN, Malawi**
- \*MoRENet, Mozambique**
- XNet, Namibia**
- \*RwEdNet, Rwanda**
- SomaliREN, Somalia**
- SudREN, Sudan**
- \*TENET, South Africa**
- TERNET, Tanzania**
- RENU, Uganda**
- ZAMREN, Zambia**

# Where are we? (2): Current Operations

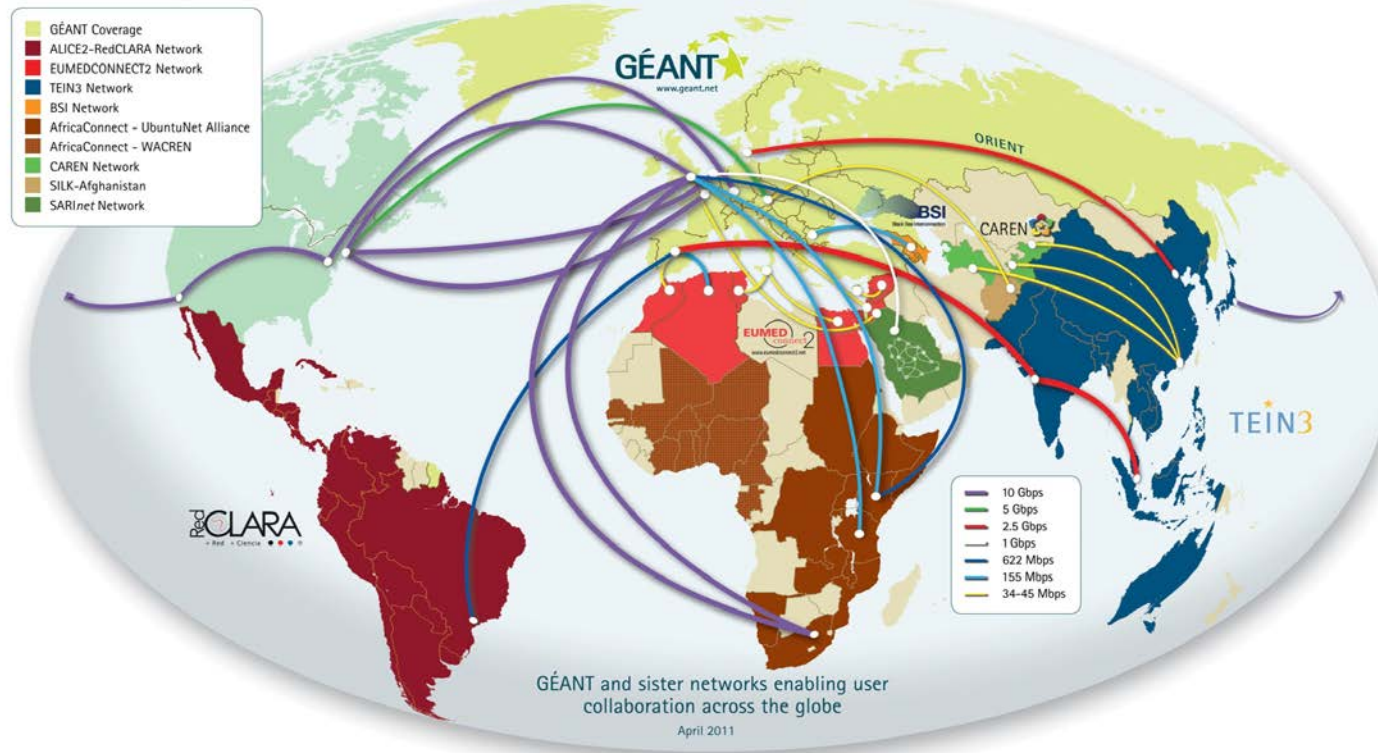


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# Where are we? (3): Connecting to the World thru GÉANT



## GÉANT At the Heart of Global Research Networking



connect • communicate • collaborate

GÉANT is co-funded by the European Commission within its 7th R&D Framework Programme.  
This document has been produced with the financial assistance of the European Union. The contents of this document are the sole responsibility of DANTE and can under no circumstances be regarded as reflecting the position of the European Union.



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# And AfricaConnect? (1): Operational by 1 Dec 2013



- **Group A:**
  - **All Ready**
  - **All equipment delivered and installed, with some gaps due to small items that went missing in transit**
  - **Projected online by 1<sup>st</sup> Dec 2013**



# And AfricaConnect? (2): Operational by March 2014



## Group B Links

- **Best and Final Quotes called for ZAMREN, MAREN, and Eb@le;**
- **Equipment – framework agreement already signed**
- **Expected to go live by March 2014**

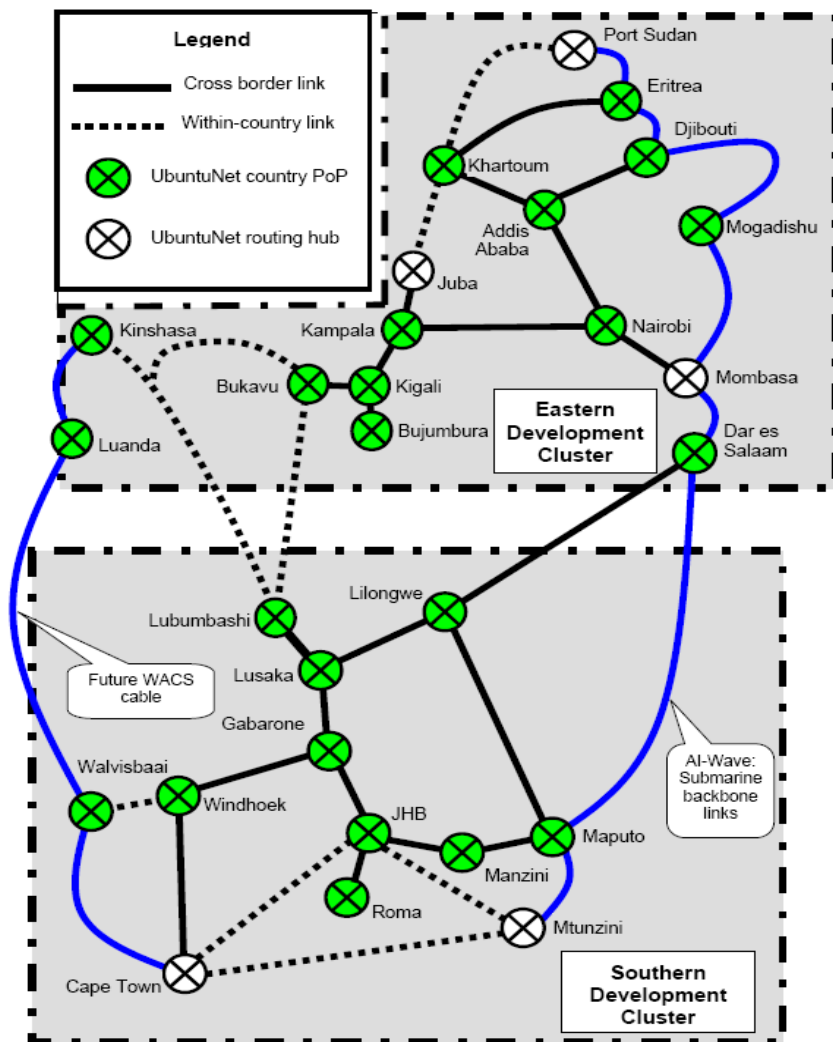


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# And after AfricaConnect?



Future UbuntuNet Backbone as envisaged on 1 Nov 2008



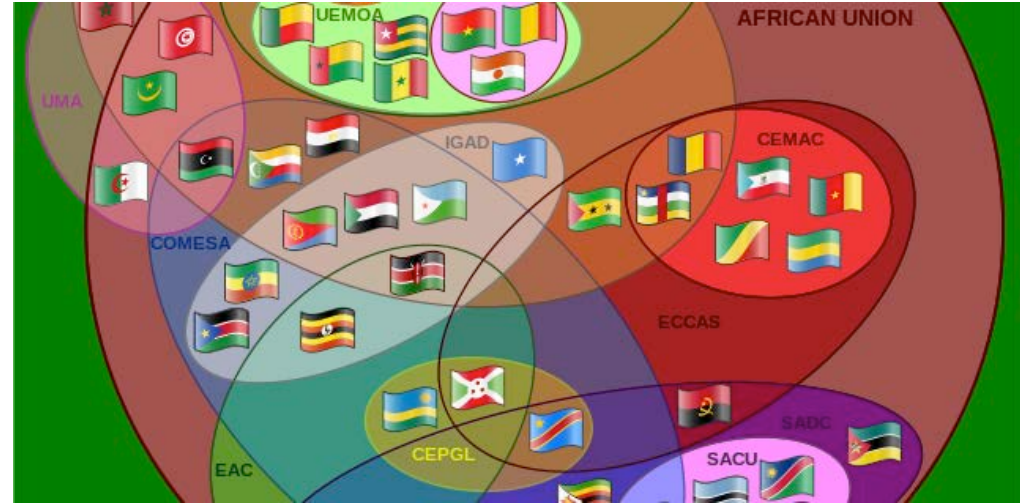
- **Our Network Vision of 2008 still stands!**



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**The challenge:**  
***Maintaining Relevance***  
***in an Evolving World***

# *Political factors: Will challenge any “one size fits all” approach*



# ***ICT policies and strategies – Great Variations***

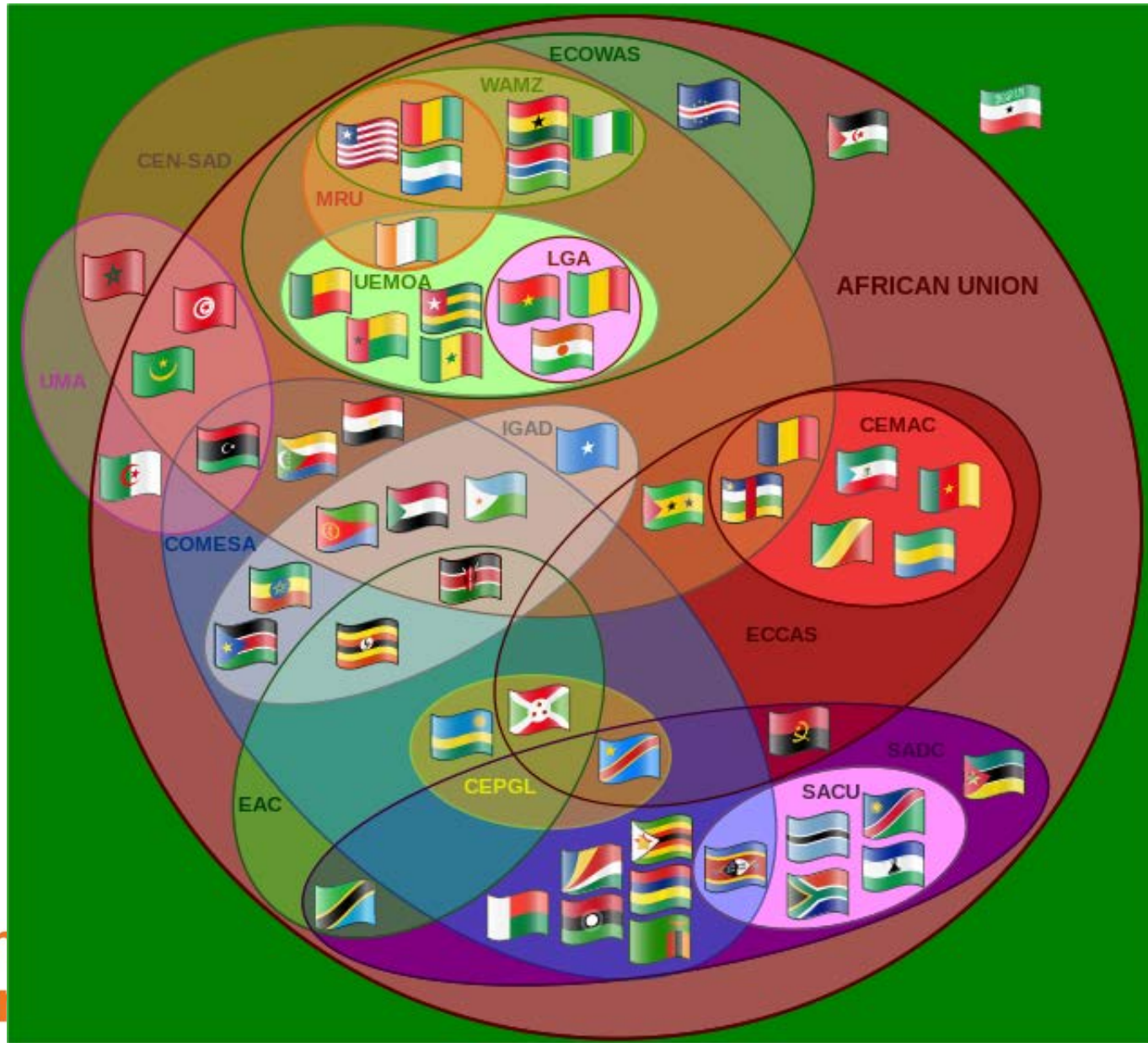
***Our challenge – addressing the varying demands of countries at different stages of ICT development***



***Kenya - Konza City***

***Uganda – No ratified  
ICT Policy***

# *Regional groupings with different agendas and membership overlaps – how do we reconcile them?*



***Poor funding for R&D as well as NRENs***

***Apparent real awareness vis a vis lack of any serious funding?***



***Kenya and Mozambique have borrowed from multi-lateral agencies to fund NREN activities***

# ***Involvement of University executives***

***- minimal involvement of senior executives of HEIs in NREN and UA activities***

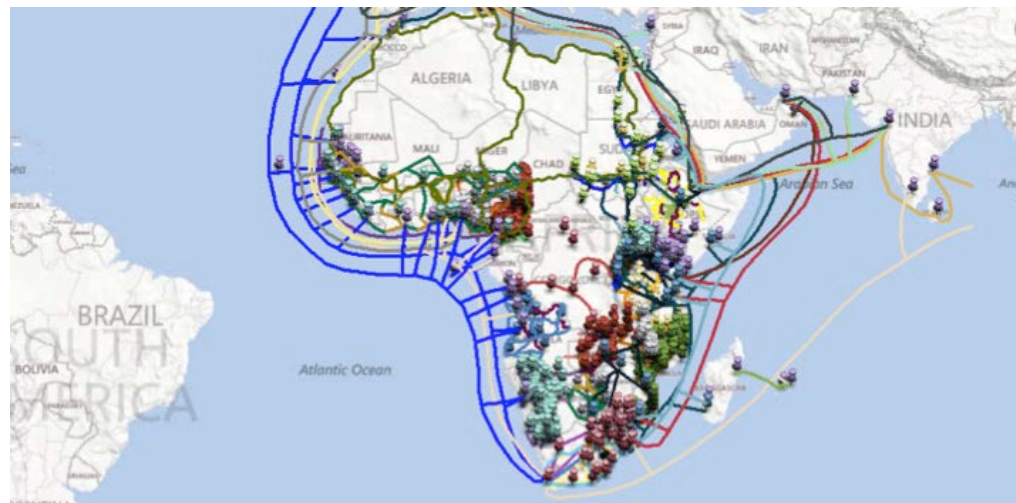


***How do we get them involved in NRENs?***

***How do we maintain relevance?***

# *Economic factors*

*Limited avenues through which NRENs/UA generate or receive funding will impact the activities of UA*



***Dwindling government funding for education:  
Governments are reducing funding as numbers of  
students and expectations go up!***



***Higher education is changing from public funded models to  
private for-profit models funded by students/ parents***

# ***Global recession and austerity***

***Donor Countries fighting recession; imposing austerity  
rejected by own populations – harder to give support***



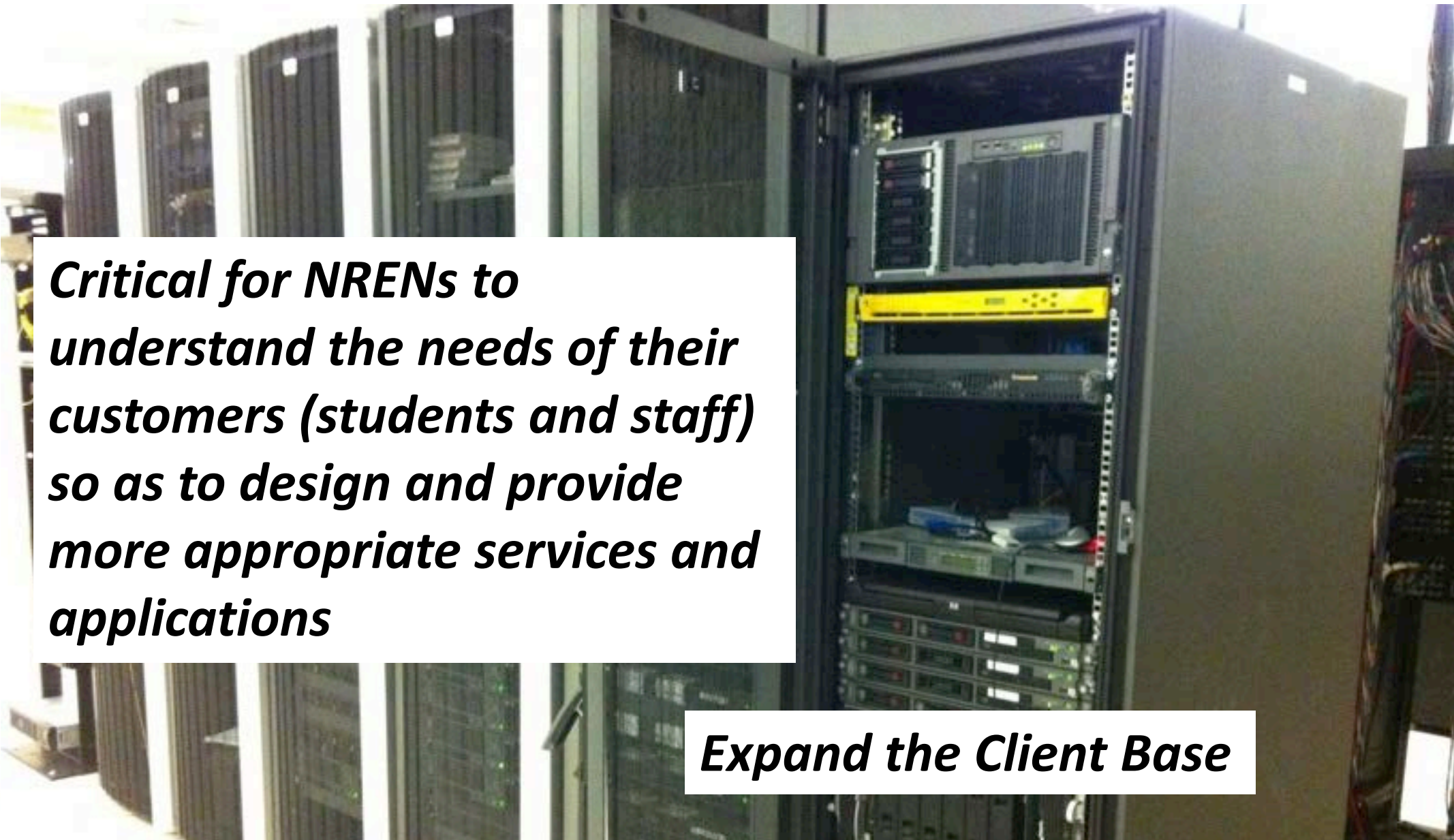


# ***Sustainable NREN service delivery***

***Bandwidth as the mainstay? – Think Beyond Bandwidth into applications, services, content!***

***Critical for NRENs to understand the needs of their customers (students and staff) so as to design and provide more appropriate services and applications***

***Expand the Client Base***



# ***Social factors***

***Will shape the size of our potential market and influence the expectations of different stakeholders***



## ***Sub-Saharan Africa's youthful population***

***Africa's youth population (15–24 years) increasing faster than in any other part of the world (PRB, 2009)***

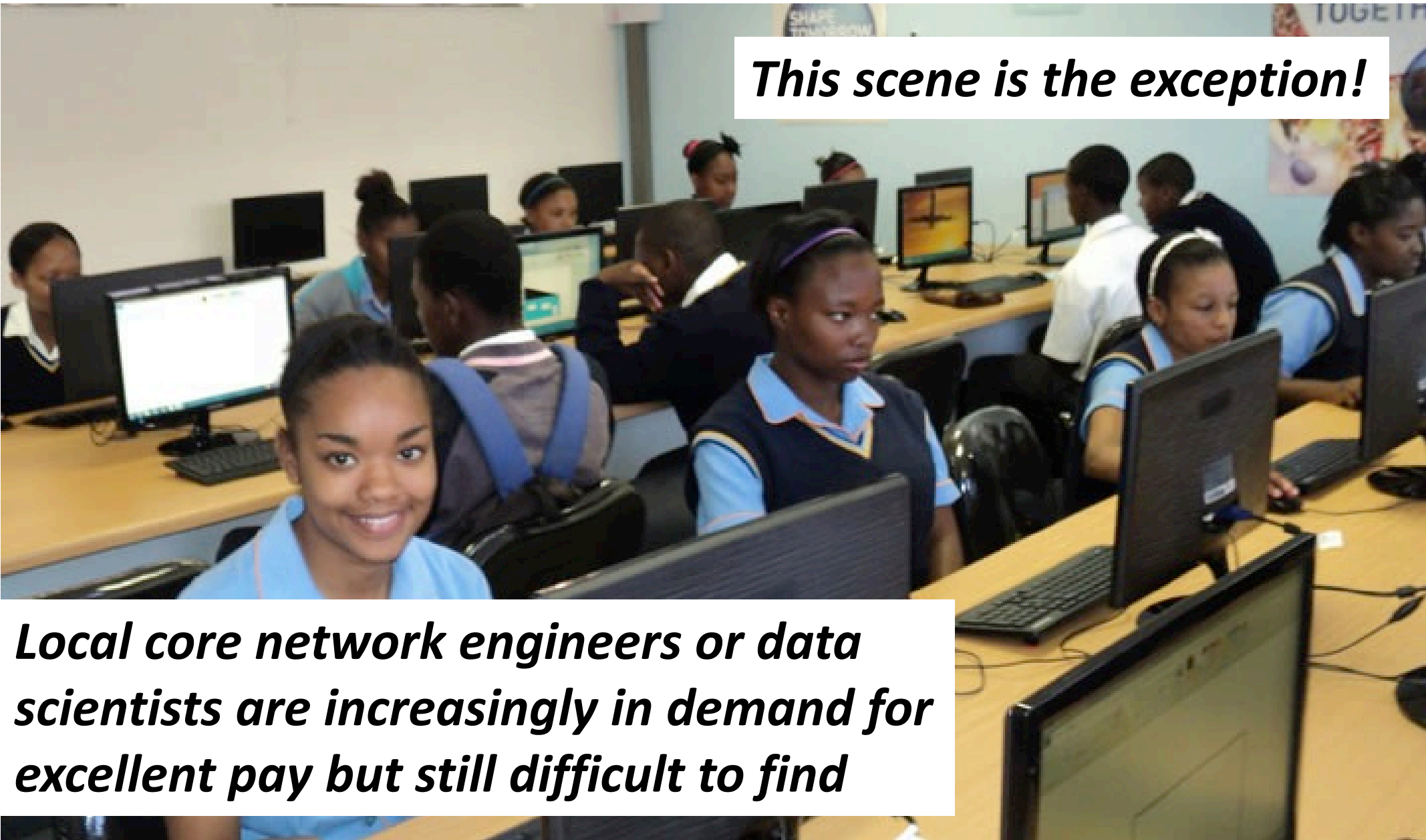


***200 million people in Africa in this category: 20% of the population, 40% of the workforce; 60% percent of the unemployed on the continent (World Bank)***

***Lack of adequate technical human resource***

***Digital literacy is increasing, but there is a dearth of technical and research competent human resource***

***This scene is the exception!***



***Local core network engineers or data scientists are increasingly in demand for excellent pay but still difficult to find***

# ***Perception of science and research***

***Research and science given lip service as potential drivers for economic development, not funding!***

***Role of NRENs and the Alliance in stimulating, supporting, and enabling science and research***

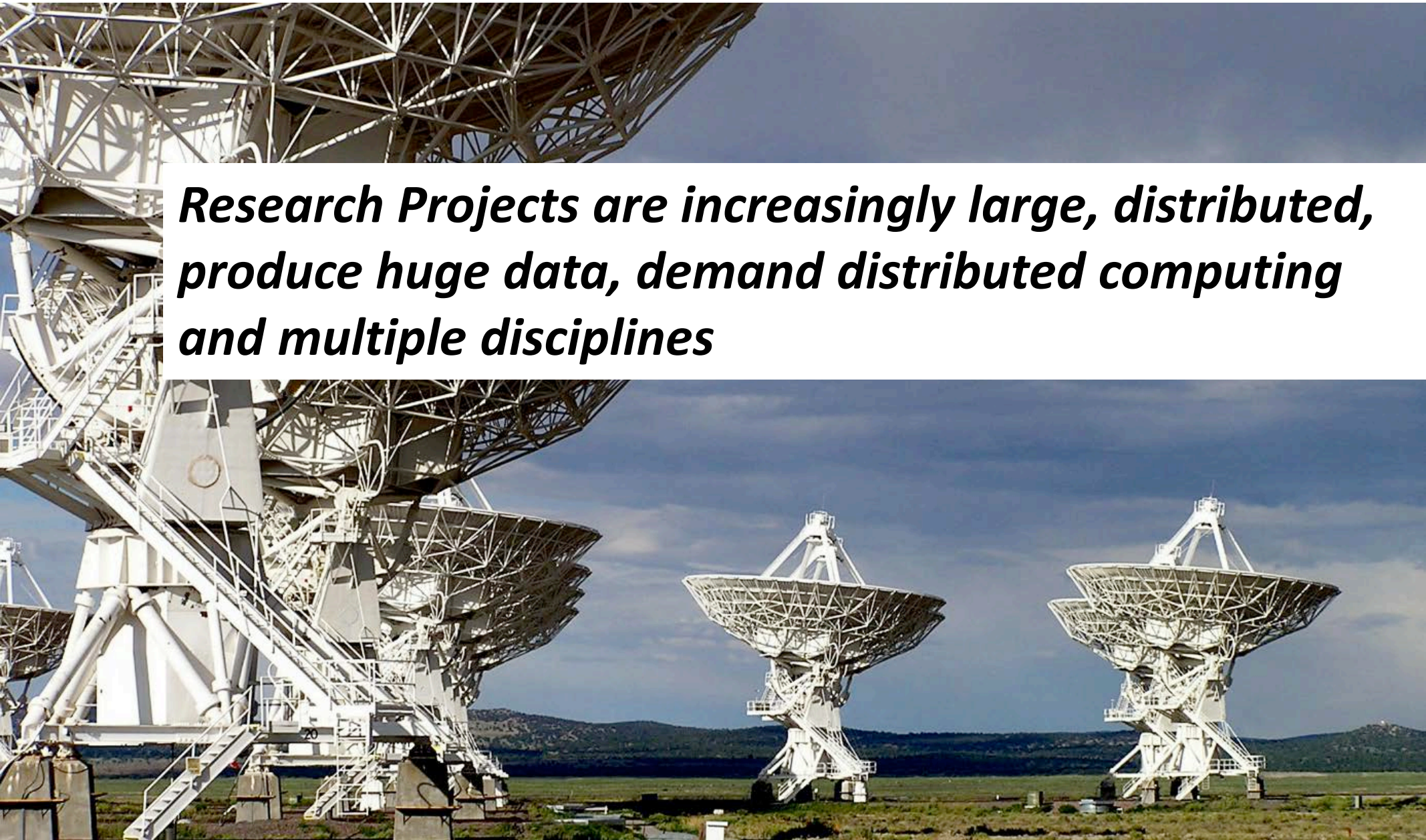
A woman with short dark hair, wearing a bright green, long-sleeved dress with lace detailing, stands in the center of a large library. She is surrounded by tall wooden bookshelves filled with books. The lighting is warm, and a window with a cross-shaped pattern is visible on the right side of the frame.

***Supposing money that funds corruption funded education and research?!***

## ***Changing nature of research***

***African researchers tend to work individually; But research is now multi-disciplinary, collaborative and global***

***Research Projects are increasingly large, distributed, produce huge data, demand distributed computing and multiple disciplines***




# ***Technological factors***

***Technologies are changing how institutions engage and disseminate knowledge and how students learn***



## ***Poor infrastructure***

***The quality of infrastructure is still poor both at the national and institutional level in many SSA countries***

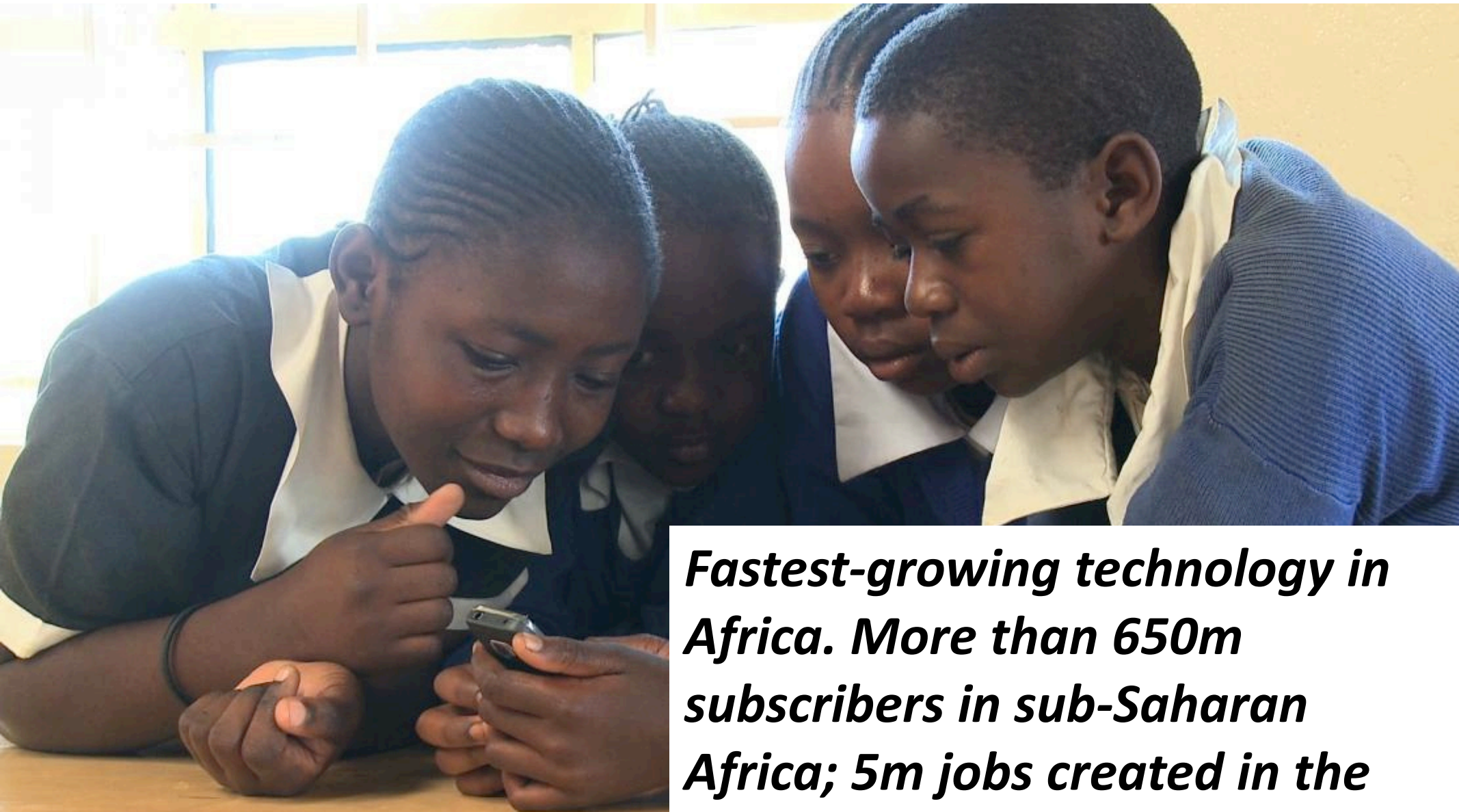


***Not just roads: Inadequate fiber networks, insufficient and erratic power, all contribute to low broadband penetration***

***ICT Policy and Regulation  
Still barriers!***

***Africa now leads the mobile revolution!***

***Mobile phones/devices becoming ubiquitous amongst students and staff. Require robust networks; mobile apps***



***Fastest-growing technology in Africa. More than 650m subscribers in sub-Saharan Africa; 5m jobs created in the continent last year. (The Guardian)***

# ***Cyber security has gained prominence***

***As the connectivity improves, we need to enhance security, resilience, and reliability of cyber infrastructure***



***User awareness; train more security professionals to protect our critical infrastructure***

***How can we leverage UA's leadership to help in this area?***

# Improving schools through faster internet

President Barack Obama directed his government to begin a process to give 99% of American students high-speed internet connections within five years

www.reuters.com/article/2013/06/06/us-usa-obama-internet-idUSBRE9550FF20130606?irpc=932



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## Obama wants to transform U.S. schools through faster Internet

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By Steve Holland  
MOORESVILLE, North Carolina | Thu Jun 6, 2013 3:42pm EDT

(Reuters) - President Barack Obama directed his government on Thursday to begin a process to give 99 percent of American students high-speed internet connections within five years.

"In a country where we expect that in our schools?" he told students at a middle school in Mooresville.

Obama ordered the Federal Communications Commission to start work

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Analysis & Opinion

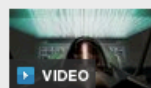
**What are WE going to do?**

Thursday June 6<sup>th</sup> 2013

"In a country where we expect free Wifi with our coffee, why can't we expect that in our schools?" Obama told students at a middle school in Mooresville.



homes (2:02)



FACTBOX: U.S. jets struggle to evade Chinese hackers



EU plan to remove Libor from London  
(Financial Times)

## ***(1) Mene, Mene, Tekel, Upharsin? Not quite!***

- **Address the traditional mission, because many are still in dire need, but also:**
- **Develop new areas of competence and service portfolios that are responsive to the changing needs of our stakeholders;**
- **Position ourselves as key national and regional players spearheading development efforts within our areas of competence: move from the passive platform background to stimulation, activism and delivery**

## ***(2) Mene, Mene, Tekel, Upharsin? Not quite!***

- **Engage new partners as members of the Alliance in Different Categories – private sector, regional content and application networks, regional organisations (AAU, AUC, CRASA, EACO, ARICEA, etc), development agencies, etc**
- **Think networks in all dimensions without losing focus on individualism of researchers and educators**
- **Create direct global links. GEANT is good – but not as our “forever” gateway to the Global REN Community**

### ***(3) Mene, Mene, Tekel, Upharsin? Not quite!***

- ***It is not the strongest of the species that survive, nor the most intelligent, but the ones that are most responsive to change – Charles Darwin***