



Next Generation Wireless Research Infrastructure (NGWRI)

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our future through science

***Cape Town, South Africa - www.euroafrica-ict.org
4th Euro-Africa Cooperation Forum on ICT Research***





The Need for the NRF-NGWRI - Testbed

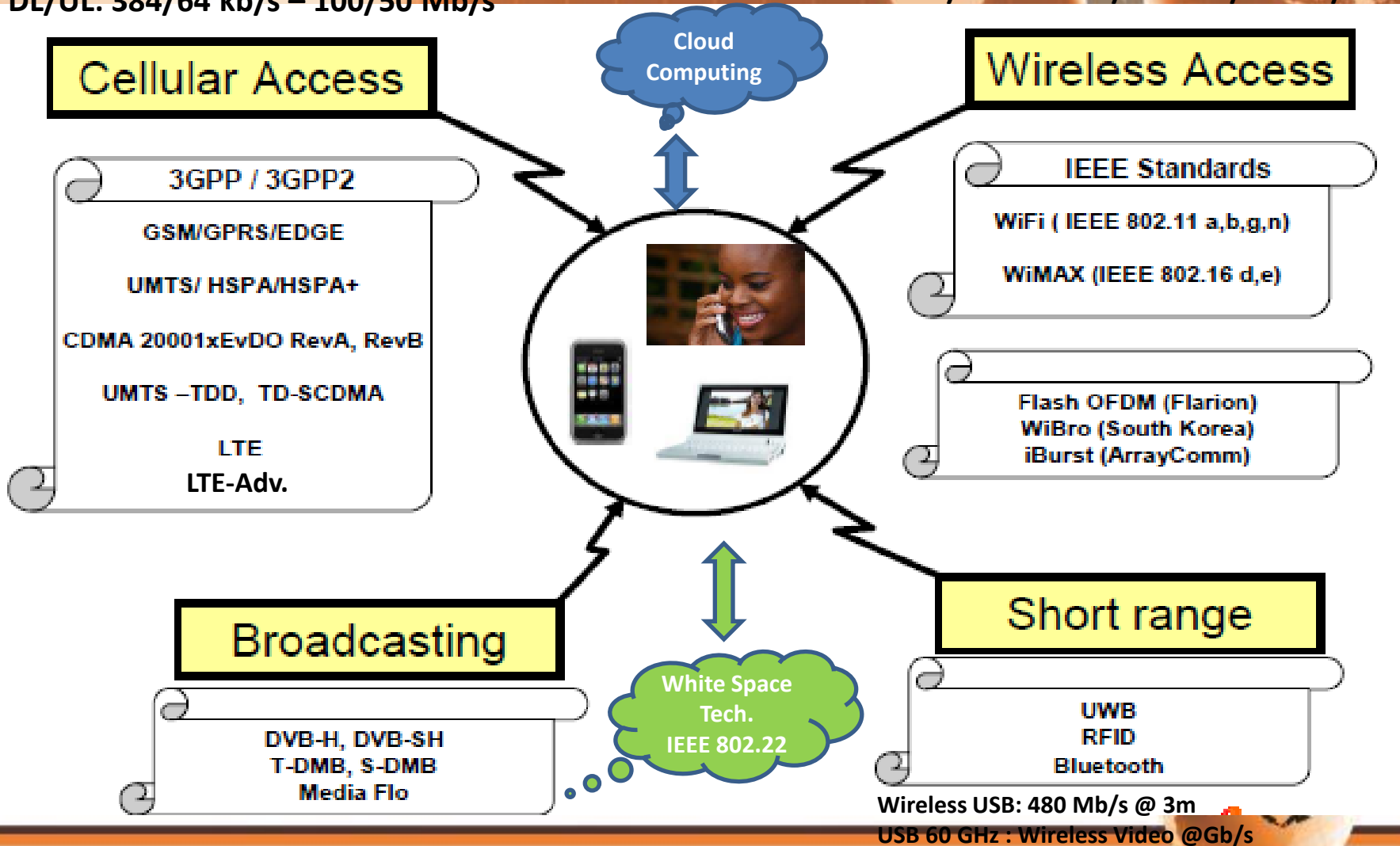
- Human Capacity Building.**
- Participate in the Wireless Eco System of Research, Innovation and Business Development.**
- Research, development & Usability Testing of Locally Relevant Technology and Applications.**
- Understanding the Complex Scenario of Heterogeneous Wireless Communications Systems, and make effective use for socio-economic benefit.**
- To Provide Research Support to Government, Local Telecom Regulators and Policy Making institutes.**
- Collaborate with Local, African, EU & International Research institutes**
- Collaborate with the Wireless Industry, and Standards Bodies.**



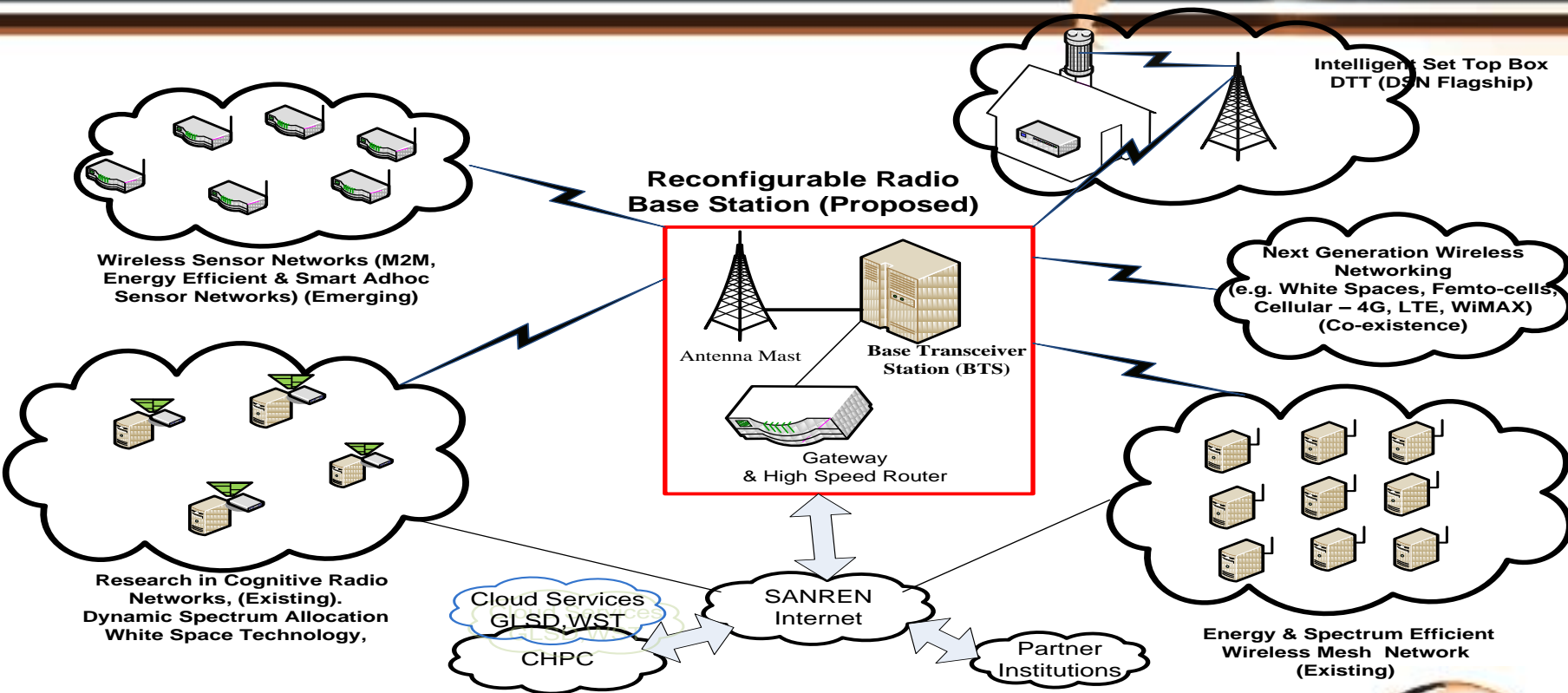
The Complex Scenario of Heterogeneous Wireless Communication Systems

DL/UL: 384/64 kb/s – 100/50 Mb/s

DL/UL: 20 Mb/s – 350/xx Mb/s

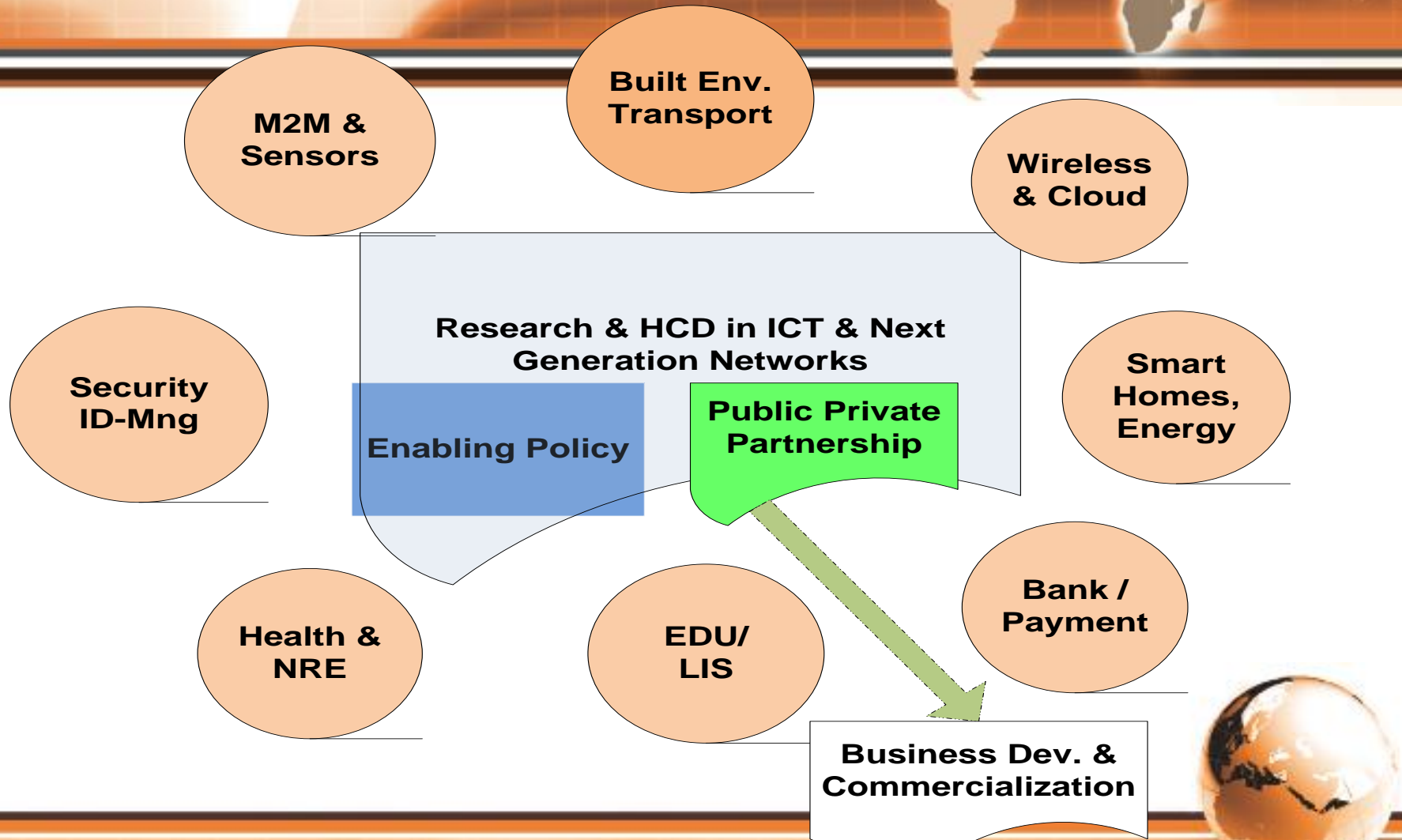


Proposed Next Generation Wireless Research Infrastructure



Next Generation Wireless Technology Research Infrastructure - NRF-RISP proposal

Impact & Eco System of ICT & Wireless R&D.



Status:

- ❑ Wireless Mesh Networks for Broadband4All & Community Services.
- ❑ R&D in Next Gen. Radio Network Technologies for improved Broadband4All:
 - Software Defined Radio, Cognitive Radio Networks: Dynamic Spectrum Allocation, White Space Tech.(WST): IEEE 802.22.
 - Intelligent & Dynamic Spectrum Allocation – ICASA
 - Coexistence of Heterogeneous Wireless Networks & IOT.
 - Secure & Energy Efficient Wireless Sensor Networks (ASN).
 - Intelligent Digital Services Node & Set Top Boxes – DTV-DoC
- ❑ 7 Southern African Universities listed as Co- Users for Research & Postgraduate HCD.
- ❑ 3 International Universities for Research collaboration
- ❑ ICASA supports the project for R&D and HCD.



Conclusion:

- ❑ Emerging Economies Path to Internet Services is Predominated by use of Heterogeneous Wireless Communications Technologies .
- ❑ The NRF-NGWRI-testbed will promote state of the art Research & HCD in next generation networks and applications.
- ❑ R&D in ICT & Next Generation Wireless Technologies is a key for taking part in the ICT + Wireless Eco System.
- ❑ Building affordable and sustainable wireless broadband networks.
- ❑ Promoting African, EU and Industry R&D collaboration on Next Generation Wireless Broadband Technologies and Services for better Socio-economic impact.





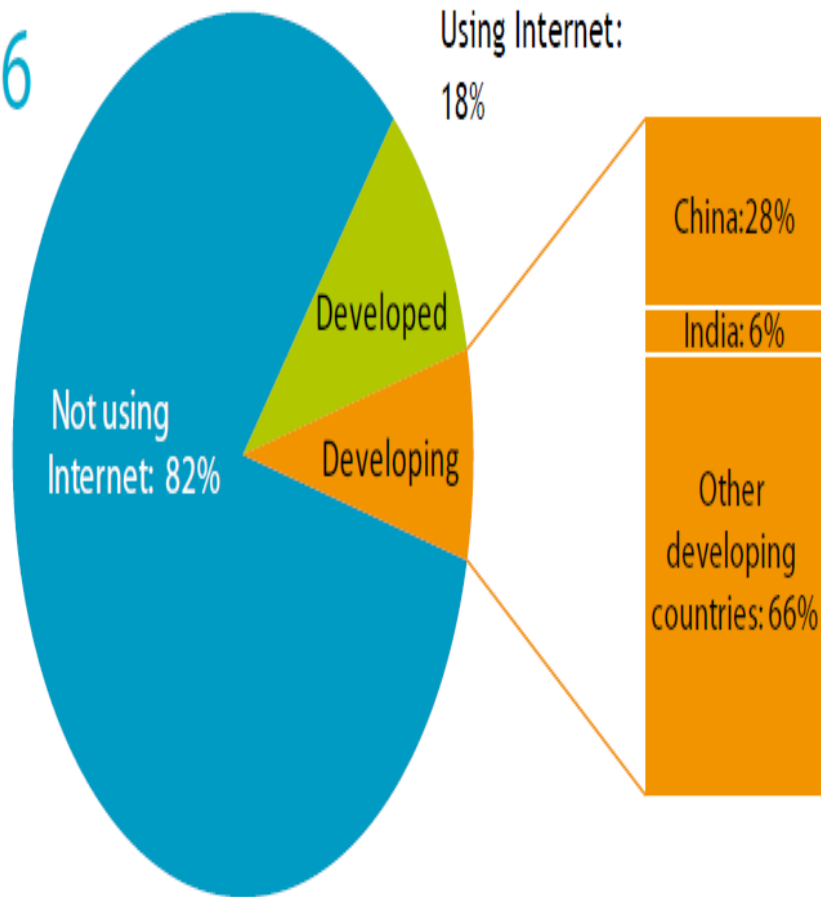
The Future is Looking Back at Us ! ...Annon.



Thank You

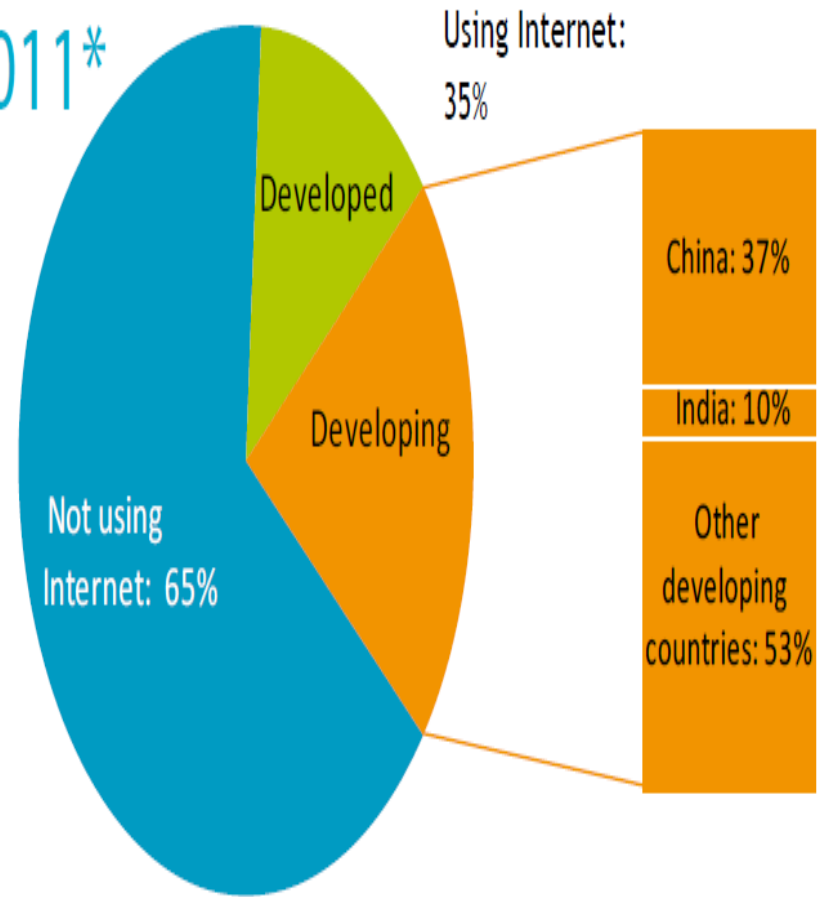


2006



Total population: 6.5 billion

2011*



Total population: 7 billion

Note: * Estimate

Source: ITU World Telecommunication/ICT Indicators database