Mobile Broadband Technology & Services: Sustainability Factors

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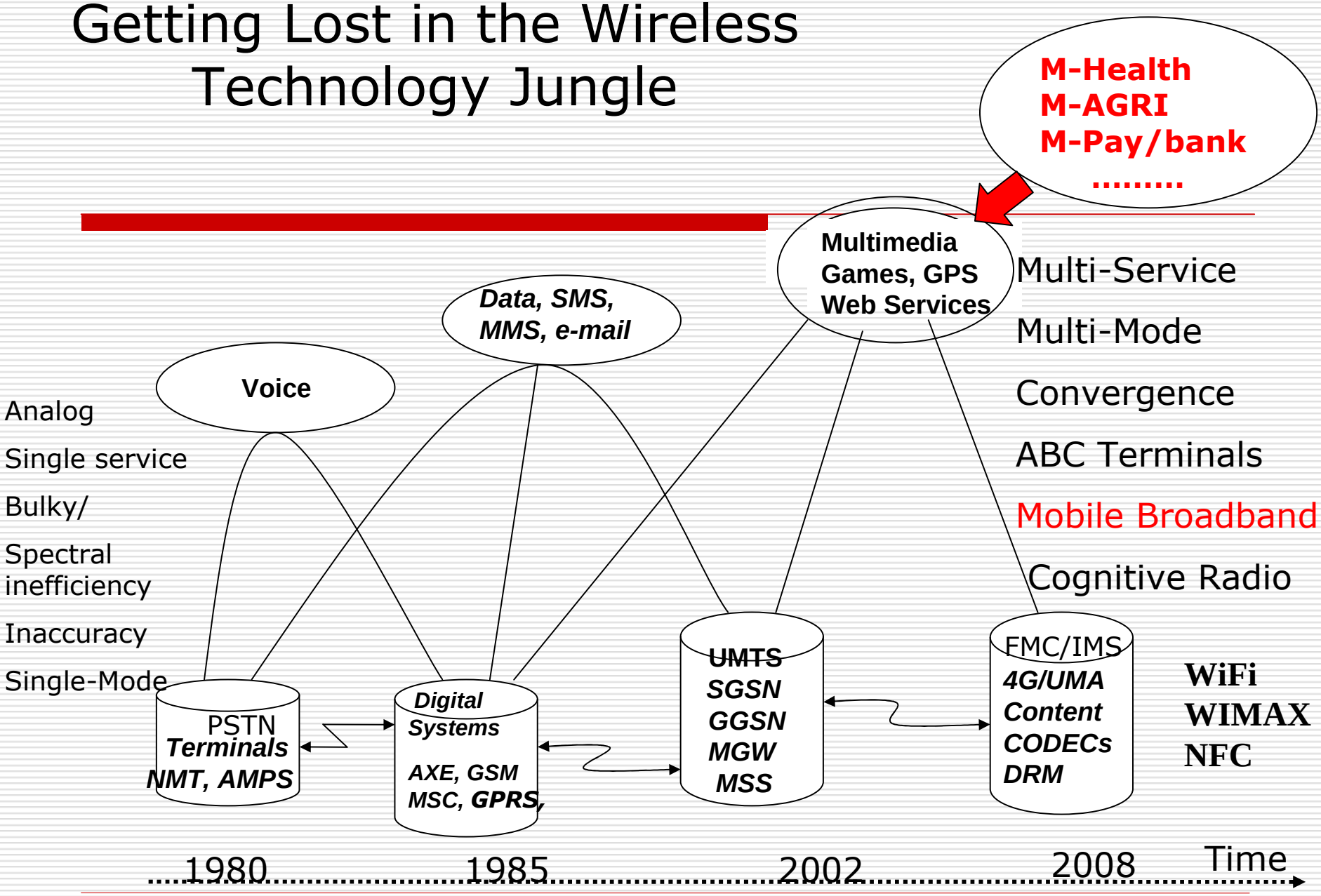
DWF workshop: Low cost Broadband Access & Infrastructure

Sustainability Factors

- Broadband Technology Choice
- Entrepreneurship & Local Service Provision
- Indigenous local content & Social Networks
- Network Resource utilization or Sharing

Getting Lost in the Wireless Technology Jungle



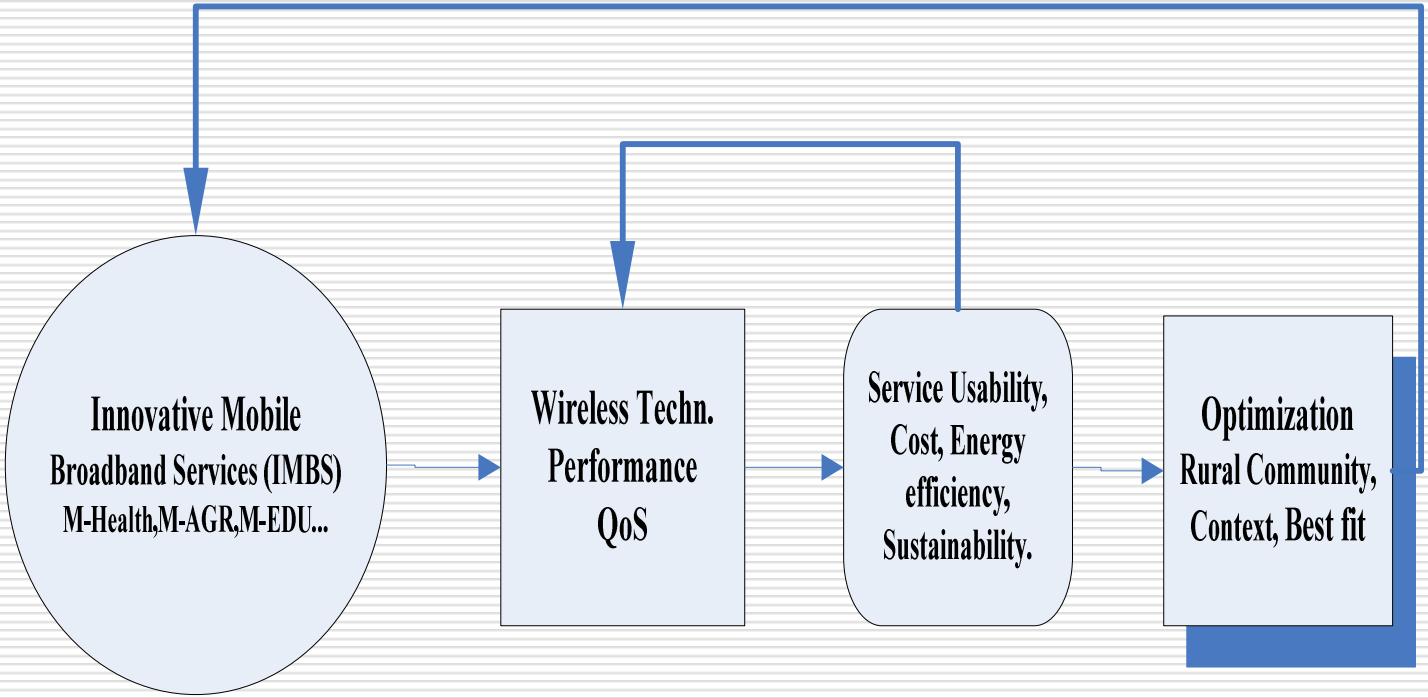
Choice of Mobile Broadband Technology:

3G+HSA &/or WiMAX/WiFi &/or DVB-H?

- 3G + HSA + IMS –Mobile Broadband
  - Multi-Radio & Common Core
  - Use Enterprise Mobile Broadband Development
- WiMAX is new technology + WiFi
  - Extending broadband services to areas without DSL & DSL service with mobility (IEEE802.16e,m)
  - Multi-hop Cellular Networks
- 3G-MBMS & DVB-H Broadcasting services
  - Mobile-TV

..... *ACM Mobicom-08, San Francisco.*

An iterative model for Guaranteeing Sustainability



Innovative Mobile Broadband Services

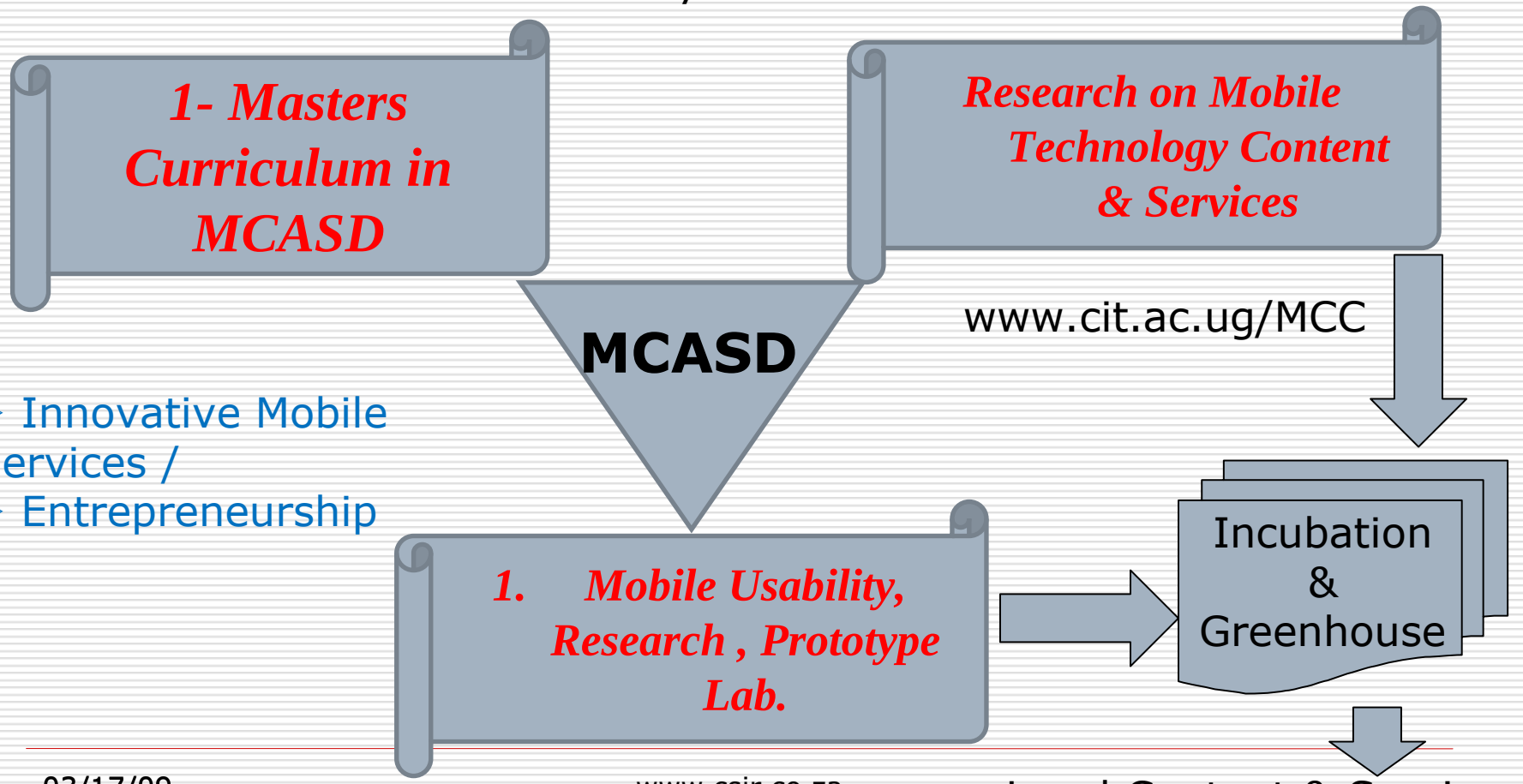
Defn.: *An innovative mobile broadband service is a new mobile service which guarantees successful launch, and is motivated by real need of users. The service should be able to use low power and low cost network architecture and devices. With respect to customers, the service must be affordable, fulfill a requirement, provide a benefit, and promotes the creation of an echo system of stakeholders to sustain economic and social development of the community, technology and services.*

- Mobile Applications (Apps. Store Frenzy)

Education, Research & Capacity Building

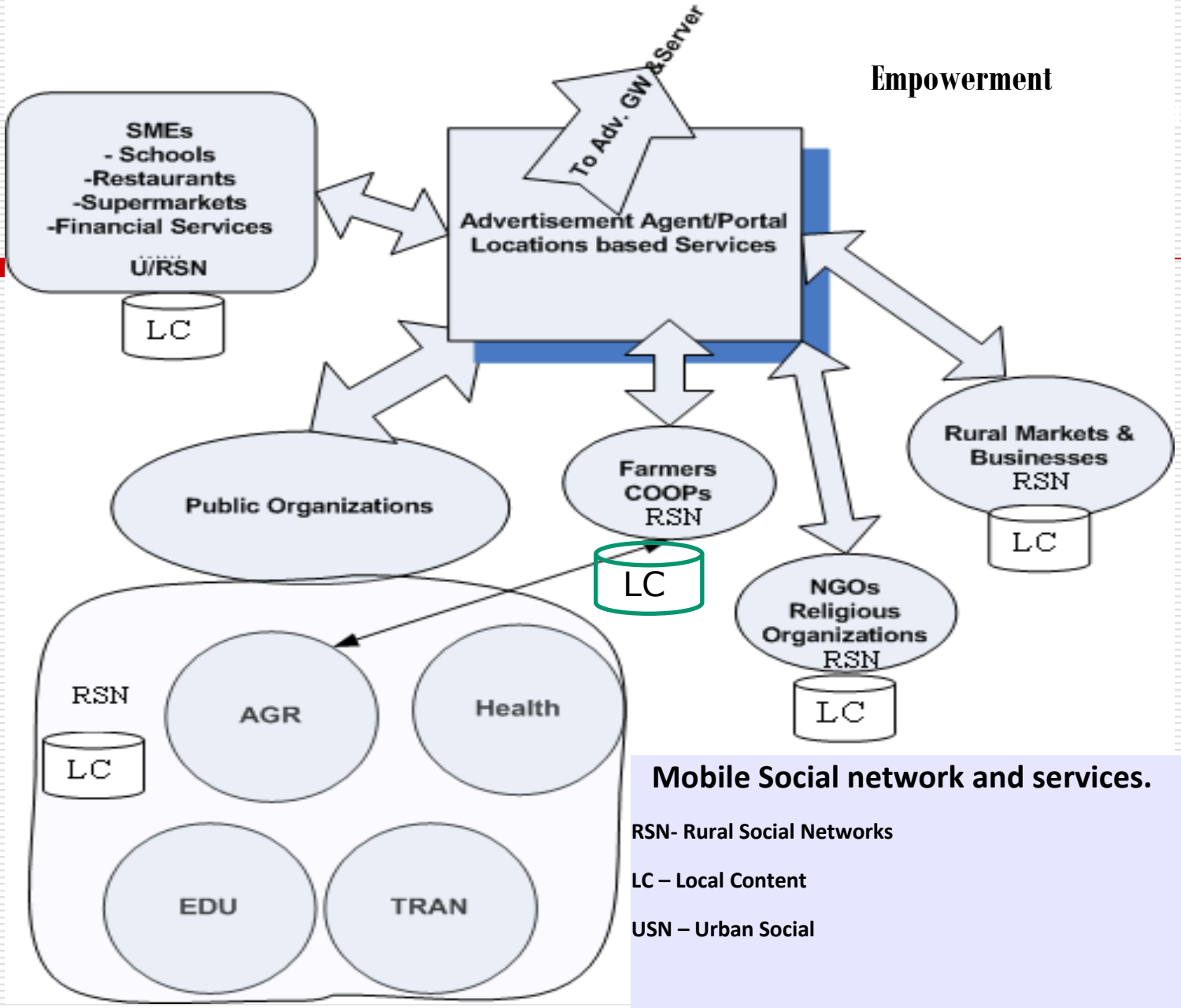
Mobile Computing & Appl. Software Development

Sustainability Factor 1



Sustainability Factor-2:
Echo System & Local content

- Creation of an Echo System of R/USN
  - Promote dev. Indigenous Local Content (ILC)
  - A bottom –up mobile business model
  - Promoting dynamic content based mobile services
- HEI Research support in the creation of ILCs
- Network Operators & MVNOs use of ILCs
- ILCs+ Mobile Adverts as a cost reduction tool
  - Location Information and Intelligence in ILCs



Mobile Social network and services.

RSN- Rural Social Networks

LC – Local Content

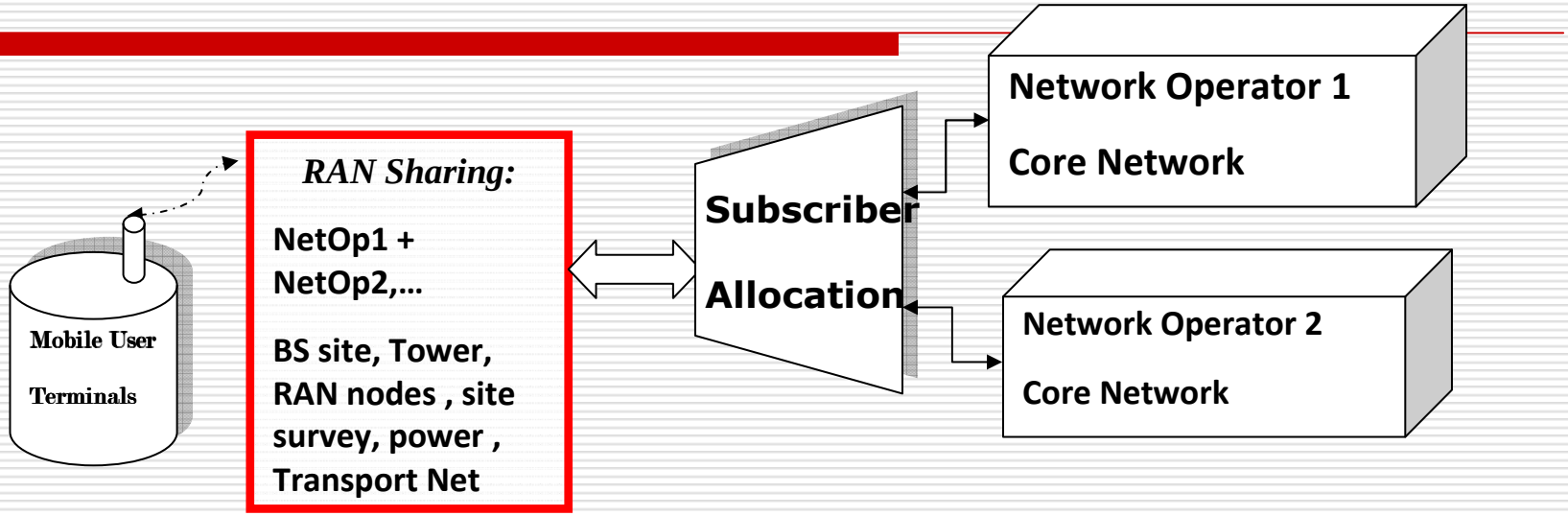
USN – Urban Social

Sustainability Factor3: Network Sharing

Reason: Broadband – high CAPEX & OPEX

- A new Techno-Economic Model
  - Competing operators: collaborating on RAN Access
- Implications and Long term sustainability
  - Lower Mobile Broadband CAPEX & OPEX
  - Reduction of Mobile Service Costs
  - Lower Energy Requirement
  - Environmental Sustainability
- An Appropriate model for Developing Countries.
- Regulatory incentives ?!

Radio Access Network Sharing Concept.



- Only European Operators Going for RAN sharing
  - T-Mobile & 3UK : ~ 2 Billion Euros, ~ 5000 BS sites, less OPEX
- Why not RAN/Core/transport sharing in Africa ?

Conclusion

- Choice of Mobile Broadband Technology
  - EDU & Research Capacity Building: MCASD
  - Next Generation Network Technology Strategy
- Research on Innovative Mobile services:
  - M-Health, M-banking, M-ATM, M-E-Gov
  - Security & Reliability of mobile services
- Large Market in Affordable Mobile Services
  - Promote Local Content & Service Providers
  - RAN sharing for improved Affordability

The Future is Looking Back at Us ！

Thank You