



ERICSSON

UHF SPECTRUM AND MOBILE BROADBAND

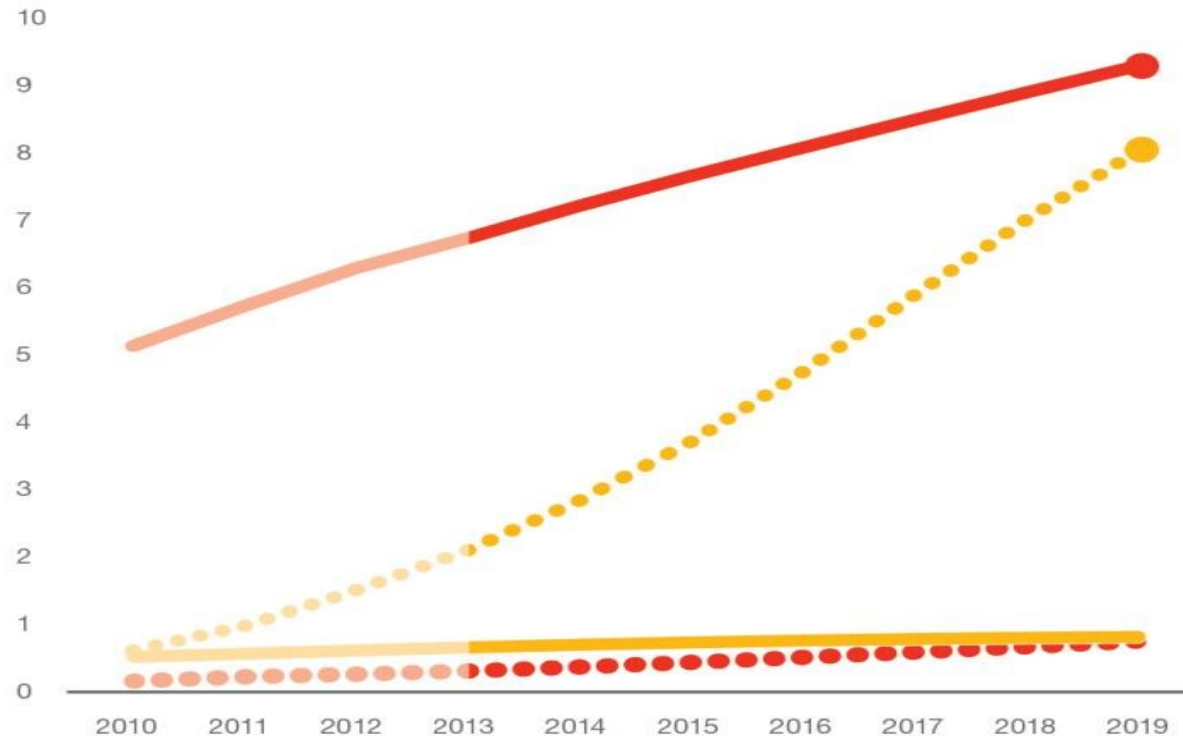
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GROUP FUNCTION TECHNOLOGY, ERICSSON

ITU RRS-13-Arab
Tunis, December 13, 2013

FIXED AND MOBILE SUBSCRIPTIONS 2010-2019



Subscriptions/lines (billion)



Source: Ericsson (November 2013)

9.3 BILLION

**mobile subscriptions by
the end of 2019**

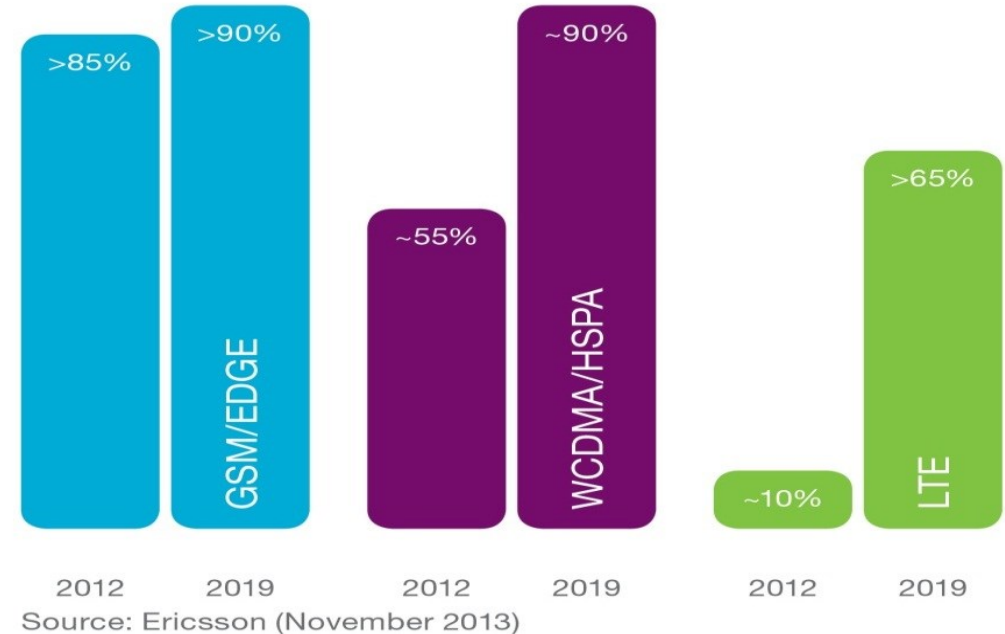


POPULATION COVERAGE



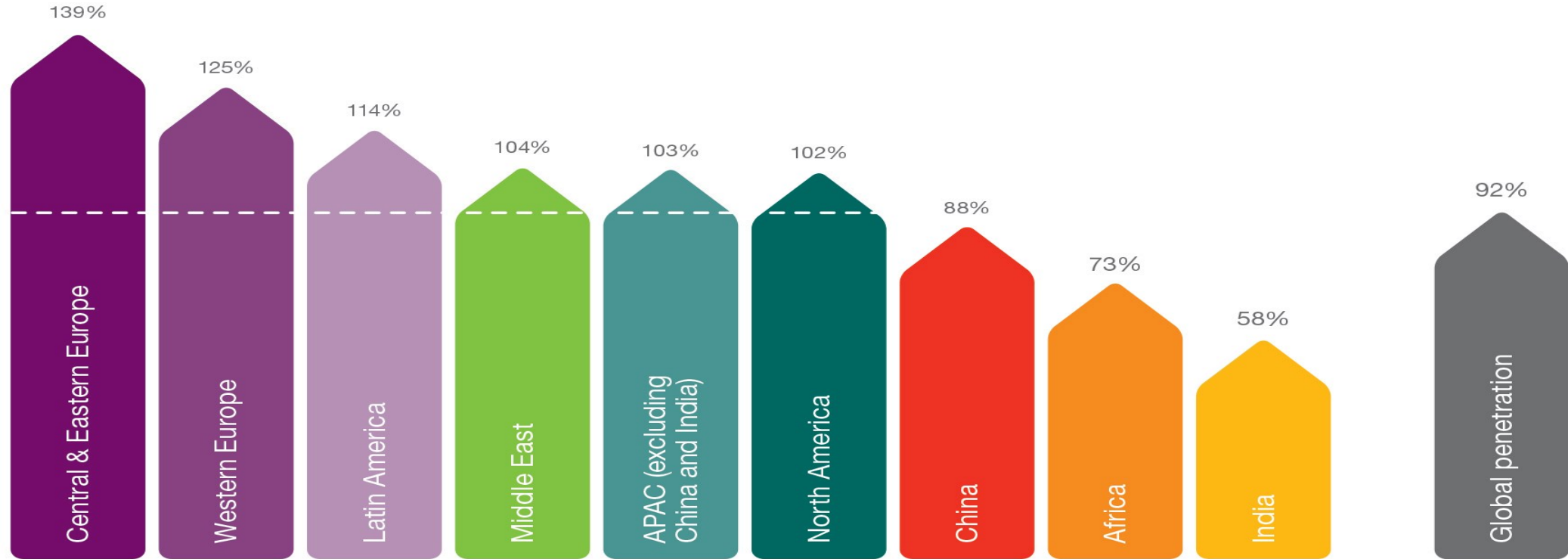
Population coverage by technology, 2012 and 2019

~90%
of the world's population will be covered by WCDMA/HSPA in 2019



- › **Around 90% of world's population covered by WCDMA/HSPA in 2019**
- › LTE network deployments continue in all regions of the world, as LTE population coverage doubled in 2012 compared to 2011 (10% vs. 5%)
- › More than 65% of world's population covered by LTE in 2019

MOBILE PENETRATION REGIONAL Q3 2013 -



Penetration

Source: Ericsson (November 2013)

HSPA DEVICES IN

LOW PRICE



- › Driven by local vendors in India & China
- › Typical Specs & Price
 - HSPA 7.2Mbps / 5.76Mbps
 - 3.5 inch screen, Dual SIM
 - Retail price \$48, wholesale <\$35
- › Entry tier \$36-\$99 will be largest by volume in 2017



K-Touch W619
\$48
Ultra-Low Tier



K-Touch W700
W900/2100
4.0" screen
\$65

SPECTRUM USAGE PRINCIPLES



Licensed Dedicated
mainstream approach for MBB
about 350 MHz today



- Efficient for large area and population coverage (~85%)
- Predictable quality of service
- Reliable at high load at all times
- Affordability, Economies of scale, High valuations

Unlicensed Spectrum
Wi-Fi main usage
>500 MHz today

- Efficient for indoor / controlled environments and short ranges, typically indoor – not wide area coverage
- Vast majority fixed line subscription extensions
- Unpredictable quality of service, unreliable at high load

Licensed / Authorized Shared
complementary for MBB

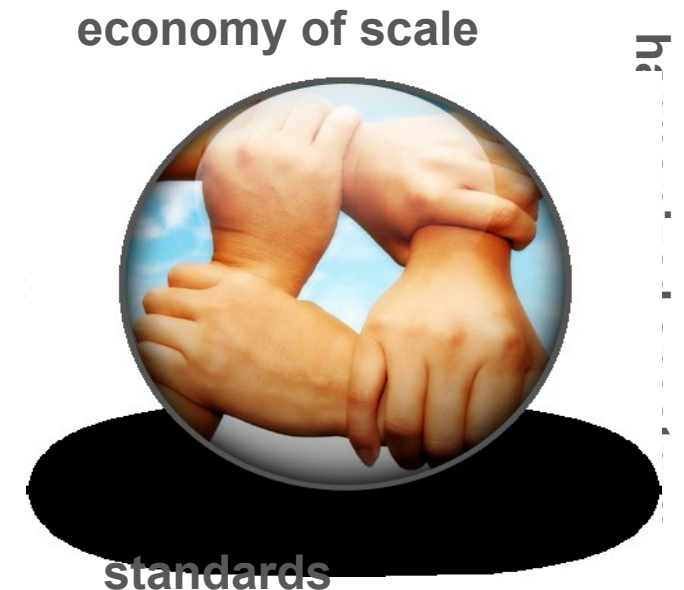
- Fast unlocking of mobile spectrum
- Either-or usage between incumbent and licensee
- Predictable quality of service
- Protects incumbent, lends investment security

HARMONIZED SPECTRUM



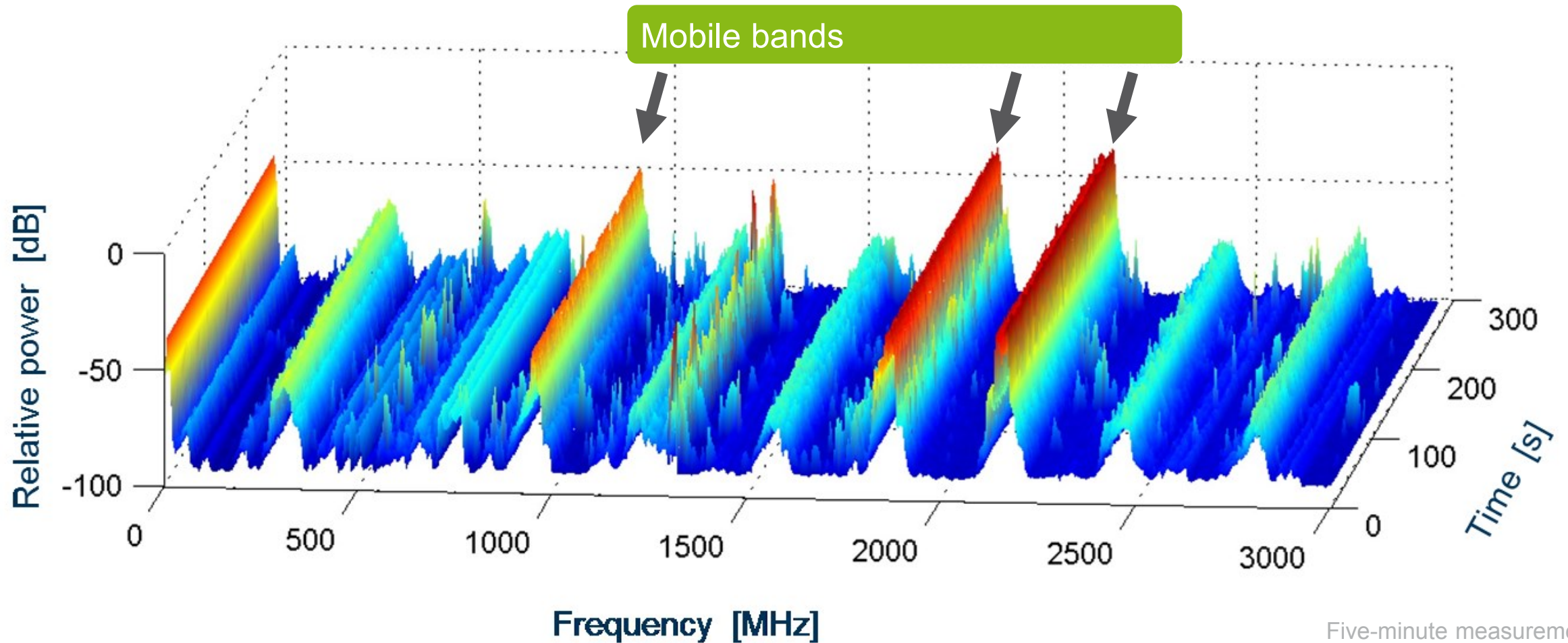
Harmonized spectrum is key for development of public MBB access as well as for industry to be able to successfully respond to national policy goals by providing **standardized products** and operated in **licensed spectrum**

- › **Economy of scale** (based on a mass market)
- › Easy **cross-border coordination**
- › **Cross-border operation** (between countries)
- › **Global roaming** capabilities
- › **Interoperability** choice and convenience
- › **Efficient use** of spectrum (also in border areas)



Providing affordable services and applications for all

TYPICAL SPECTRUM UTILIZATION



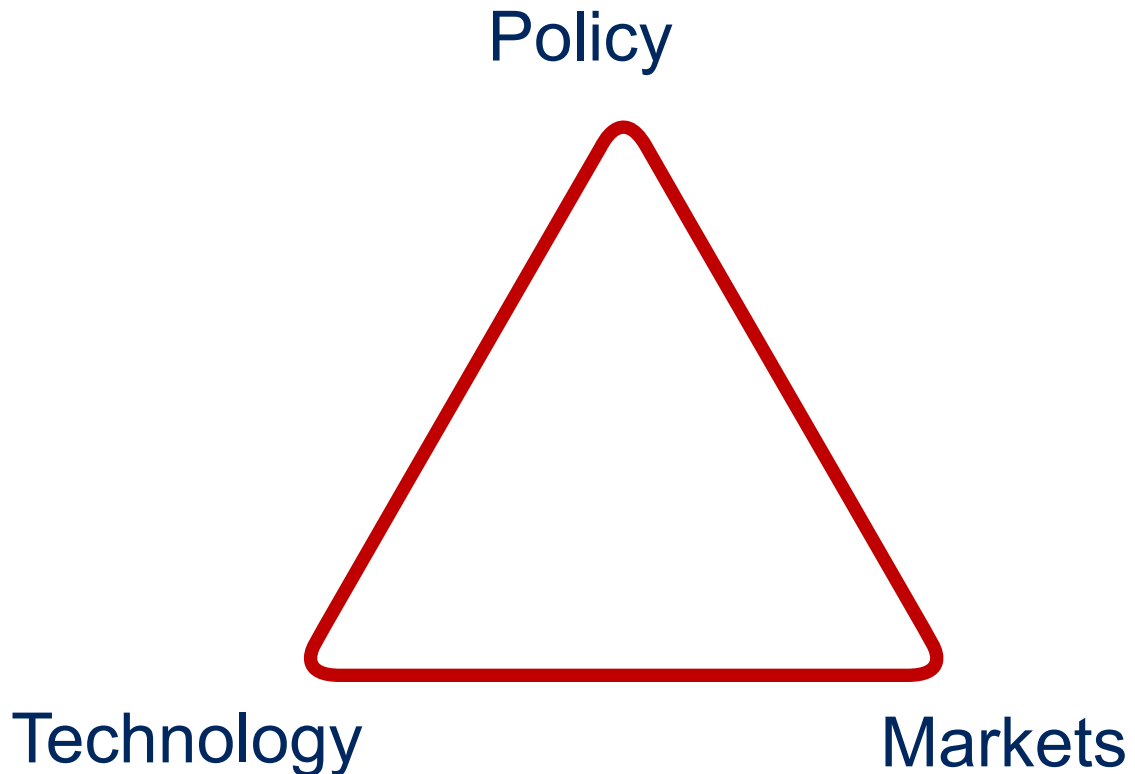
Five-minute measurement in office environment, Kista, Stockholm, Sweden (Feb 2009)

THE TV UHF SPECTRUM



- › The band 700 MHz; a harmonized approach - APT700 based
- › Ongoing activities for mutual benefits for Mobile and TV broadcast in the range 470-698 MHz

IMPLICATIONS FOR POLICY

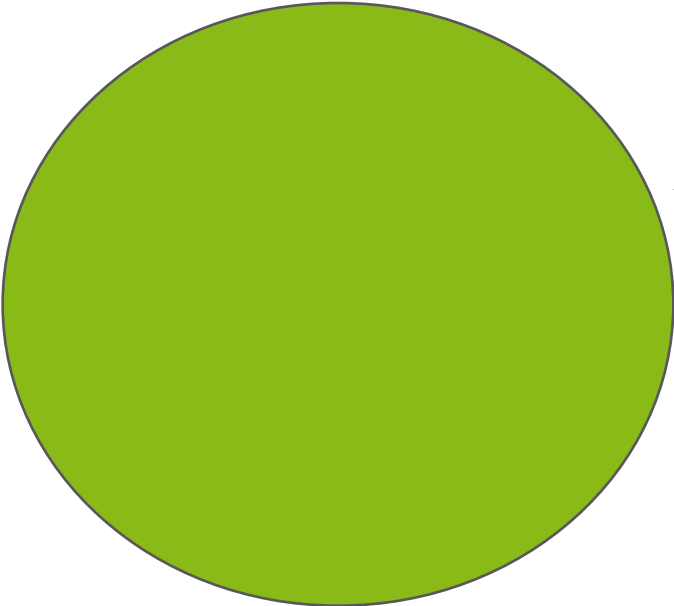


- To exploit scale (and scope), harmonize spectrum
- Policy players must seek to provide regulatory certainty, if Public Private Partnerships are to work
- Recognize & govern telecom as critical social infrastructure, not a mere vertical industry

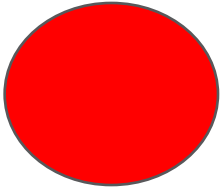
COVERAGE AND ECOSYSTEM



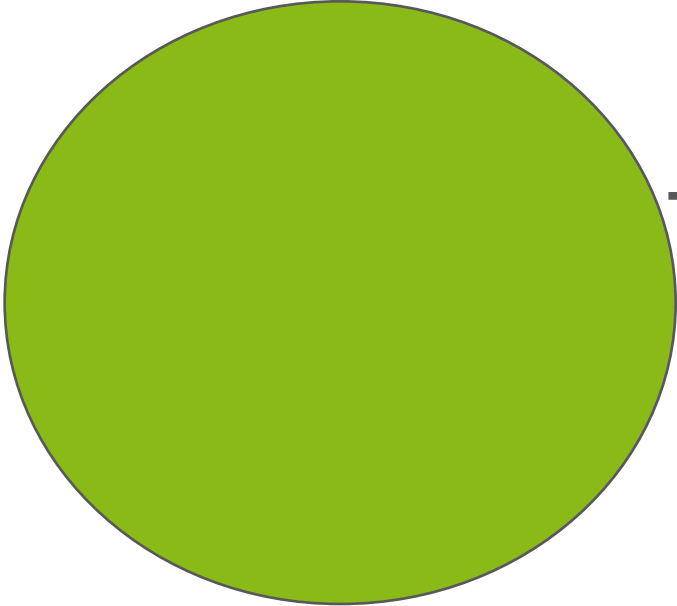
Coverage with Licensed spectrum



Coverage with Unlicensed spectrum



HSPA/LTE eco system



TVWS eco system



- 
- › SEIZE the opportunity
MBB on 800-900MHz now
MBB on sub 800 after DSO
 - › REALIZE the potential to
unleash digital vitalities of
African economies
 - › A golden opportunity
for Africa!



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