

Future Spectrum Requiremetns for RCC Region

WRC-15 lunchtime seminar for CEPT

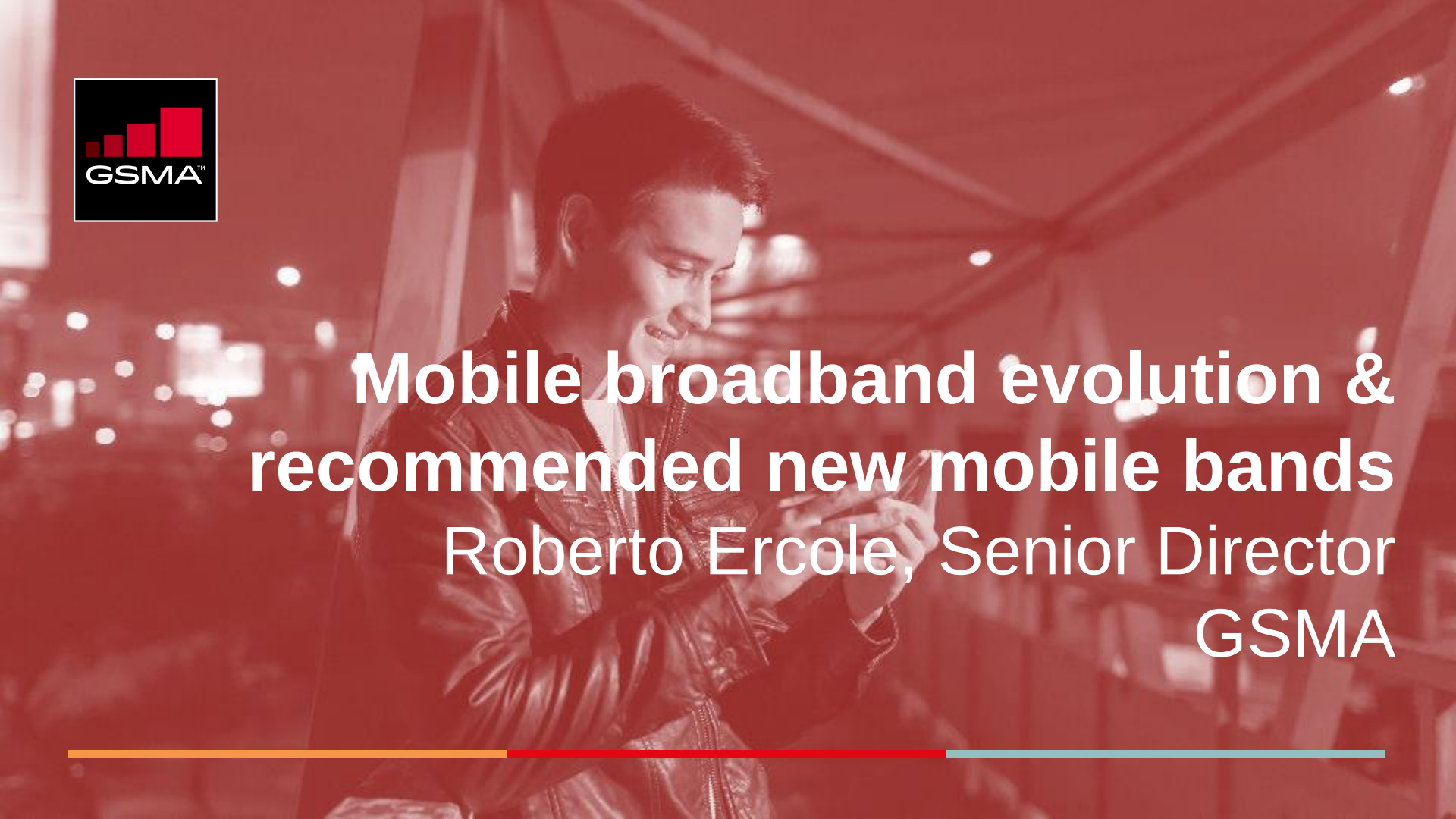
Geneva, 10 November 2015

Welcome
Mortimer Hope, Director of Africa
GSMA

Mobile broadband evolution & recommended new mobile bands
Roberto Ercole, Senior Director
GSMA

Q&A and networking





Mobile broadband evolution & recommended new mobile bands

Roberto Ercole, Senior Director
GSMA

GSMA recommended new mobile bands

Sub-700 MHz UHF

(470-694/8 MHz)



The key to the future of widespread mobile broadband coverage

L-band

(1350-1400 MHz & 1427-1518 MHz)



A good mixture of coverage and capacity

2.7-2.9 GHz



A good capacity band that would allow use of existing 2.6GHz cell sites

C-band

(3.4-3.8 GHz & 3.8-4.2 GHz)



Large bandwidth could provide capacity to support high-speed mobile broadband

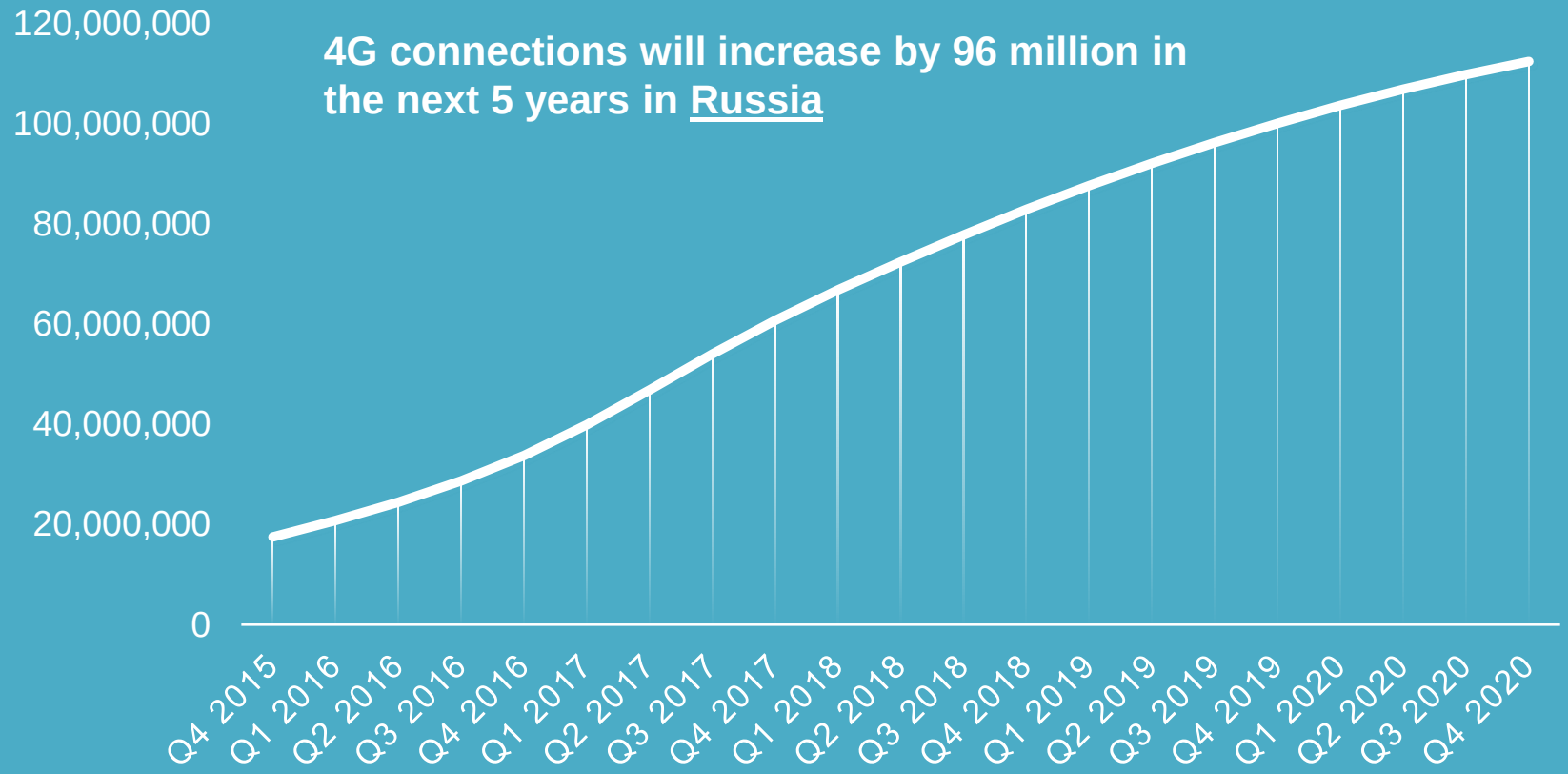
Mobile is increasingly dominant in CIS

EVOLUTION OF CONNECTIVITY OVER PAST DECADE (IN MILLIONS OF SUBSCRIPTIONS)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fixed subscriptions	64	69	72	73	73	74	73	72	69	67	65
Fixed *broadband* subscriptions	2	4	6	12	17	22	26	31	36	37	39
Mobile subscriptions	166	227	267	312	355	377	358	368	386	389	391
Active mobile *broadband* subs	N/A	N/A	N/A	N/A	N/A	62	88	99	119	133	141

Source: ITU *n/a = not available*

The next five years will see a 4G revolution



In Central & Eastern Europe mobile data is growing fast…



Mobile data growth in 2014

91%

14x

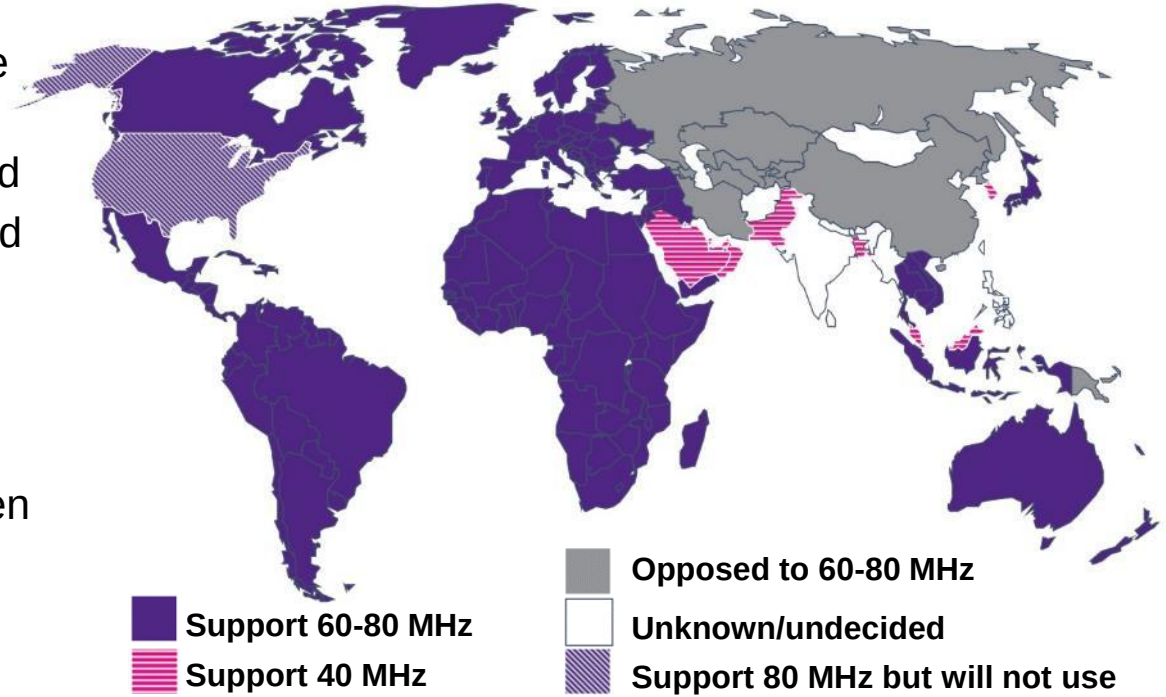
FROM 2014-2019

THE TREMENDOUS GROWTH IN DATA USAGE MAKES NEW IMT SPECTRUM VITAL

L-Band (1427-1518 MHz)

WIDESPREAD SUPPORT FROM COUNTRIES AROUND THE WORLD

- Good combination of coverage and capacity
- 1452-1492 MHz largely unused
- Co-existence with existing fixed links is manageable
- Compatibility with MSS above 1518 MHz can be achieved at the national level
- The US supports the band even though it doesn't plan to use it

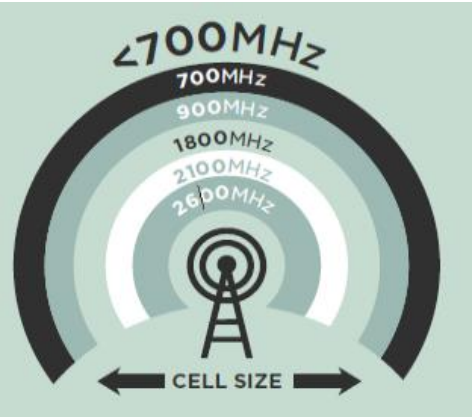


Source: Plum Consulting (Oct 2015)

Sub-700MHz (470-694/8MHz): Key for coverage

Extremely important for scaling affordable mobile broadband services in all areas especially rural parts of the RCC

- **Vital for the sustainability of rural populations**
  - Faster speeds will support rural economies, jobs etc.
- **Mobile and broadcast can share the sub-700 MHz band**
  - 50 x TV channels can fit below 600 MHz
  - Broadcasting allocation and use are protected
- **Sub-700MHz UHF spectrum will start to be used for IMT**
  - 3 multi-country proposals from 3 ITU regions
  - US incentive auction means low cost devices will come soon
  - RCC risks losing out falling behind other regions if it does not have more flexibility in how this spectrum can be used



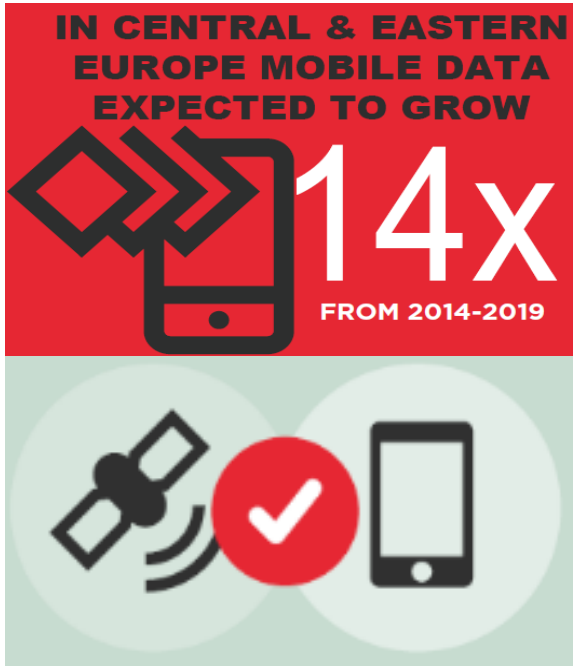
CAN'T RECONSIDER THE BAND UNTIL WRC-23 WHICH WOULD DELAY MOBILE USE UNTIL 2030

C-band (3.4-3.8 GHz)

EXCELLENT CAPACITY BAND – SUPPORTS BEST POSSIBLE MOBILE EXPERIENCE

- **Sharing studies prove satellite & IMT can both use the band under the *right* conditions**
  - Numerous options including FSS use of *the full band* in rural and suburban areas and IMT can use *a portion* in city centres
  - Several markets already use the band for both services - including an LTE service in the UK

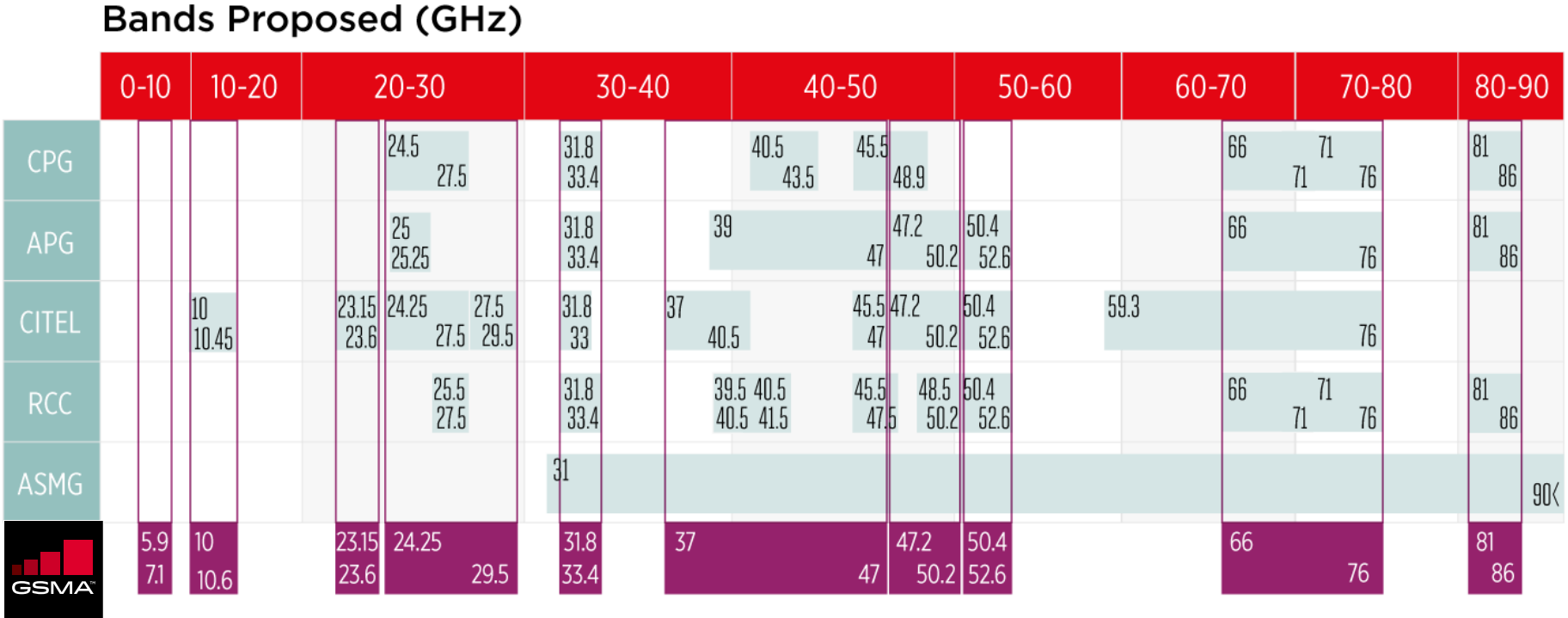
- **Support for a wide portion to be made available for IMT**
  - 3.4-3.6 GHz: Existing IMT footnote in 90+ countries
  - Europe supports 3.4-3.8 GHz
  - Strong support for 3.4-3.6/7 GHz in Region 2



Enable the future of IMT: AI 10

IMT 2020 WILL RELY ON MUCH WIDER MOBILE BANDS

- WRC-19 Agenda Item needed for IMT identification > 6 GHz



Secure the future of mobile

THE FUTURE OF MOBILE BROADBAND IS AT RISK WITHOUT MORE SPECTRUM

- **Mobile traffic is growing faster than anyone's expectations**
  - 2015-2020: 14x traffic growth currently expected in CEE
- **Agenda Item 1.1 risks not meeting its goal**
- **More spectrum is vital to improve services and increase socioeconomic benefits**
- **Flexibility is essential to allow countries to react to their evolving situations**
  - New bands won't be licensed to operators until governments see clear demand
  - Existing services can continue and be protected through regulatory conditions

REMEMBER WE CAN'T RECONSIDER SUB-6 GHz BANDS UNTIL WRC-23


GSMA
Any questions?