

**ITUWORKSHOPS**

# 1<sup>st</sup> ITU Inter-regional Workshop on WRC-19 Preparation

21 - 22 November 2017

Geneva, Switzerland

[www.itu.int/go/ITU-R/wrc-19-irwsp-17](http://www.itu.int/go/ITU-R/wrc-19-irwsp-17)



## 1<sup>st</sup> ITU INTER-REGIONAL WORKSHOP ON WRC-19 PREPARATION (Geneva, 21-22 November 2017)

# Some reflections regarding Agenda item 1.13

**GSMA**



90<sup>th</sup> Anniversary  
CCIR - ITU-R Study Groups  
(1927-2017)

Organized by:



# **SOME REFLECTIONS REGARDING AGENDA ITEM 1.13**

1st ITU Inter-regional  
Workshop on WRC-19 Preparation

Geneva 2017-11-21



# WHY IS AGENDA ITEM 1.13 IMPORTANT FOR THE MOBILE INDUSTRY

- Demand for increased mobile capacity and bandwidths are driven by changed user behavior and new use cases.
- The frequency bands >24 GHz will be very important for new use cases and areas with very high data demand which cannot be supported in lower bands due to limited bandwidth.
  - Without new spectrum, there is a risk that 5G in dense areas will be experienced as 3G/4G
  - New mobile services will demand the capacity and bandwidth that only the bands above 24 GHz can support, e.g. high definition 360 video.
- Besides high bandwidth and capacity, the low latency and ultra reliable possibilities in IMT-2020/5G opens many new possibilities
  - IoT – IMT-2020/5G capabilities offer many new opportunities for IoT and M2M applications
  - Other industries – possibilities to support specific industry applications, both as dedicated deployments/applications but also as a part of the public network
- Our vision - A future common multi purpose network that could be used for many versatile applications



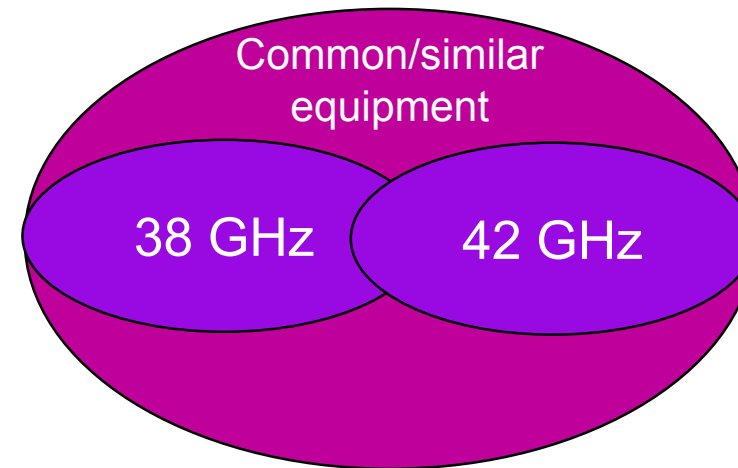
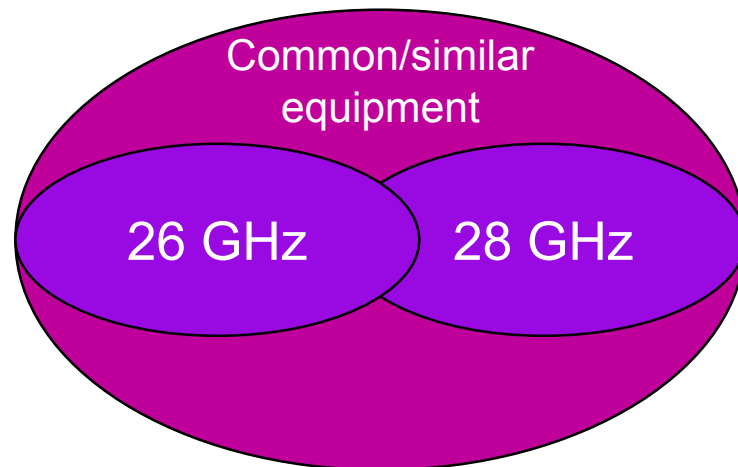
# PRIORITY BANDS

- Bands prioritized for studies by the mobile industry so far.
  - 24.25 - 27.5 GHz
  - 31.8 - 33.4 GHz
  - 37.5 - 43.5 GHz
- Higher bands still under considerations



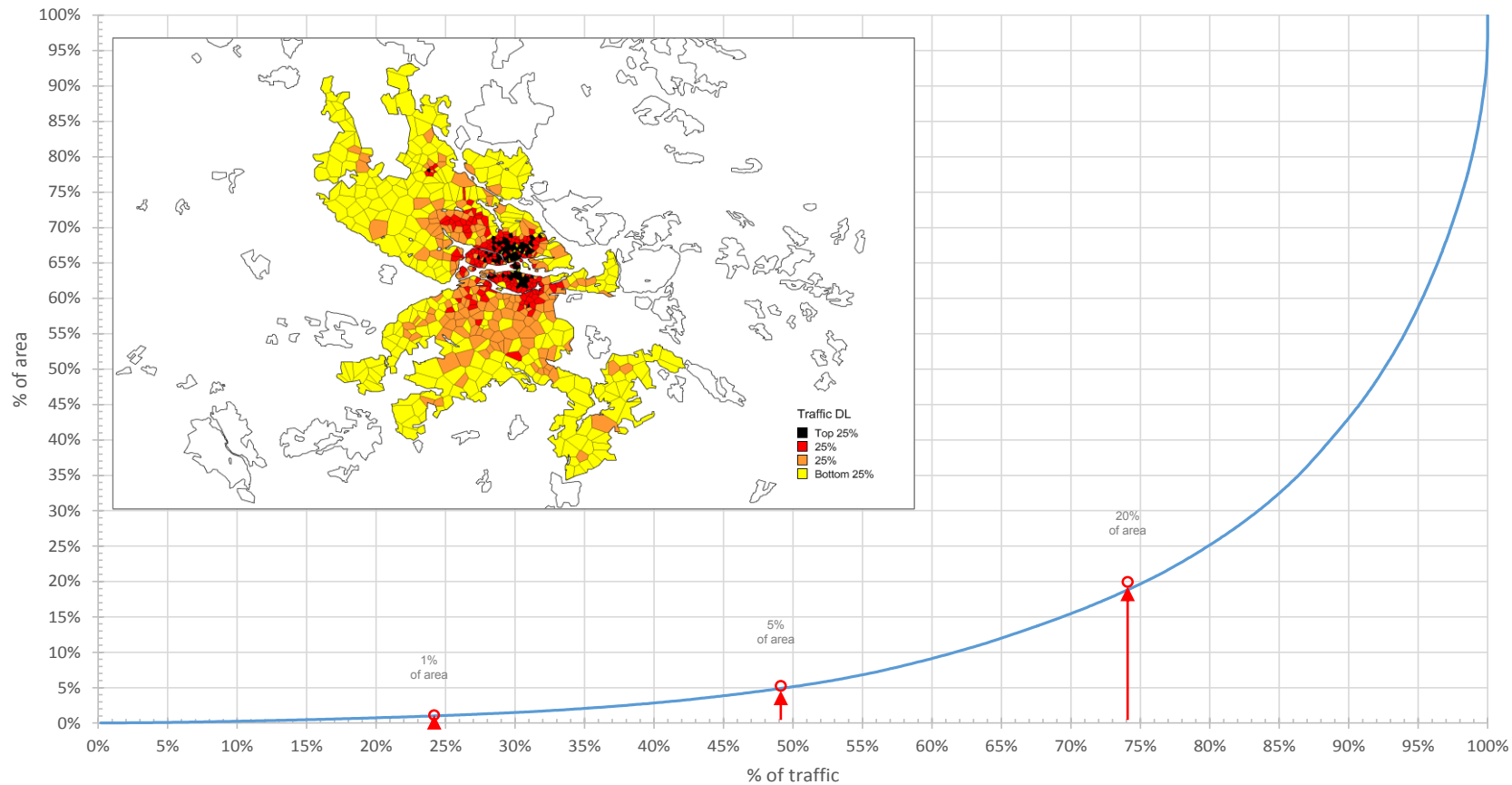
# HARMONISATION / ECONOMY OF SCALE

- Same bands not envisaged to be available in all regions
- Tuning ranges a possible way to accomplish economy of scale and harmonisation
  - 26 GHz and 28 GHz
  - 38 GHz and 42GHz



# DEPLOYMENT

- Bands above 24 GHz expected to be deployed in traffic intense areas
- A very small part of the total area covered by the network is generating a large part of the traffic



# STUDIES

- Initial preliminary results indicating,
  - possibilities to share between IMT and incumbent services in several cases (e.g. with FSS, ISS)
  - in other cases some coordination may be needed but looks to be feasible to accomplish (e.g. with FS, EESS s-e, RAS)
  - in some cases further studies and discussions are needed to find a possible way forward for both concerned services (e.g. EESS passive)
- Better sharing possibilities between IMT and incumbent services than in lower bands
  - Higher attenuation
  - Higher clutter losses
  - Higher antenna isolation due to the beamforming, in particular for aggregated cases
  - More similar to the sharing situation between FS and other services.



# MORE VIEWS FROM THE MOBILE INDUSTRY

- The GSMA position on Agenda Item 1.13 can be found by using the link below,
  - [GSMA WRC-19 AI1.13 position](#)

