



5TH INDIA SPECTRUM MANAGEMENT CONFERENCE 2025

Global Trend: Mission-Critical Communications

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Critical communications for all professional users



What is critical communications?





Critical Communications requirements

For

Public Safety – police, fire & rescue, ambulance, customs, military ...

Transport – railways, subways, buses, highways, airports, ports ...

Critical Infrastructure – power, heat, water utilities ...

Resource/Energy industries – oil & gas, mining ...& other Industrials



COVERAGE



AVAILABILITY



RESILIENCE



PERFORMANCE



SCALABILITY



CONNECTION IS THE LIFELINE

•24/7/365



Instant
service

FUNCTIONAL SUITABILITY



Need to cooperate – regionally/globally



**<0.1 billion critical
communications
users^(*)**

(*) generous estimation including all
critical communications sectors



We drive standards, spectrum and interoperability

Standards



Spectrum



Band 68
380 MHz
400 MHz

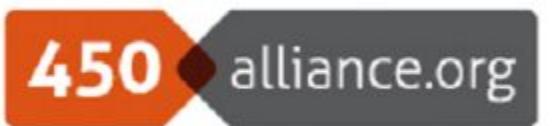
High Power UE
D2D sidelink
6G

Interoperability





Partnerships and collaboration forum importance:



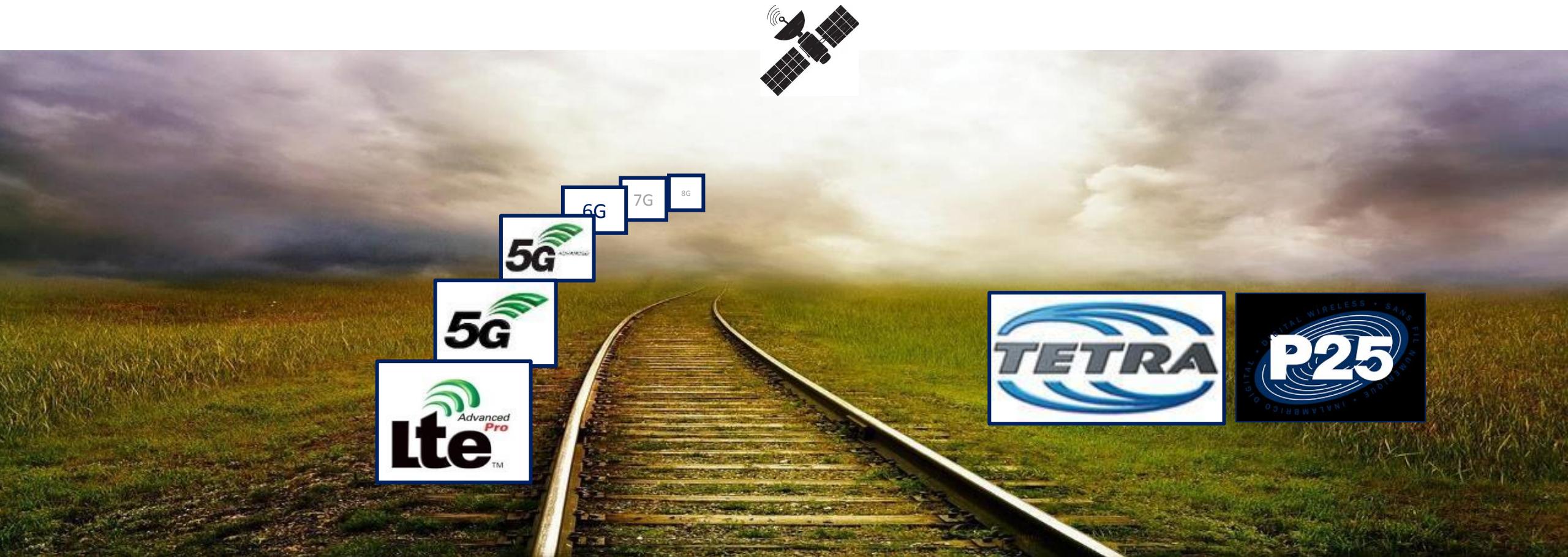
Registration with
• esa



Other Members affiliations>>

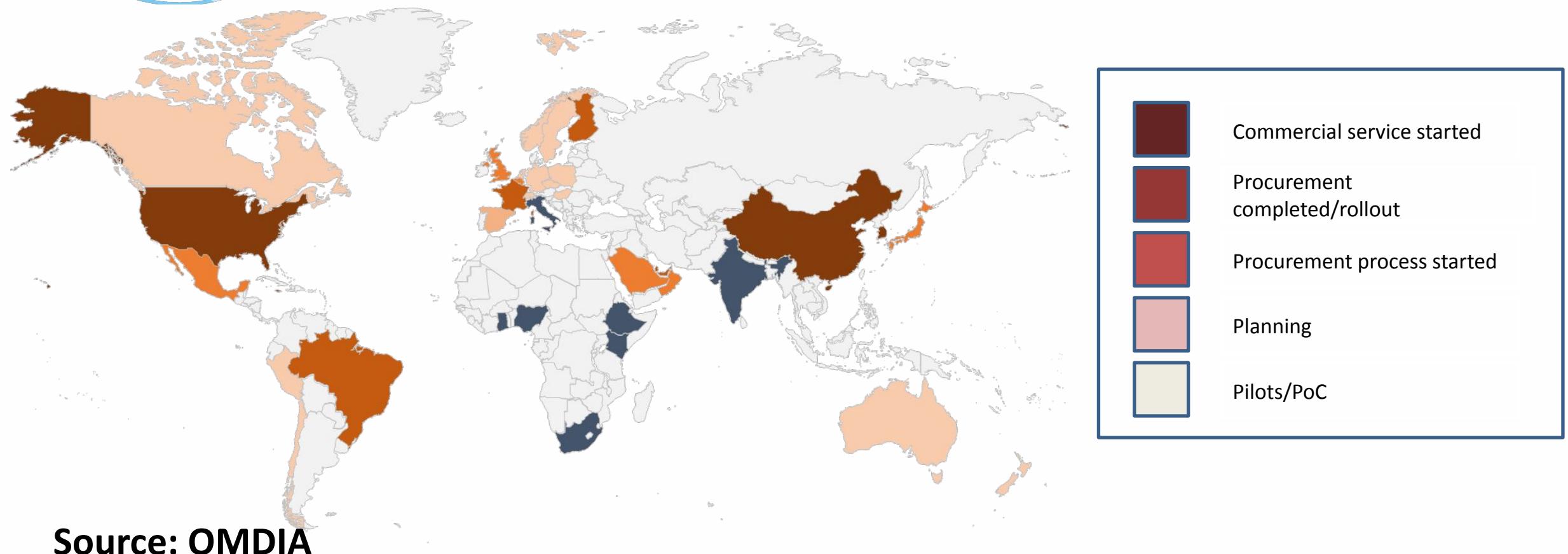


Continuous technology evolution





MCX Adoption Progress



Source: OMDIA

Operating Models for Gov. Mission Critical 4G/5G networks adopted globally



Colour
Key

New Asset
(Mission Critical)

Existing Asset
(Commercial MNO)

Notes

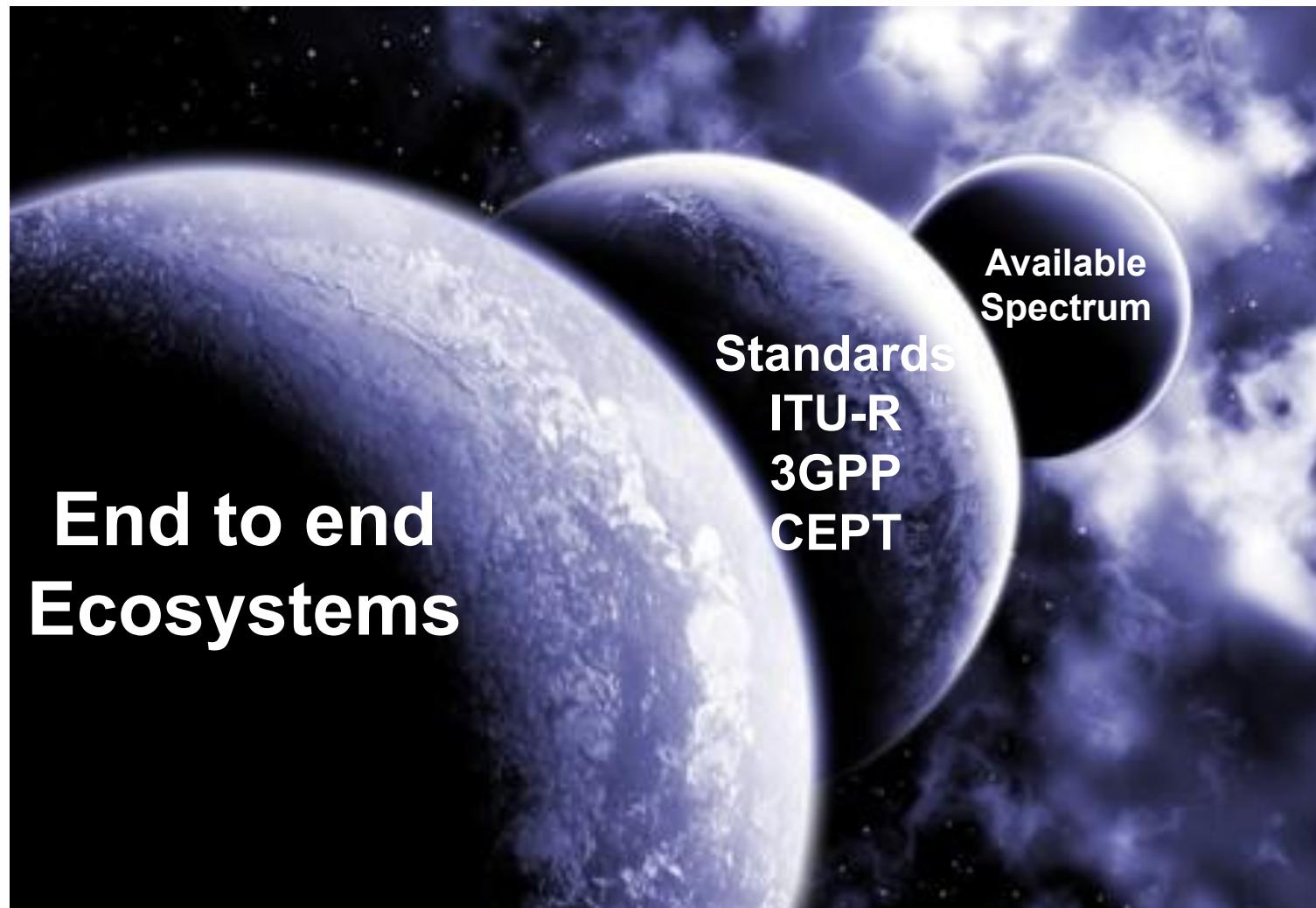
* Optional element, may not be present in all implementations

** Some Countries have multiple implementation models by regions

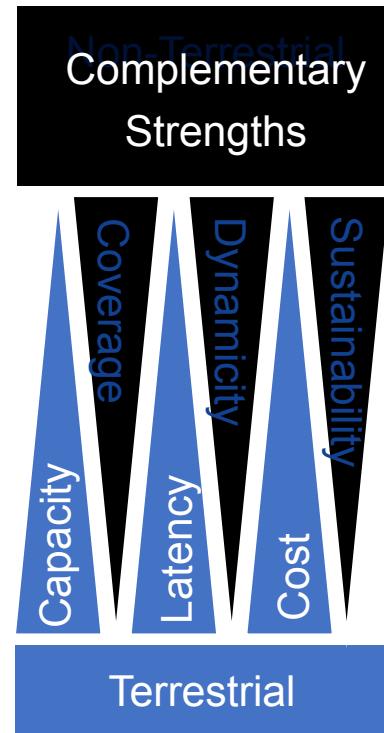
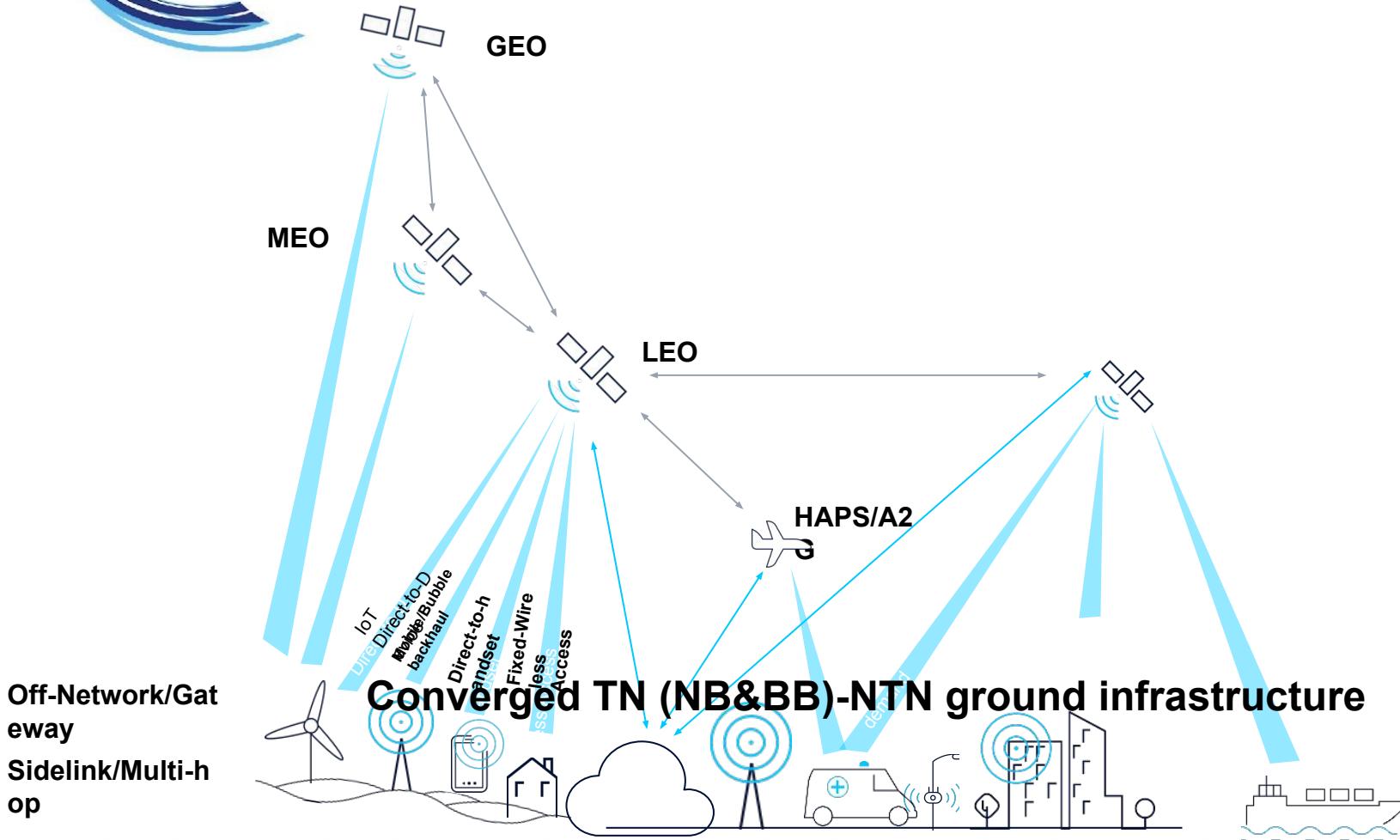
MNO = Mobile Network Operator
MVNO = Mobile Virtual Network Operator
RAN = Radio Access Network



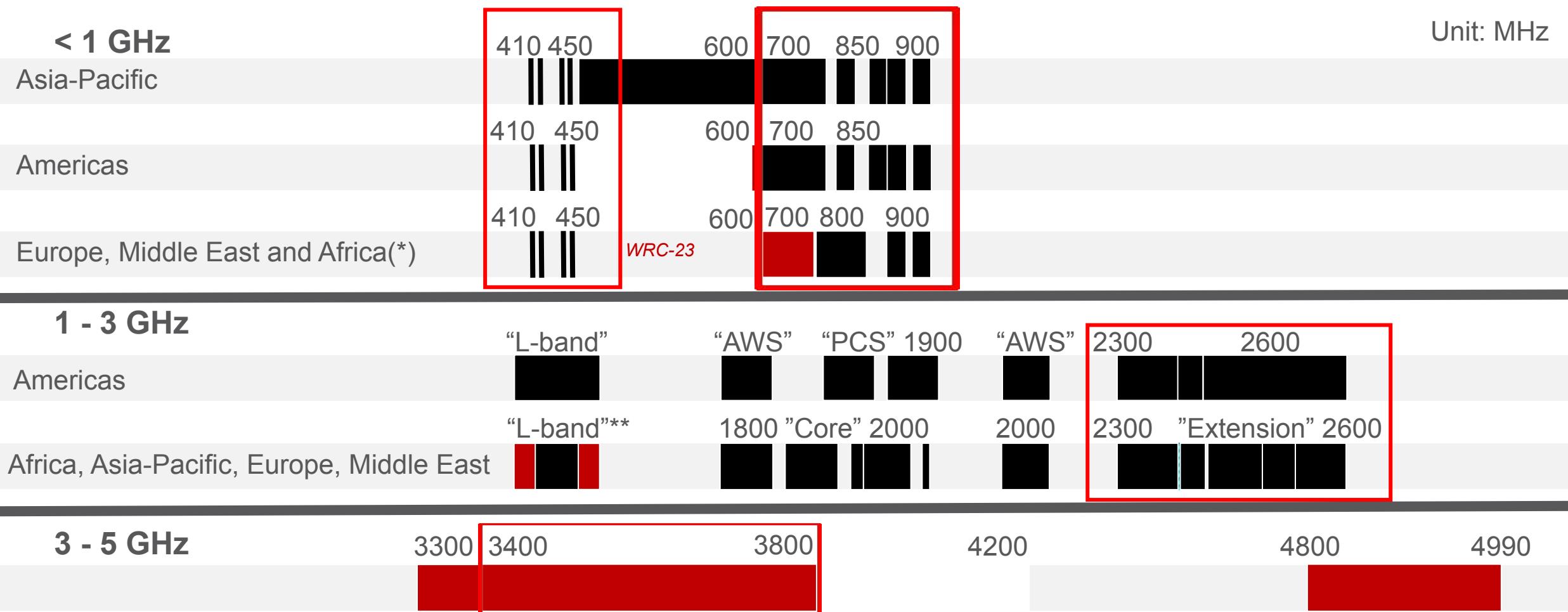
Critical communications broadband market challenges



Terrestrial and Non-Terrestrial Networks Convergence



Spectrum used for current mission critical communications

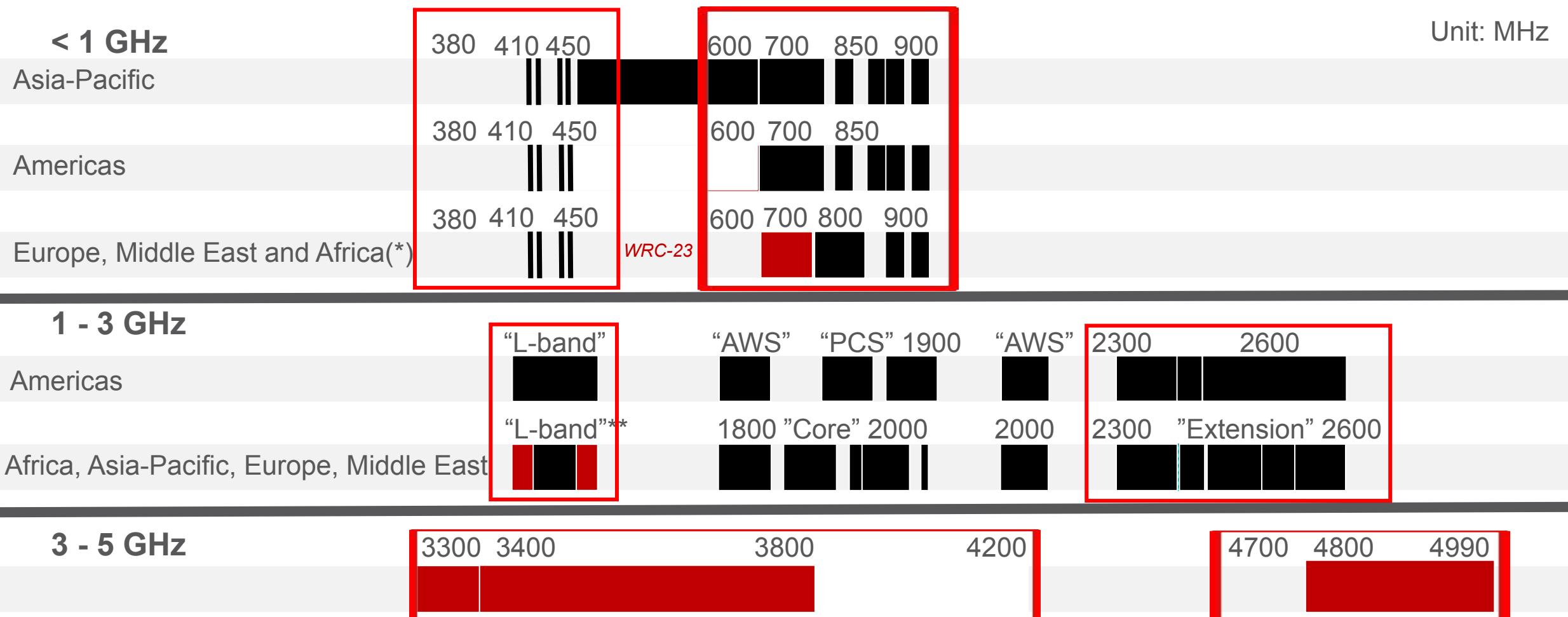


(*) The band 850 MHz is used in some countries in MENA

(**) The L-band is envisaged for SDL

- IMT identification in the ITU-R Radio Regulations (WRC-15)
- Implemented / discussed at national / regional level
- IMT identification in the ITU-R Radio Regulations (before)
- No IMT identification

Spectrum for current and future mission critical communications



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Success in cooperation- Call out for all

Four streams



Local &
International
cooperation



Cooperation
between network
providers,
industry and end
users



Cooperation
between different
sectors



Cooperation for
innovation &
evolution

Support critical communication regulation, standardisation and certification



TCCA Events



Events - TCCA





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