

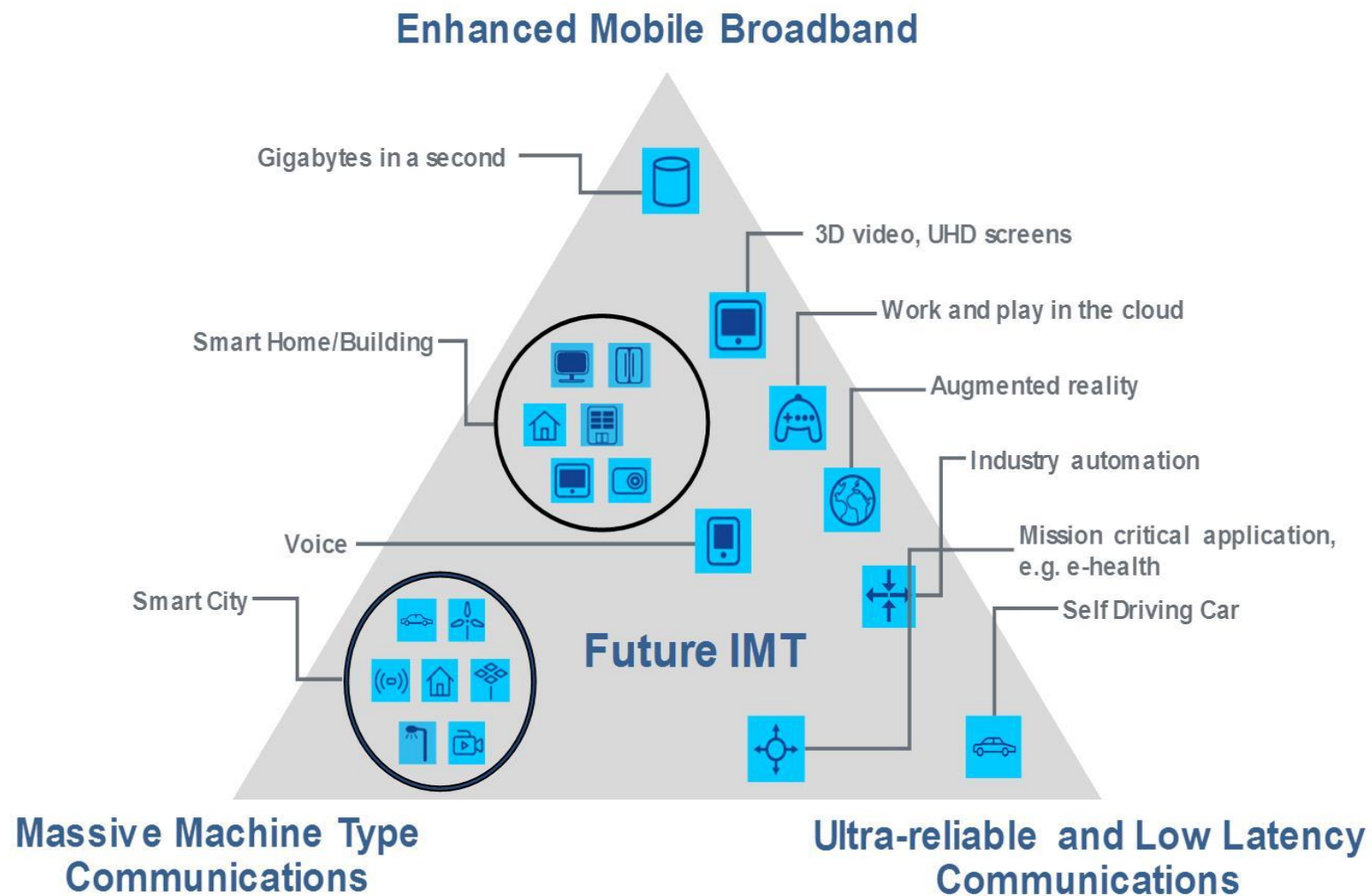
# DIGITALEUROPE



**5G Spectrum Recommendations**

**October 2018**

# An overview of 5G



Source: ITU-R M.2083

# Recommendations on Commercial Spectrum for 5G in Europe



## 1. Pioneer bands

- To meet requirements of initial commercial deployments in 2020 and to achieve full 5G capabilities by 2025 license the 700 MHz, 3.5 GHz and 26 GHz EU pioneer bands no later than end of 2019.
- 700 MHz suitable for wide area and indoor coverage, incl. several IoT applications.
- 3.4-3.8 GHz essential for 5G deployment, harmonized mobile band that provides unique opportunity for early and wide-scale 5G deployment; it is paramount to clear and defragment this band to enable contiguous ~100 MHz bandwidth per operator. Extension to 4.2 GHz is for future consideration.
- 24.25-27.5 GHz necessary for very high data rates and capacity, leveraging equipment development in other regions e.g. US, Korea and Japan (all or part of 26.50-29.50 GHz). Where whole 26 GHz band is not available for early release, 26.5-27.5 GHz should be considered. Countries should then commence re-farming in 2018 to make 24.25-26.5 GHz available for 5G as soon as possible. Administrations are encouraged to clear the band by 2023, recognizing national situations.

## 2. Longer term bands

- 37-43.5 GHz is for longer-term consideration (US considering 37-38.6 GHz and 38.6-40 GHz; Europe considering 40.5-43.5 GHz due to fixed links in 37.5-39.5 GHz and uncoordinated FSS Earth stations in 39.5-40.5 GHz).
- Above 60 GHz should be considered within ITU-R and may provide extreme bandwidths for indoor and short-range 5G applications.



## 3. International situation and harmonization

- Take advantage of early developments in other regions, in particular momentum in 3.3-3.8 GHz and 26.5-29.5 GHz
- Support activities both within and outside ITU-R to ensure timely availability of sufficient globally/regionally harmonized spectrum for 5G.

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## 4. Licensing



- Licensing mechanisms should achieve harmonisation of licensing conditions between different countries to maximise investments in networks and technologies (implying longer license duration for secure investments at reasonable spectrum costs).
- DIGITALEUROPE recommends awarding the 700 MHz, 3400-3800 MHz and 26 GHz bands on the basis of individual national licensing, and does not see license-exempt use of 26 GHz as appropriate.



## 5. IoT and Verticals



- Consideration should be given to spectrum for IoT solutions and verticals.
- MNOs may manage vertical services by network slicing, or may sub-lease spectrum.
- Other regulatory options may be considered for providing MNOs and verticals with sufficient licensed spectrum.

