

# Telia's view on the mobile market towards 2030

Spectrum, 6G, market changes  
and the regulatory framework

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# The spectrum requirements continue to increase

Industry estimate: around 2 GHz of additional mid-band IMT spectrum is needed by 2030.

## Current situation

- **The CAGR** has come down, but from very high levels.
  - Annual growth today is similar to *total traffic* 10 years ago.
  - Further growth in FWA, new AI-related traffic and standard mobile traffic points towards continued growth.
  - ISAC will not add much traffic but will use some capacity.
- **Sub-1 GHz** Rural and deep indoor coverage. Low bands are coverage bands and essential in rural areas.
- **1-3 GHz** Today's "capacity engine" carries a majority of the mobile traffic. Each and every MHz is heavily used in urban and dense urban areas.
- **3.6 GHz** Primary 5G band and a capacity booster in

## Future

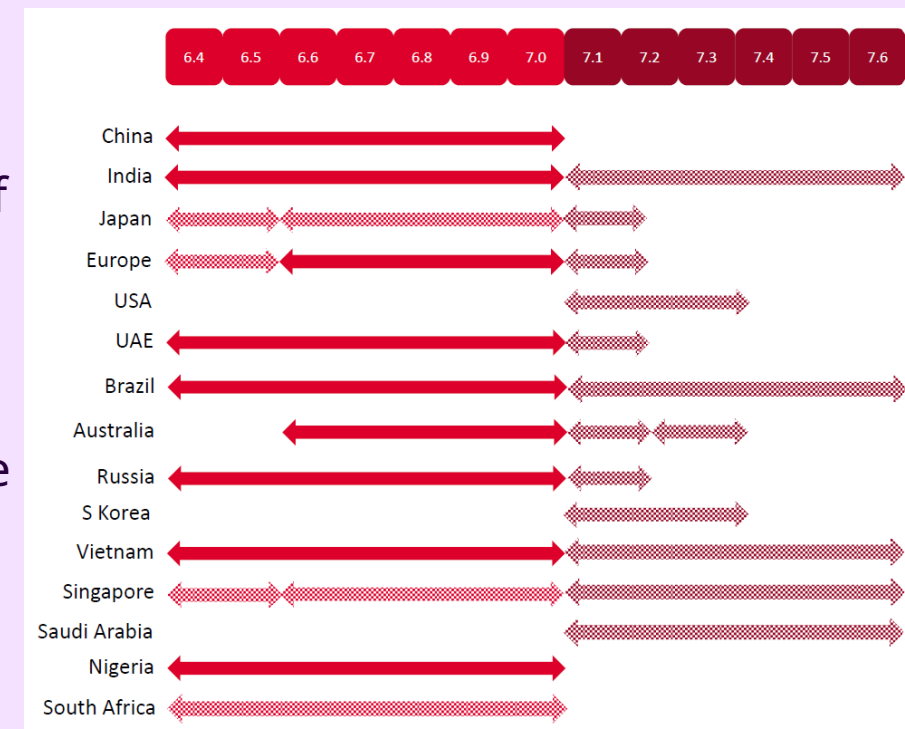
- **Upper 6 GHz (6425–7125 MHz)** Tech development makes it possible to **reuse the "3.6 GHz grid"** with similar coverage. Major 6G band for the new decade.
- **1500 MHz** Improves downlink in rural areas. Has been "promising" for several years, but NOW we see development and increased terminal support.
- **UHF band** extension of low-band capacity when DTT usage is reduced.
- **Higher bands** 7/8 and 14 GHz look difficult in Europe due to other use. mmW could be a complement in hotspots, specific industries and for fixed wireless access. At least in the short to medium term, they are unlikely to serve as mobile bands for general area coverage.



# Upper 6 GHz is the most important (*and only available*) capacity extension and launch band for 6G

- **Why?** ~700 MHz of contiguous spectrum enables 200 MHz carriers, just in time for the launch of 6G.
- **Status** CEPT has analyzed sharing between mobile networks and Wi-Fi. RSPG adopted a long-term recommendation in Nov 2025. “540 MHz now + 160 OR 125 MHz after WRC-27”
- **Operator perspective** Prioritize full-power macro base stations, international harmonization and known conditions before the 6G investment cycle starts.
- **Disagreement** The Wi-Fi industry opposes the outcome and disagrees on the best socio-economic use. MNOs, which normally also provide fiber to homes and companies, see a clear advantage of using U6 for 6G.  
“No deficiency of Wi-Fi frequencies in the coming decade”.\*  
Thereafter, higher bands can be used.
- **Ecosystem** U6 is harmonized for IMT in countries representing more than 80% of the world's population.  
(including China, India, Mexico, Brazil and the EU)

\* Lower 6 GHz, recently dedicated to Wi-Fi, can accommodate traffic growth for the coming decade.



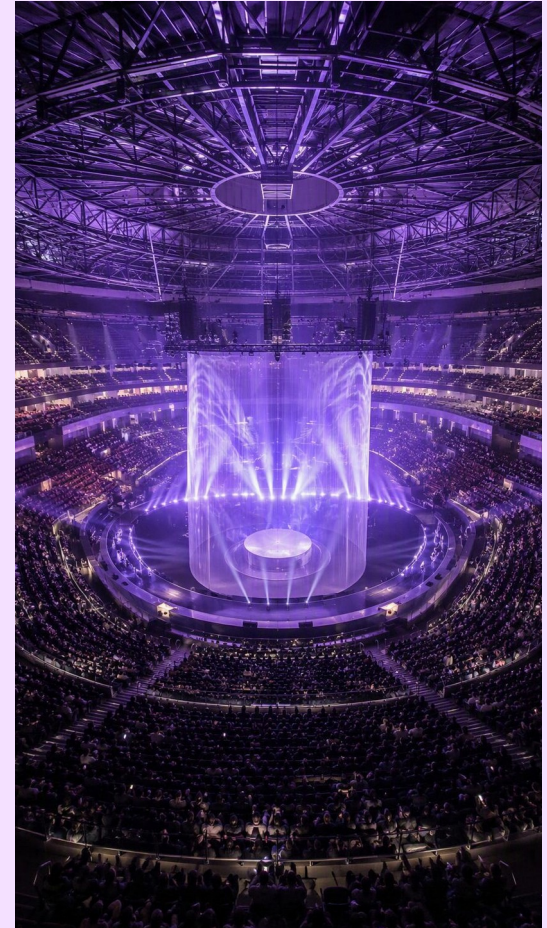
# The DTT band (470–694 MHz) remains as a post-2030 option

- **Why mobile is looking there** A need to complement the 6G roll-out with low-band spectrum to also provide 6G in rural areas and to increase capacity outside urban areas.
- **What is problematic** DTT usage varies hugely across Europe, from single-digit percentages to over 80% of households. DTT is seen as important for resilience and backup.
- **Operator perspective** As always, existing services must be protected when new services are introduced. But it is inefficient to have empty spectrum in the Nordics due to heavy usage in Italy and Spain. It is important to consider needs and alternative uses, country by country.
- **Way forward** Maintain flexibility and enable demand-based transition towards more efficient utilization. Identify demand scenarios, decision dates, and transition mechanisms early without delaying the outcome.
- **Cross-border agreements** could be an issue if neighboring countries move forward with different timelines. It would be useful to keep the Nordics on the same path.



# Higher mid-bands and mmW spectrum

- **3.8–4.2 GHz** is currently harmonized for **local use** in the EU and is being implemented.
  - It is questionable whether the full band is needed for that, and it could be wise to use the upper end first.
  - If it proves to be underutilized, the lower part could be used as an extension to the 3.6 GHz band (need to modify harmonization to allow high-power usage)
- **7/8 and 14 GHz** are being studied internationally for future expansion of IMT.
  - **In Europe**, the bands are used by other services and will not be available for IMT in foreseeable future.
- **For mmW** (26/28 GHz and 42 GHz), the momentum has diminished and support in terminals is still to be seen in Europe. These bands still show promise for special use cases, but will not be used for general area coverage.
  - **Tremendous speeds and capacity** can be provided over limited areas such as arenas, industry parks and conference centers, while also boosting FWA capacity and offloading traffic from mid- / 3.6 GHz bands.



# Regulatory environment

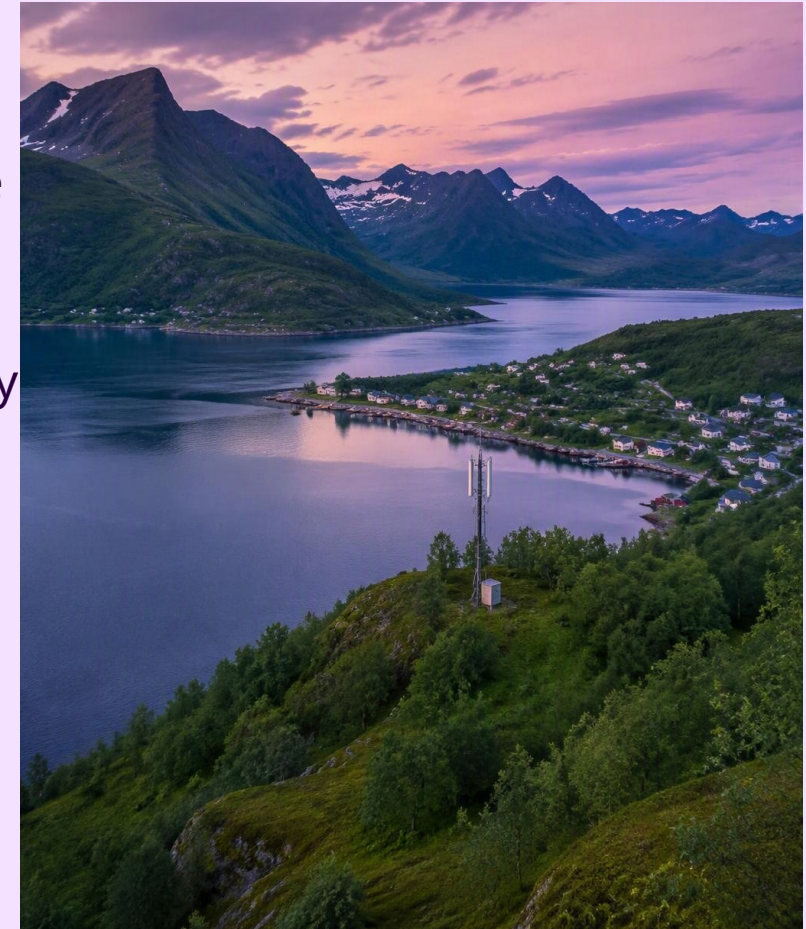
- **MNOs** have seen **license costs increase** since the 1990s.
  - We continue to pay annual fees for existing licenses, alongside auction costs for new licenses.
  - **Annual fees** are substantial, particularly in **Norway**.
  - At the same time, **our services are critical**, and we have obligations to support society.
  - **It is not sustainable** to pay an ever-higher proportion of our revenue for licenses.
- An important aspect is **predictability**. Investment cycles are 7–10 years, and it is crucial to know the regulatory environment for the period to **justify investments**.



# New situation on the Norwegian market: Vardnet

It is too early to disclose many details

- **Vardnet** is being established as a joint venture between Telia and Lyse/Ice.
- **Final closing** is pending as decisions from the authorities are yet to be announced.
- **The JV** will be a 50/50-owned production partnership, providing RAN services to the owner companies. Target is to lower production costs by higher efficiency in roll-out and capacity expansions
- **MOCN**-based solution where spectrum is pooled with resource partitioning for usage.
- **Increased competition** in the Norwegian market.
  - On the **network** side we will be going from “Tripp, trapp, trull” to “Snipp og Snapp” 😊
  - On the **commercial** side there will be **full competition** → consumers, businesses and wholesale.
- **After regulatory approvals** → full pace ahead to challenge the market leader



# Thank you for your attention

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