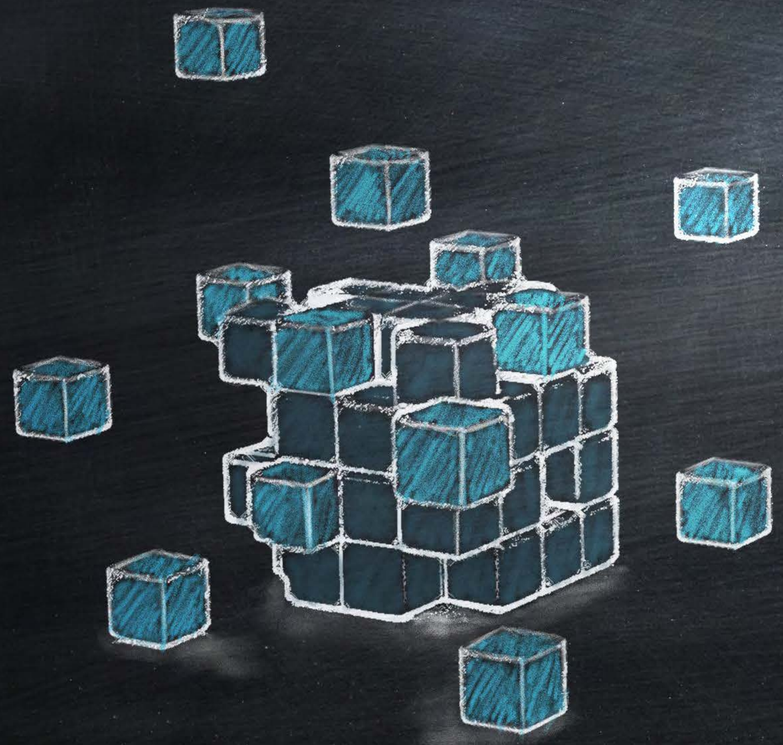
Nasjonal kommunikasjons-myndighet

Regulation of local, non public 5G networks – 3.8-4.2 GHz in Norway

5G Matchmaking Event 16 June 2023 – John-Eivind Velure



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Status harmonization of 3.8 – 4.2 GHz

CBRS launched in the US in 2017

Shared Access Licenses in the UK from 2019

Commercially available Non-Public Networks allowed in Norway from January 1, 2023

CEPT given mandate from EC to harmonize regulation (Planned ready ultimo 2024)

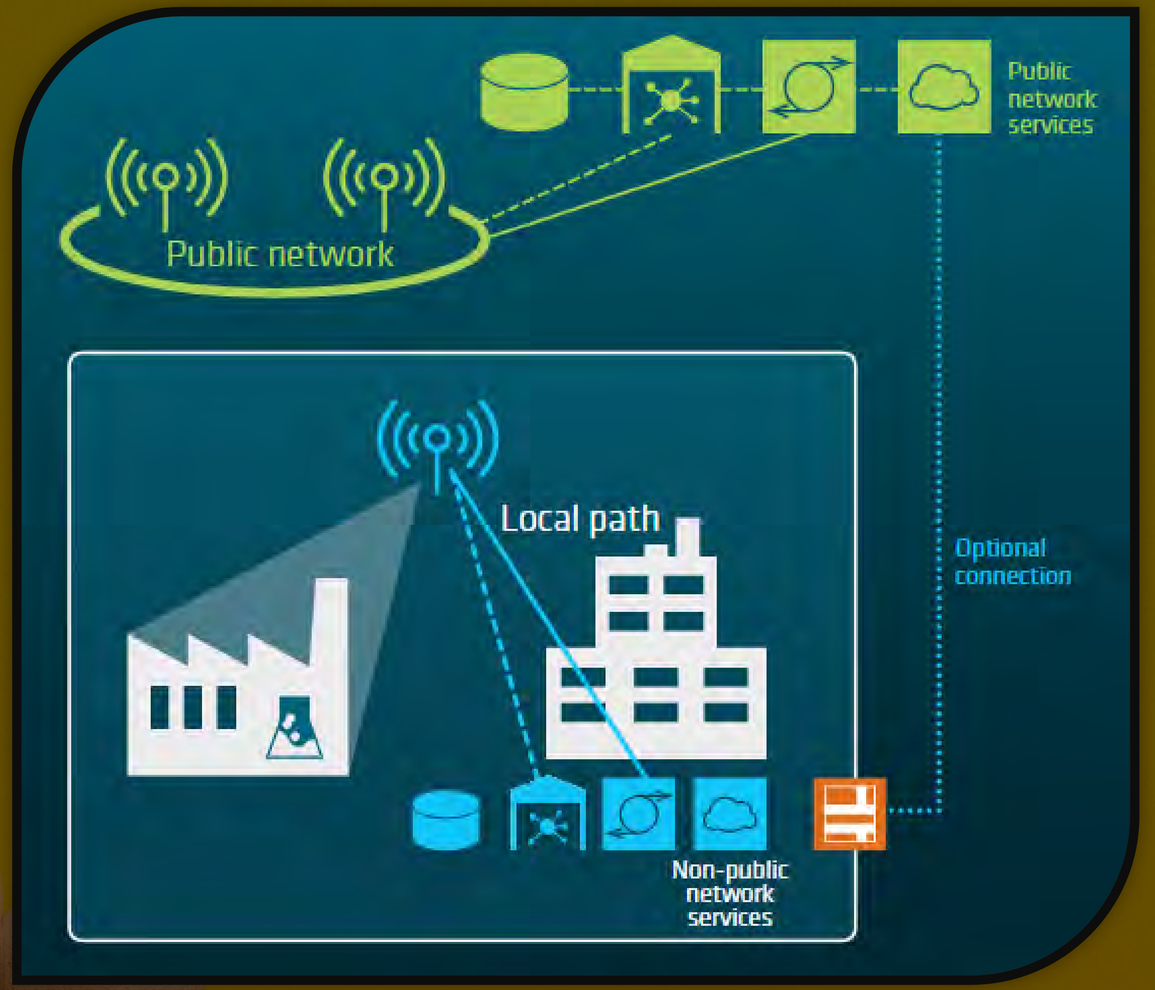
Who, what, and where?

Anyone can apply – but not to be used for public coverage

ONLY Standalone non public networks (SA-NPN) allowed. No radio equipment, nor frequencies from public mobile networks allowed

Covering large geographical areas is not allowed. Placements near **airports** and satellite **earth stations** need special consideration

Special restrictions apply to Medium power systems



Two classes of base stations

Low power

- Issued as «site licence»
- Flexible placement of one or more base stations within 50 meters of site
- Indoors or outdoors
- Lower Power (18 dBm/5MHz EIRP)

Medium power

- Issued as transmitter licence
- Pre-defined placement of base station
- Higher Power (36 dBm/5 MHz EIRP)
- Restrictions in urban settlements

Medium power – urban settlement restriction

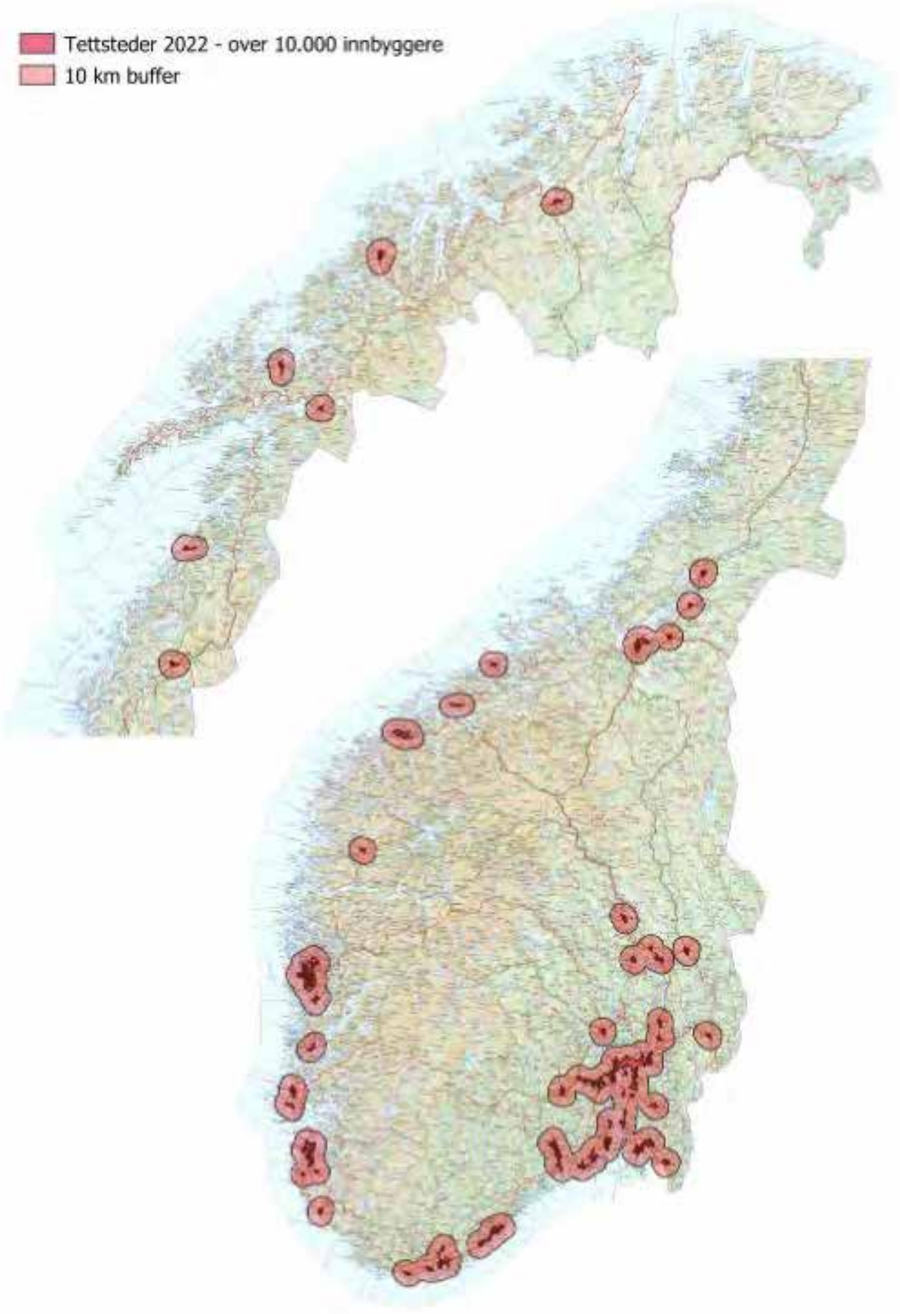
Significantly increased interference level compared to low power.

Higher antenna gains

Greater frequency reuse distance

Consequently:

Medium-power base stations and connected devices are **not permitted** to be set up **in areas within a 10 km** zone around **urban settlements** with more than **10,000** inhabitants.



Synchronization and device registration requirements

Unsynchronised networks allowed. However, may be required in certain situations.

Areas with high demand and/or need to establish systems close to 3800 MHz

Roaming devices are not allowed in local network

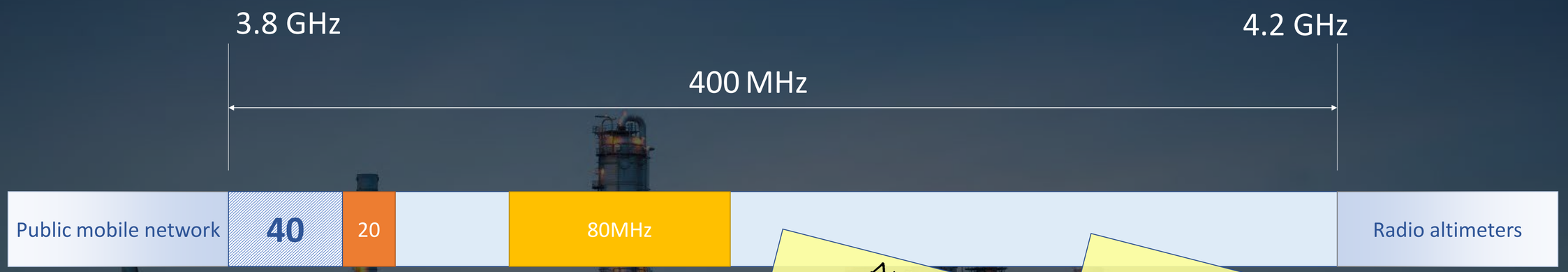
Maintain list of all registered devices in local network

Interference calculations by Nkom

Nkom calculates interference levels caused by new applications into:

- Existing local networks (and vice versa)
- Predefined satellite earth stations
- Airports and heliports

The 3.8 – 4.2 GHz band and its neighbours at a glance



Available bandwidths:
- 20 MHz
- 40 MHz
- 60 MHz
- 80 MHz

Fees:

Low Pwr.	Medium Pwr.
200 NOK	1 000 NOK
400 NOK	1 400 NOK
800 NOK	2 200 NOK
1600 NOK	3 800 NOK

Licenses for up to 10 years

Looking for more details?

The regulation documents can band application form for local networks can be found on our web pages:

www.Nkom.no

Applications and general enquiries can be addressed to:

firmapost@nkom.no