



TERACOM 



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It is all about
spectrum!

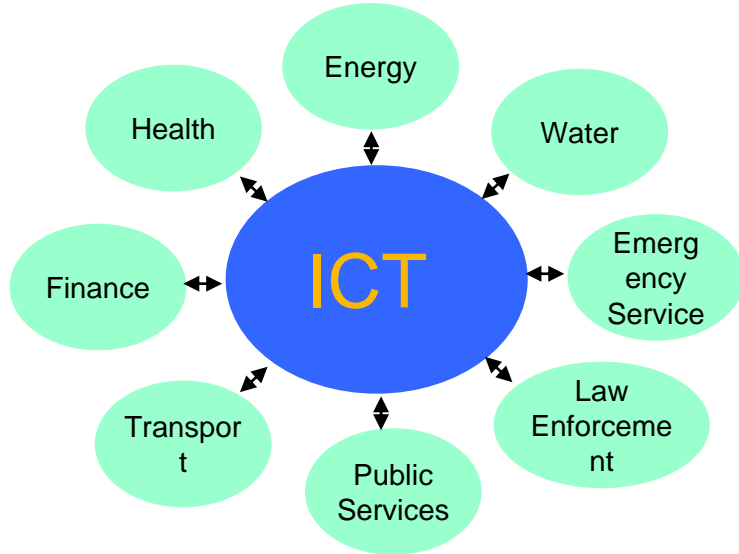
Danmark and "Radio Mafiaen" the 9th of May 1997
Agreement with NATO on Tetra i 380 til 400 Mhz

LTE and "Secure Broadband Communication"

Prof. Ole Lauridsen,
former chairmann of Tetra MoU

15th November 2018

Public- and mission critical Infrastructures are more dependent on ICT



AVAILABILITY AND ROBUSTNESS OF ELECTRONIC COMMUNICATIONS INFRASTRUCTURES FINAL REPORT MARCH 2007

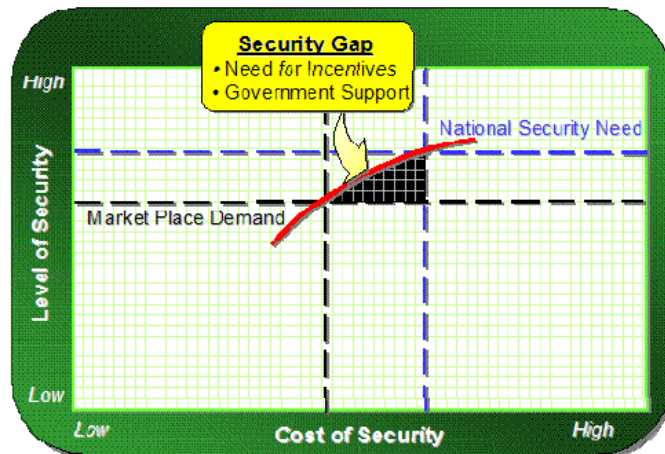
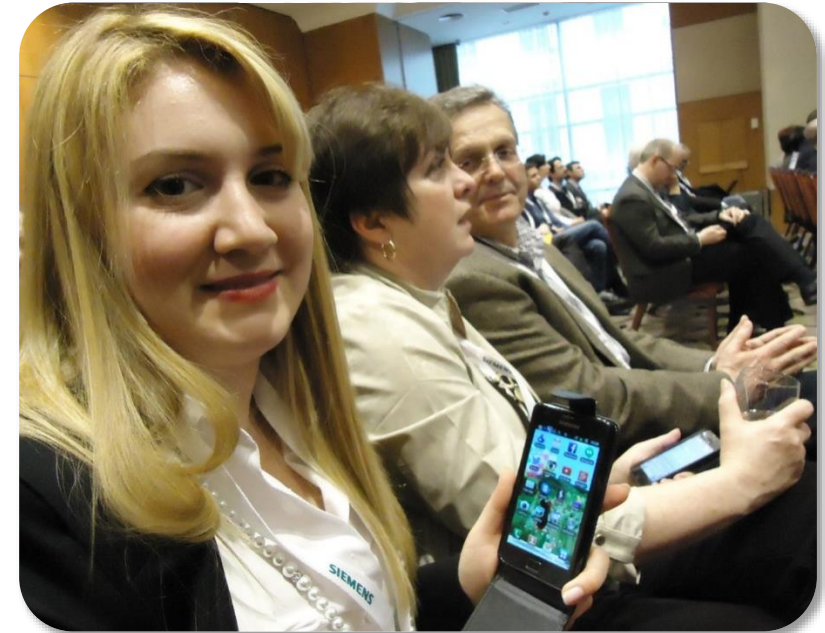


Figure 16: Nation-State Security Needs Exceed Market Place Demands²⁰²



BUT:
Who is going to pay the difference between "business grade" and "mission critical" ?

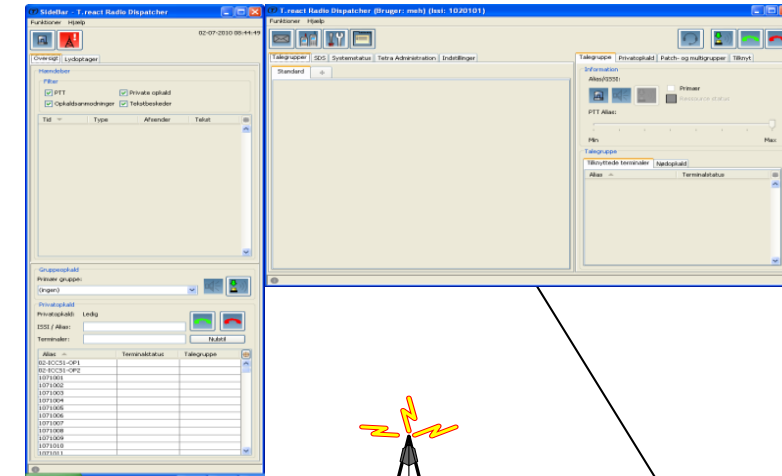
How can LTE improve collaborative working?

- We give them a Communication system with mobile control room and mobile voice/data
Smart terminals, supported by AI



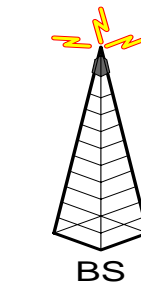
Facebook-group for seeking a girl in Herlev

Controlrooms for Tetra & LTE



TETRA

LTE



BlueTooth connection



Tetra terminal

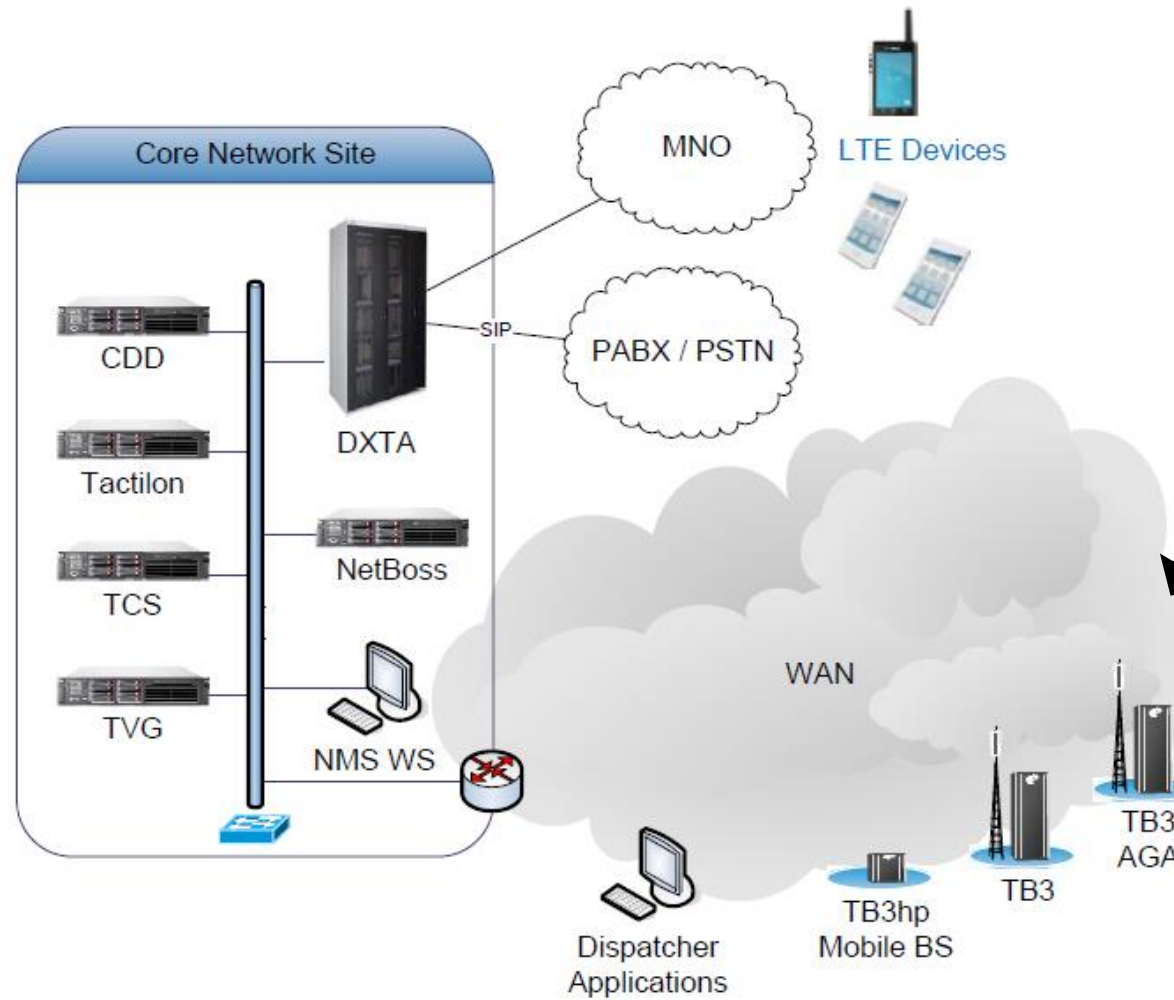
Smartphone

Airbus Tactilon and SAAB Tacticall

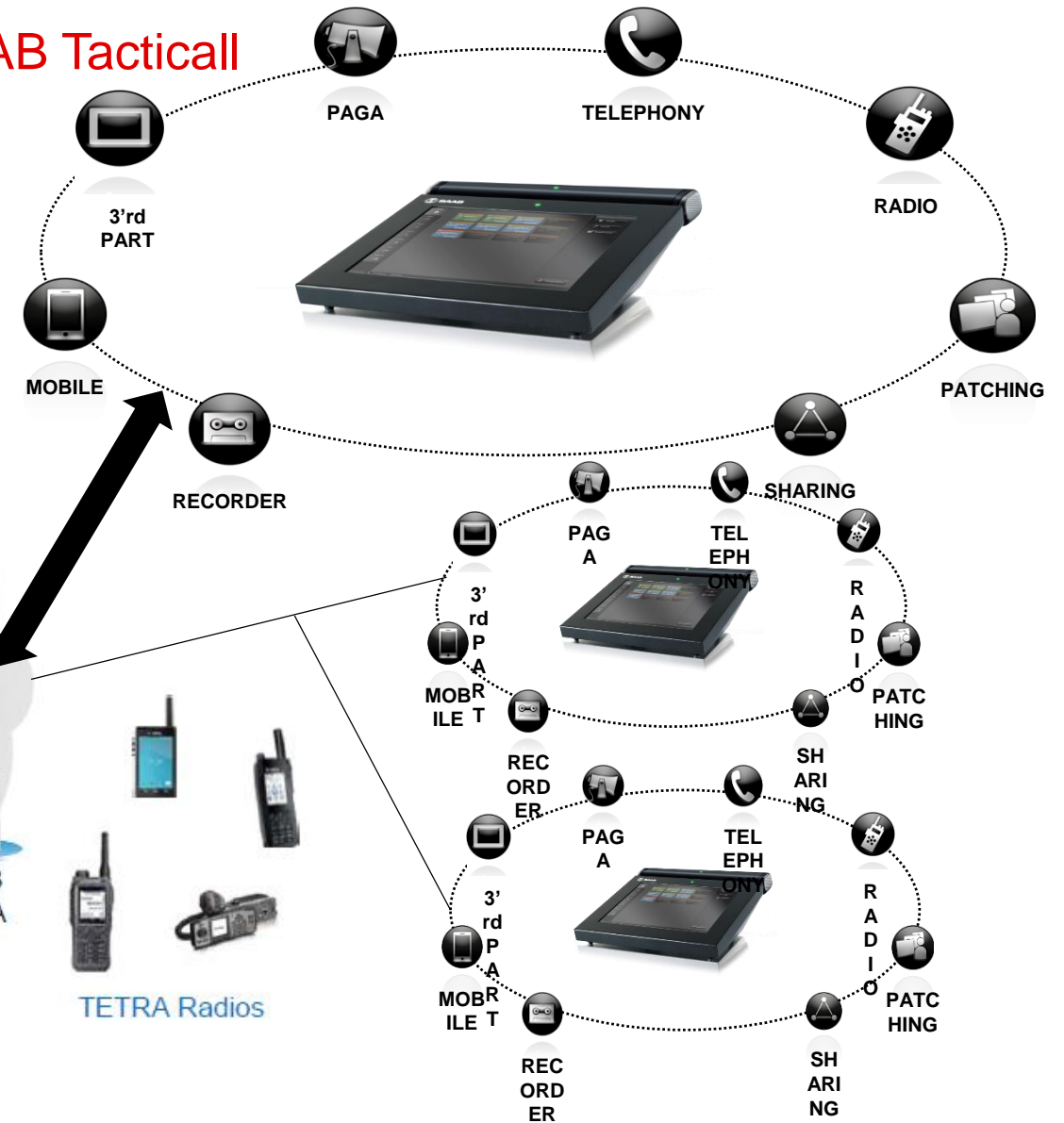
Delivers Tetra & "Tetra-like" services on LTE S-VMNO



Airbus Tactilon

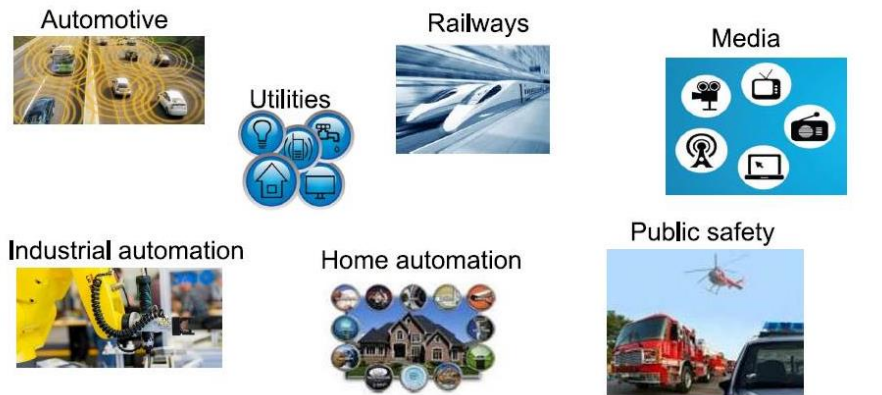


SAAB Tacticall

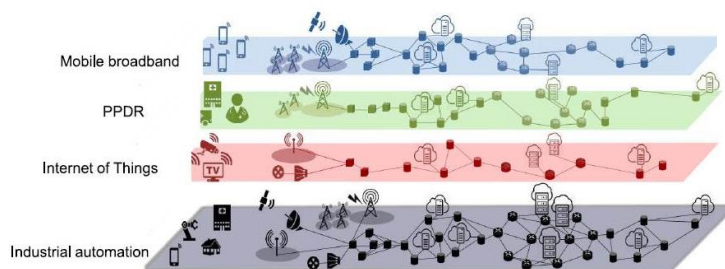


5G –broadcast communications

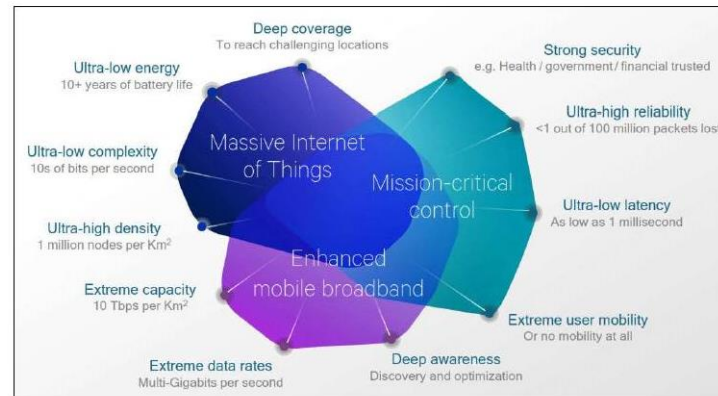
Standardisation of the 5G networks has just begun, first parts of the 5G standard with basic features are ready in 2019, and will evolve. The first 5G products are expected on the global market in 2020. In Denmark first 5G frequencies will be assigned in 2020 (700 MHz), basic 5G networks from 2022 and a more mature ecosystem in 2025. Below is shown the expected 5G market verticals, and positioning of the 5G technology.



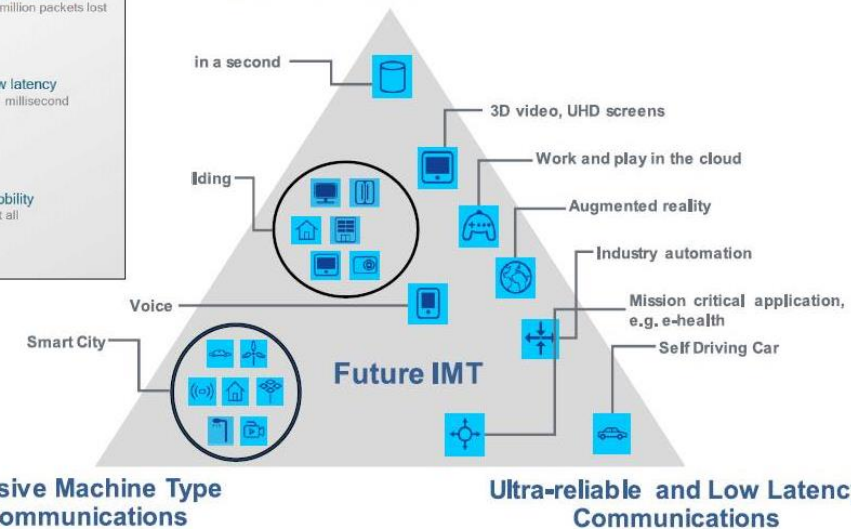
5G Network Slicing



5G platform improvements



Enhanced Mobile Broadband



5G – plans, standards and fieldtrails

EU's 5G roadmap, the first deployments are expected in 2020. It takes time to goto market, mature products and build networks, a maturing 5G ecosystem is first expected from 2025. Teracom is able to operate the existing PPDR technologies, and also have a longterm strategy to migrate and handle the future with LTE Advanced Pro and 5G deployments.

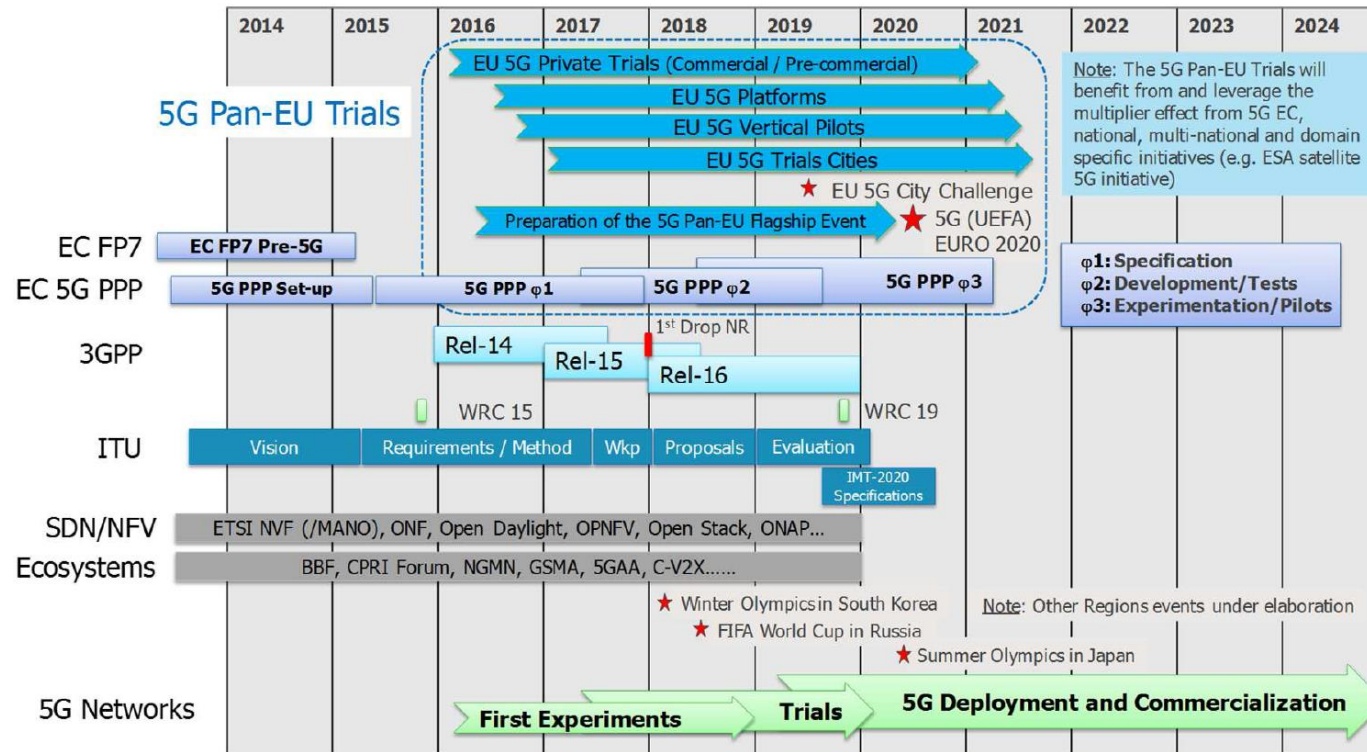


Figure 2: 5G Pan-EU Trials Roadmap

Source: EU

Conclusion S-MVNOs



MVNO for auto makers will be a large part of future mobile operator's revenues

- Mission- & Business critical communication will demand BB-smart-phone-services in the time forward!
- S-MVNOs will be the answer for economical implementations; and be a major market for application development- and security companies
- Security is the combination of: Coverage, Up-time and resistance to intrusion and hacking
- The Danish Government must use the coming recall of the SINE-contract to call for:
 - Tetra continuing for next 10 years, migrating to LTE
 - Offering "Secure LTE S-VMNO" from start of new contract
 - Release NATO 380-400 MHz frequencies to tender
 - Government must be owner of the future Tetra/LTE hybrid network

Refs.: 1) 4G and 5G for Public Safety; tandcca.com . 2) Road to 5G Outlook 2016; telecoms.com

Thank you !

Key takeaways:

100% availability will be the single most important feature of 5G;

believe over a third of respondents with just over a quarter saying the same for sub-millisecond latency.

39% of the Telecoms.com audience reckon

IoT smart home services of the future will fall into a monthly mobile, domestic and IoT multiplay bundle.

30% of respondents fear for the telco in the IoT era,

thinking 5G will provide rudimentary connectivity while consumer tech firms will begin adopting their own connectivity solutions, like Sigfox.

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