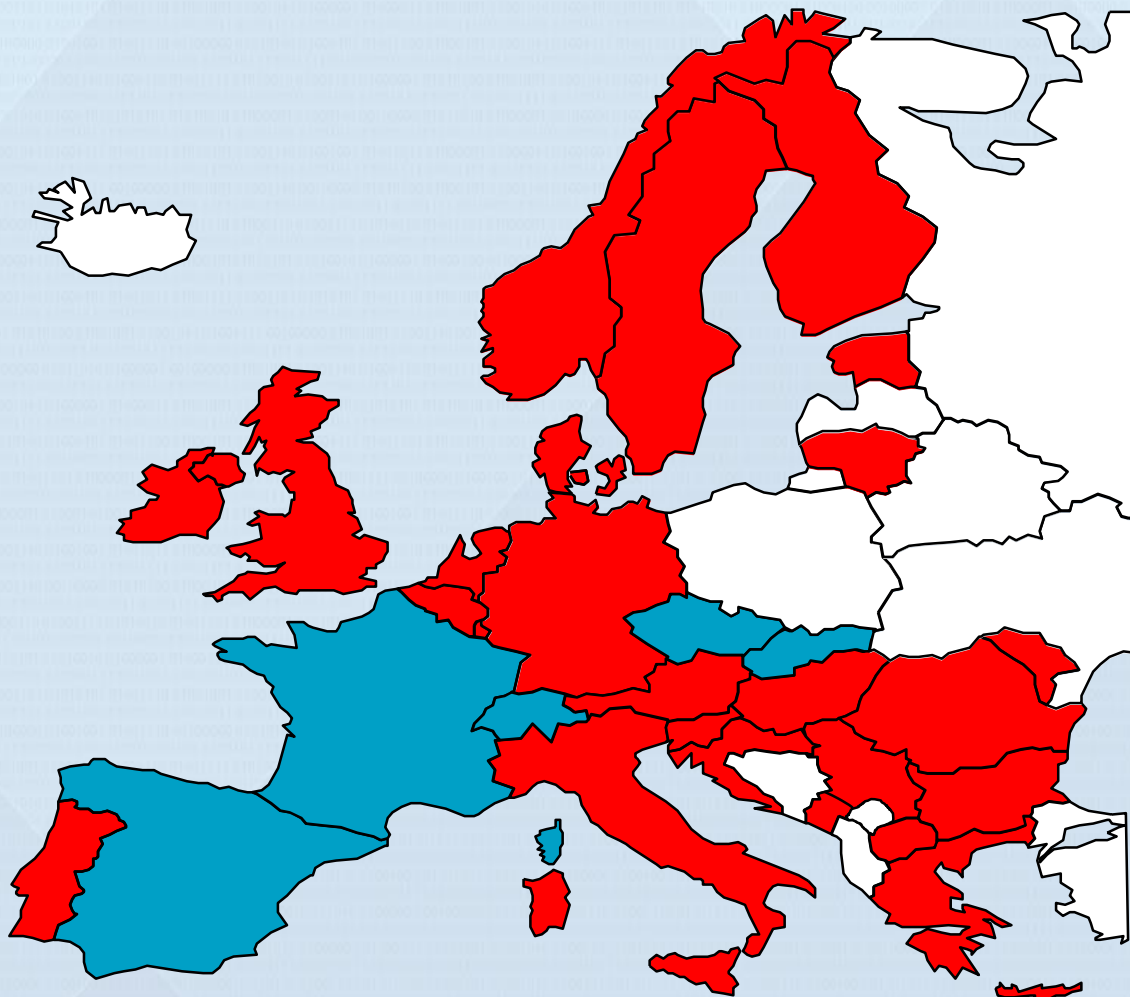# Next generation PPDR services

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Legacy national PPDR systems

Tetrapol – 5
TETRA – 25

Current situation

- TETRA standardization in 90th, it is old technology – only voice, short data and low speed data
- Vendor locked for infrastructure
- Minimal cross border interoperability – a limiting factor for pan-European collaboration
- No possibility for new services
- Mobile high speed data usually realized in public systems

- But! Legacy networks are very good for voice communications of big user groups

Wishes of end user

- Available all features used in legacy systems
- Same possibilities that are in smartphones
- Coverage
- Availability
- Security
- Applications like in office
- New mobile applications
- Usage of only one device

Issues for PPDR radio manager

- Reliability
- Capacity
- Data rates
- Latency
- Energy efficiency
- Densification
- Open standard
- Authentication, encryption
- Own user/group management (system management)
- Voice calls (group and individual), emergency calls, dispatchers on command-control centers
- Priority & pre-emption

Issues for PPDR radio manager

- Interoperability (cross-border, between agencies, with legacy systems, PSAP)
- Voice recording and event logging
- Air to Ground communication (AGA)
- Mobile base stations – Standalone Mode (3GPP Rel. 15, jun.2018)
- Battery back-up
- SLA for different services
- Distinguish between mission critical and non-mission critical features
- Transition to new system (first phase just broadband data, voice still in legacy systems)
- Cost effective
- Frequencies
- Direct mode of operation (DMO) – Proximity services (ProSe)

Applications

- Multimedia (important also up-link)
- Location data (groups of vehicles, pedestrians)
- Office applications (reports, mails, internet)
- Operational data (maps, documents, sensors, patient monitoring, instructions, drawings, traffic situation)
- Data base enquiry
- Other (remote software upgrade)

Questions?

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