What was BroadMap and what is next?

PSCE Conference,
3-5 May, Munich

Public Safety Communication Europe (PSCE) Forum

www.broadmap.eu

Our goal

Establishing the **PPDR requirements**,

a **core set of specifications** and the

roadmap for procurement to achieve future evolution of European broadband applications and

**interoperable** radio communication solutions

Objectives

- To **collect, assess and validate** the PPDR's wireless broadband communication requirements

- To **establish** a core set of specifications to fulfil the requirements

- To **define** transition roadmaps for research and standardisation for future evolution of European interoperable radio communication solutions, within legal procurement constraints

- To **prepare** the ground for a new eco-system to catalyse new applications, services and processes making use of broadband capabilities for Public Safety and Security

- **15 potential buyers/end users,** of which
  - 12 represent EU Member States
  - 3 represent Associated Countries
  - 8 represent the responsible Ministry within their country
  - 7 represent end user organizations and/or operators of emergency service networks
- **48 external supporters**
  - 7 extra countries
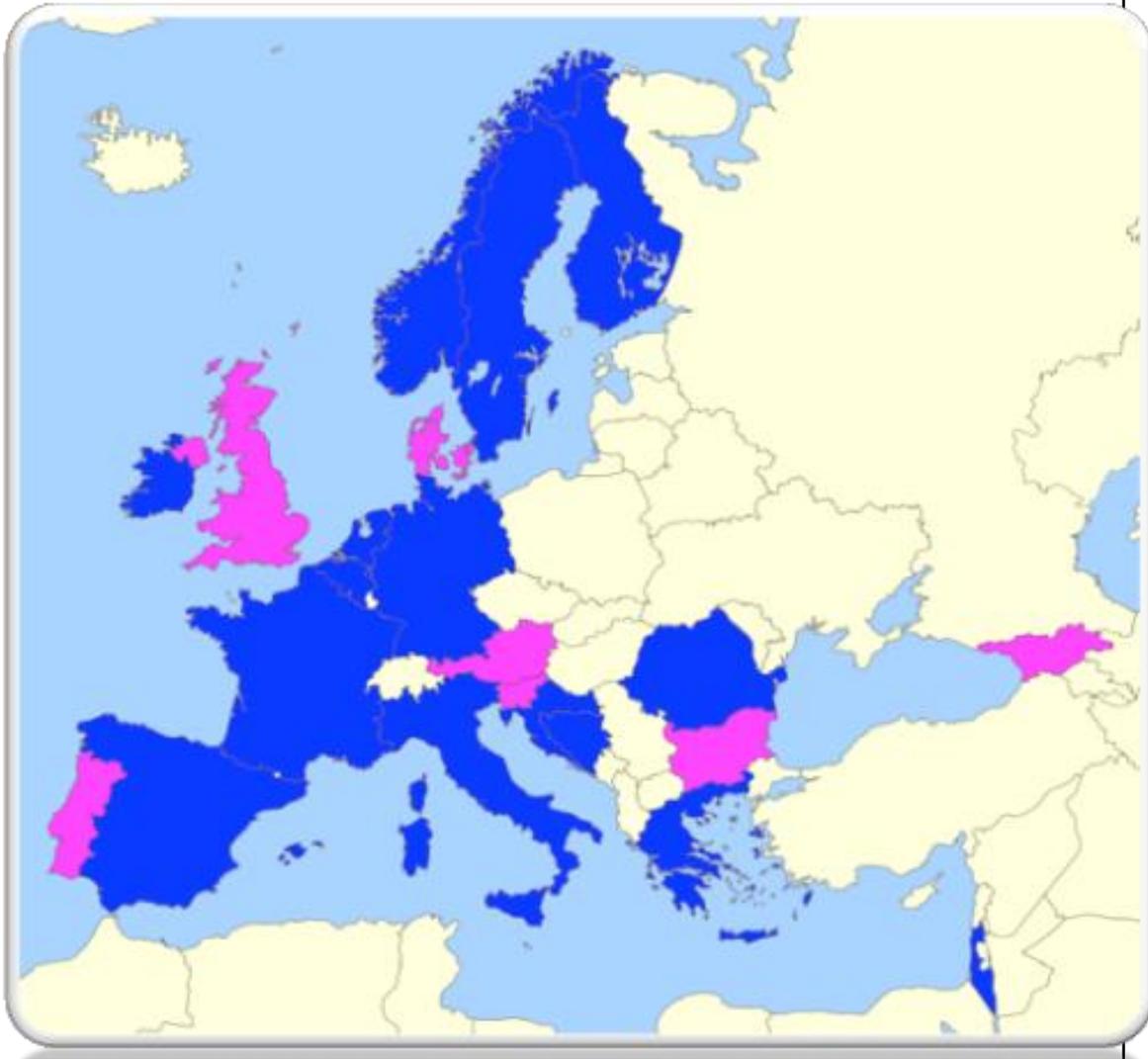
Principles

- **All output** is generated from a PPDR **end user perspective**

- The views of the **widest possible reach across Europe of** Critical Communications needs and use.

- To utilise all **existing and relevant materials from previous and on-going activities**

- To utilize the **combined experience** on PPDR communications

- To foster **cross fertilization and avoid duplication** of ideas and plans between Member States and associated countries

- To **influence EU Policy and standardisation** to support the future roadmap of future evolution of EU broadband applications and interoperable radio communication solutions

- To take account of **legacy investment in state of the art** radio communications by PPDR

Project Approach
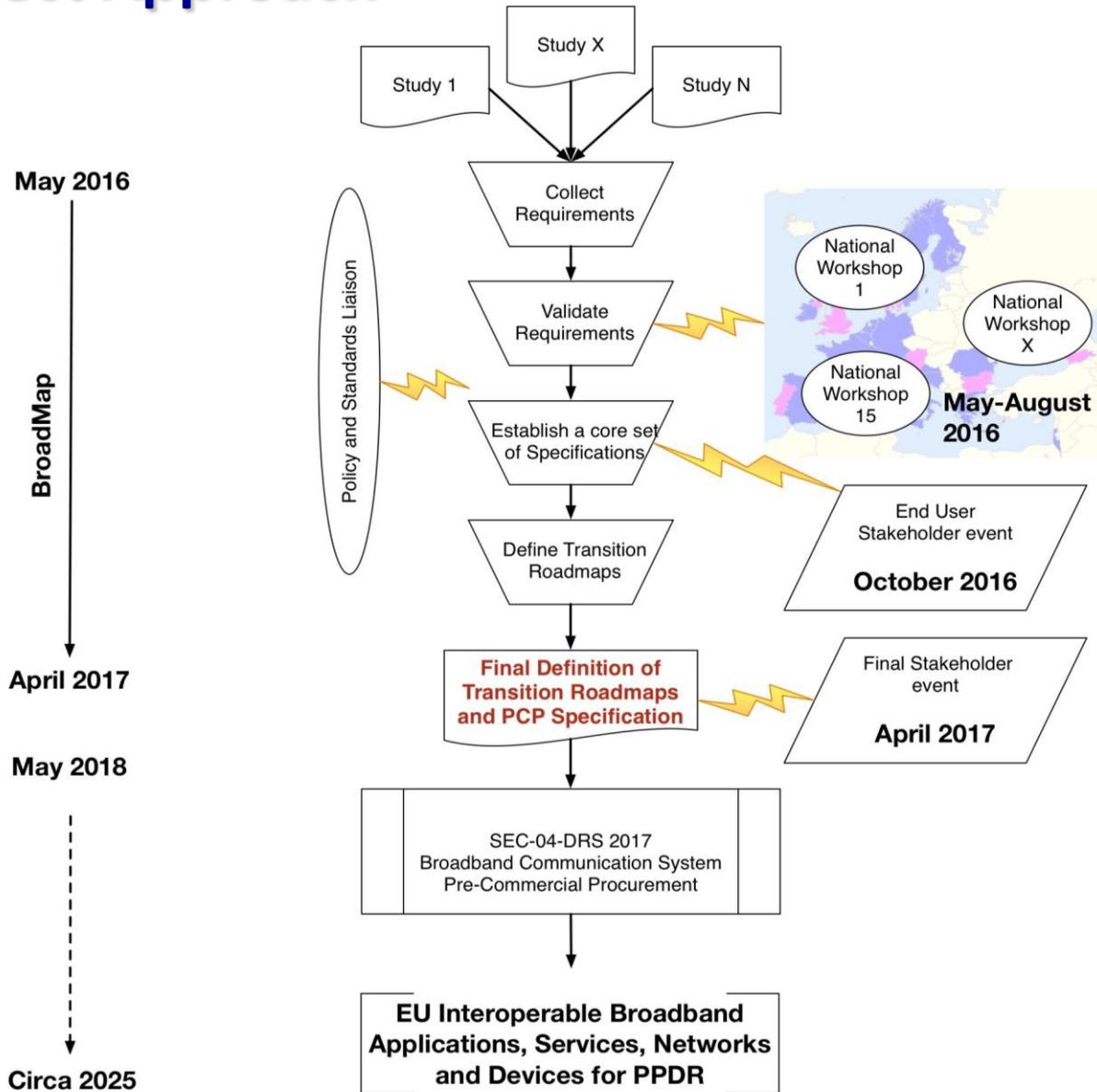
Industry? Research?

- ## Industry participation is restricted
  - to avoid conflict with the tender process later

- ## Users/Buyers only

- ## Final Conference 6th April'16
  - open for all stakeholders

Specifies

SEC-04 Broadband Communication Systems

Pre-Commercial Procurement

BroadMap

Co-ordination and Support Action (CSA)

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Applied R&D / Pre-commercial Procurement (PCP)

BROADNET

Public Procurement of Innovative Solutions (PPI)

Phase 0
Requirements
Solutions
Transition
Roadmapping

Phase 1
Solution design

Phase 2
Prototype
development

Phase 3
Original development
of limited volume
of first test products /
services

Phase 4
Deployment of commercial
volumes of end-products
Wide diffusion of newly developed
solutions

| Supplier A |
| Supplier B |
| Supplier C |
| Supplier D |

| Supplier B |
| Supplier C |
| Supplier D |

| Supplier B |
| Supplier D |

Supplier(s)
A,B,C,D
and/or X

Also normally multiple sourcing here
to keep competition going

2016   **2018**   **Circa 2020-2022**   **2025**

2025 – Commercially Deployed Interoperable
Broadband Applications, Services, Networks, Devices
for PPDR

Phase 1: Supplier Selection and Design

How do we decide ???
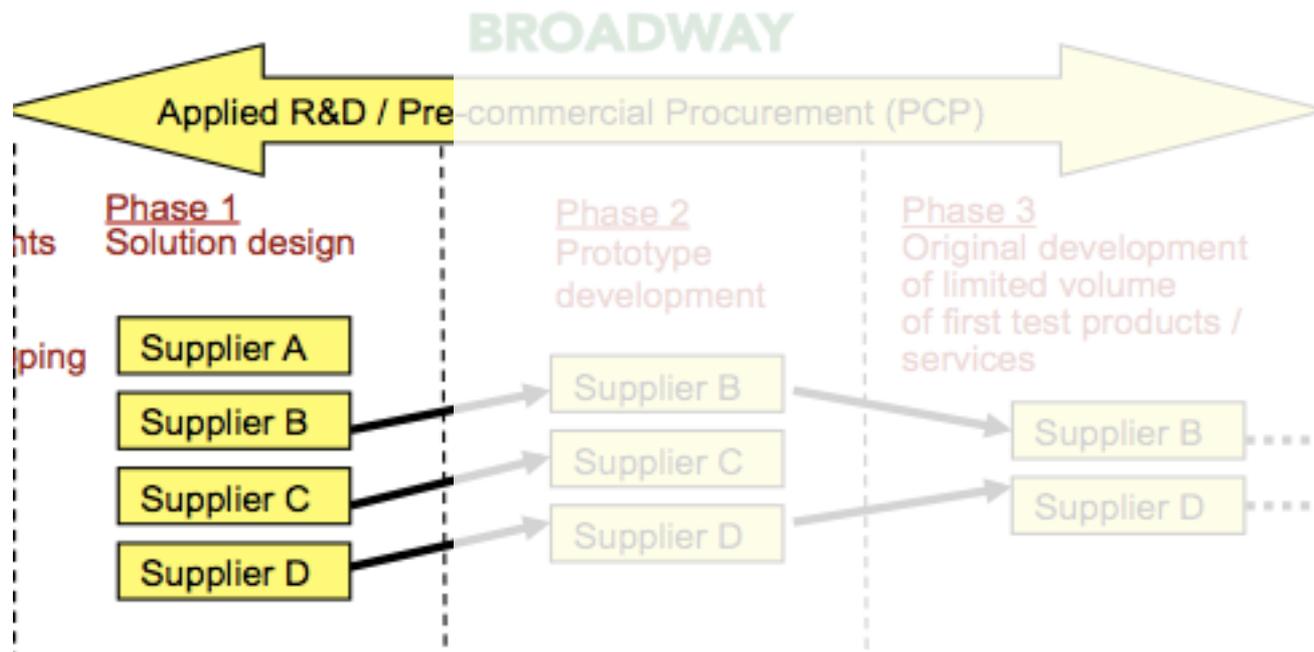
Phase 2: Prototype Development

Does it perform ???
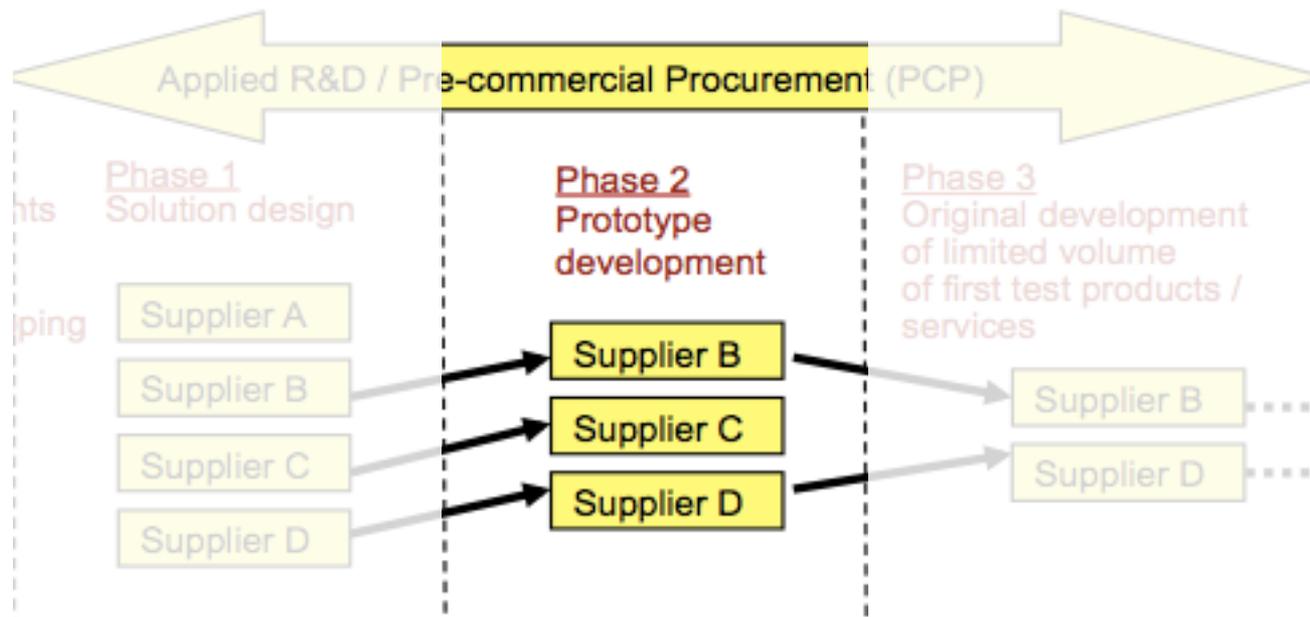
Phase 3: Pan European Pilot

Does it perform in a real situation???
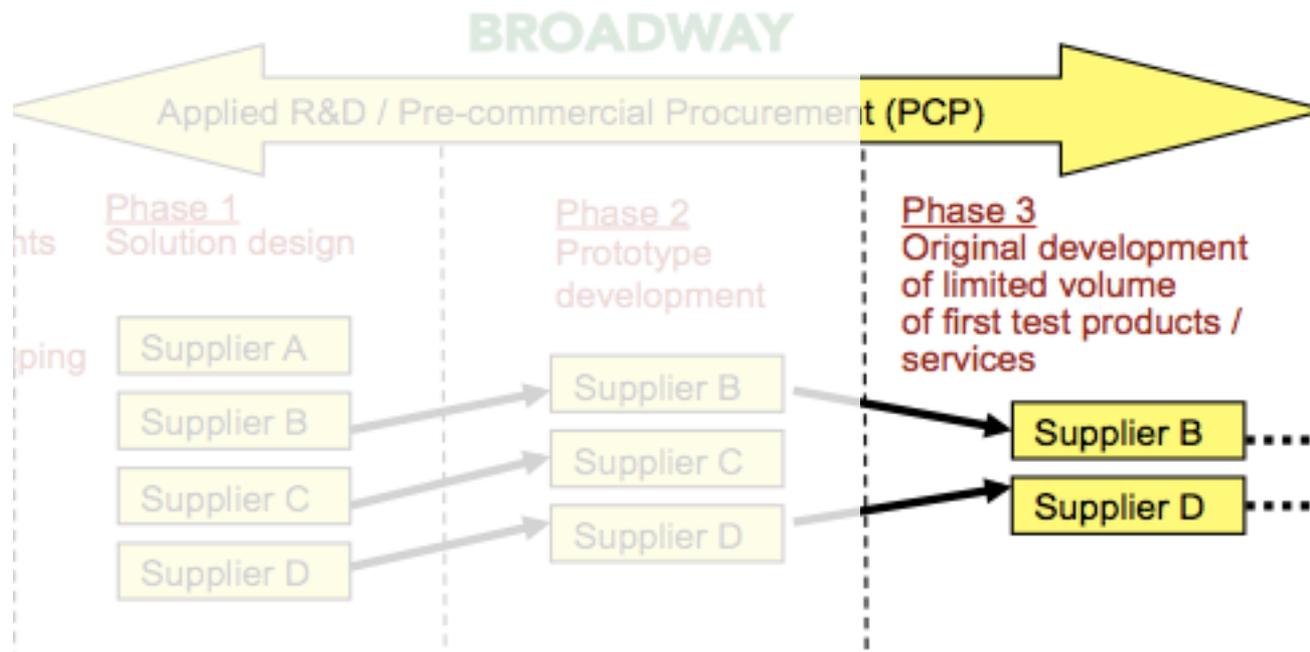
EC Administration, Financial and Procurement Provisions

- Two distinct activities
  - Coordination and Networking
  - Pre-Commercial Procurement

- **Pre-Commercial Procurement**
  - Constitute Subcontracting
  - Buying power - at least €7.77Million
  - Innovation procurement – we don't buy things that already exist
  - Suppliers keep their IPR
  - Buyers have a right to use/reuse the developed IPR

BroadWay

What PPDRs needs today?

**N
e
t
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s**

What PPDRs needs today?

N e t w o r k s

HARMONIZED TUNING RANGES & TRANSITION ROADMAP TO STANDARDIZED SOLUTIONS

Legacy Analog PPDR Radio Networks

ITU Radio Regulations – National Regulation Decisions

Legacy Narrow Band Digital Radio Networks – TETRA and Tetrapol

ITU Radio Regulations – ETSI standard TETRA /Tetrapol, DMR – National Regulation Decisions

Country A Transition Roadmap from TETRA and VHF

Country B Transition Roadmap from TETRA/Tetrapol, P.25, DMR

Country C Transition Roadmap from TETRA

Country X Transition Roadmap Country From Tetrapol

Next Generation Mission Critical PPDR Broadband Services

LTE Broadband Networks based on 3GPP Standards:450MHz, 700MHz, 800MHz,900MHz, 1800MHz, 2600MHz

ITU Radio Regulations / 3GPP REL15 Commercial Network Specifications

ITU Radio Regulations / 3GPP REL15 PPDR MC Specifications – National Regulation Decisions

GAP: EU wide regulation for MC PPDR BB Services

Requirements for National Governance Models

ORGANIZATIONAL SCHEMES

National decision to establish a Governance model for providing MC PPDR Broadband services

European Agencies
- Application Services
- Control Room Services
- SpiceNet Network Mgmt
- SpiceNet Core/ Basestn. Services
- Device Services (copy)

Country A PPDR Organizations
- Administrative Decisions
- Government Services

GOGO/GOCO SERVICES
- Application Services
- Control Room Services
- Network Management
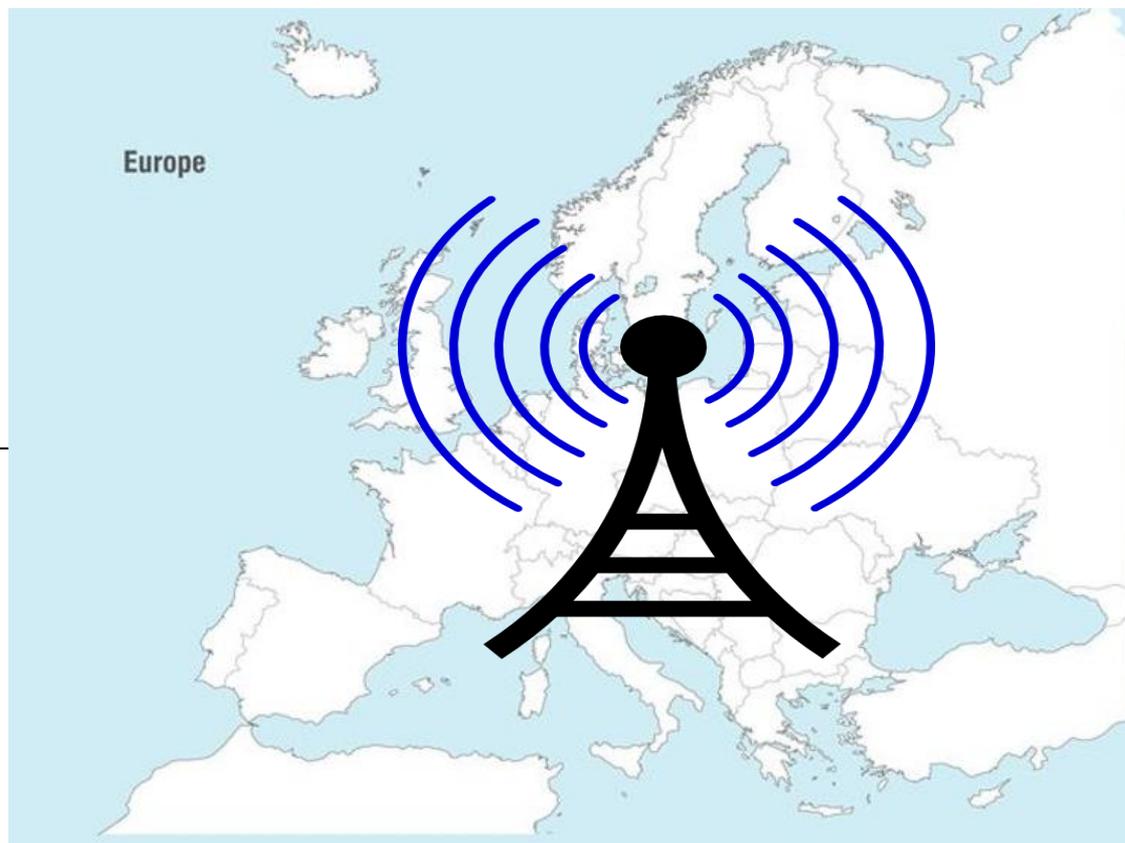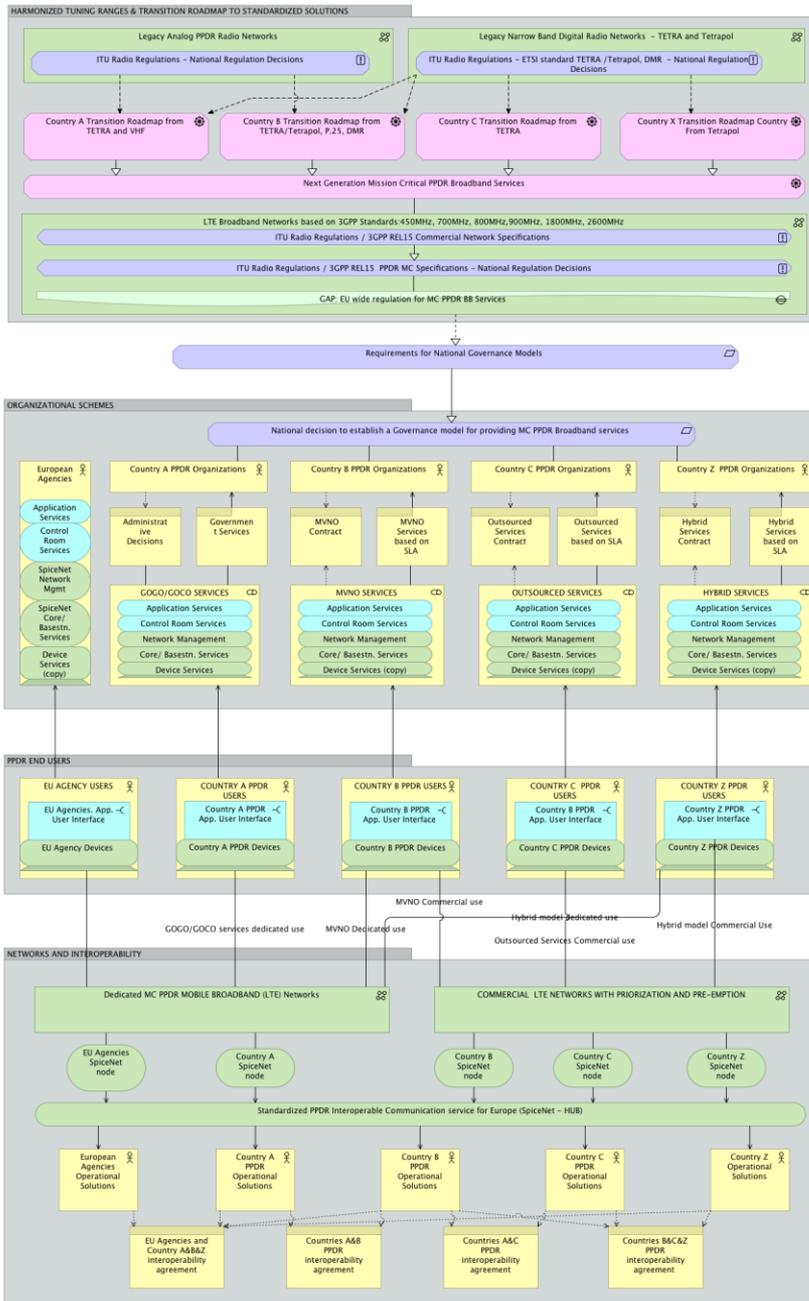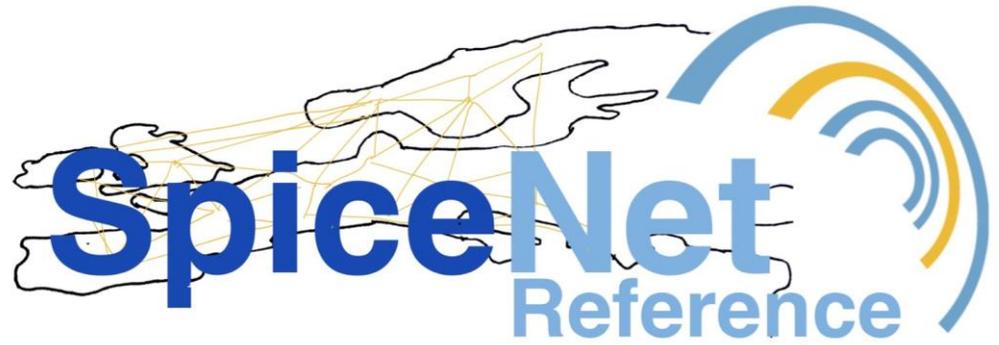- Core/ Basestn. Services
- Device Services

Country B PPDR Organizations
- MVNO Contract
- MVNO Services based on SLA

MVNO SERVICES
- Application Services
- Control Room Services
- Network Management
- Core/ Basestn. Services
- Device Services (copy)

Country C PPDR Organizations
- Outsourced Services Contract
- Outsourced Services based on SLA

OUTSOURCED SERVICES
- Application Services
- Control Room Services
- Network Management
- Core/ Basestn. Services
- Device Services (copy)

Country Z PPDR Organizations
- Hybrid Services Contract
- Hybrid Services based on SLA

HYBRID SERVICES
- Application Services
- Control Room Services
- Network Management
- Core/ Basestn. Services
- Device Services (copy)

PPDR END USERS

EU AGENCY USERS
- EU Agencies. App. User Interface
- EU Agency Devices

COUNTRY A PPDR USERS
- Country A PPDR App. User Interface
- Country A PPDR Devices

COUNTRY B PPDR USERS
- Country B PPDR App. User Interface
- Country B PPDR Devices

COUNTRY C PPDR USERS
- Country B PPDR App. User Interface
- Country C PPDR Devices

COUNTRY Z PPDR USERS
- Country Z PPDR App. User Interface
- Country Z PPDR Devices

MVNO Commercial use

GOGO/GOCO services dedicated use

MVNO Dedicated use

Hybrid model Dedicated use

Hybrid model Commercial Use

Outsourced Services Commercial use

NETWORKS AND INTEROPERABILITY

Dedicated MC PPDR MOBILE BROADBAND (LTE) Networks

COMMERCIAL LTE NETWORKS WITH PRIORIZATION AND PRE-EMPTION

EU Agencies SpiceNet node

Country A SpiceNet node

Country B SpiceNet node

Country C SpiceNet node

Country Z SpiceNet node

Standardized PPDR Interoperable Communication service for Europe (SpiceNet – HUB)

European Agencies Operational Solutions

Country A PPDR Operational Solutions

Country B PPDR Operational Solutions

Country C PPDR Operational Solutions

Country Z Operational Solutions

EU Agencies and Country A&B&Z interoperability agreement

Countries A&B PPDR interoperability agreement

Countries A&C PPDR interoperability agreement

Countries B&C&Z PPDR interoperability agreement

SpiceNet Reference

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Impact – Pilots – could be...

- Formed from a number of deployed prototype systems

- that will allow for demonstration of interoperable operation across borders, in the following settings:
  - Land-border roaming.
  - Long distant roaming (following an air or sea crossing).
  - Communication groups across all connected countries.

  - ???

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Test and Validation Centre

- Initially supporting the PCP decision making

- Later…
  - a sustainable activity for validating systems to integrate into SpiceNet

BroadWay

Any More Questions ??

www.psc-europe.eu