Airbus consortium solution for Broadway
# A glimpse on the results

11nd of May, 2022

16/05/2022

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Agenda

- Why BroadWay/BroadNet matters?

- From use cases to key requirements to Airbus consortium solution key characteristics

- Airbus consortium – Best combination of experts

- Key learnings to address for Broadway phase 3/BroadNet

- What's next?

Why does BroadWay/BroadNet matter?

- Innovation driven program for

    - Interoperability by design for Pan-European collaboration

    - Enhanced Situational Awareness

    - Security & Safety for citizens and First Responders

- Support the creation of European eco-system based on standards to <u>control the future of our security system</u>
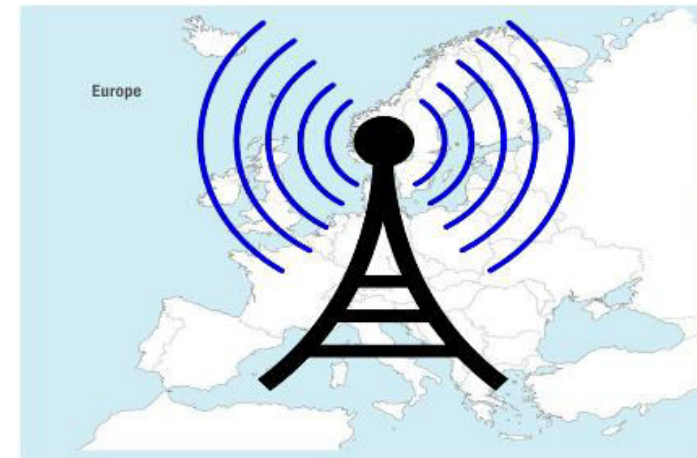
From challenge to solution

1. **Interoperability**

   - MNO, MVNO, dedicated LTE home networks

   - Communication groups shared among different organizations

   - Flexible setup of group communications

2. **Roaming**

   - End users can move from network to network, country to country

   - Privileged access to radio and network resources shall be maintained while roaming

3. **Control & Security**

   - Interoperability shall not impact home organization control & security

1. **Real production networks-based**

   - Real COTS services and infra performance

2. **Hub-based mobile broadband network roaming (IPX)**

   - Fast & efficient setup

   - Security remains fully in the hands of home organization

3. **Home routing principle**

   - End users connect to their home organization Mission Critical Services

4. **Groups of groups**

   - Control & security for each organization
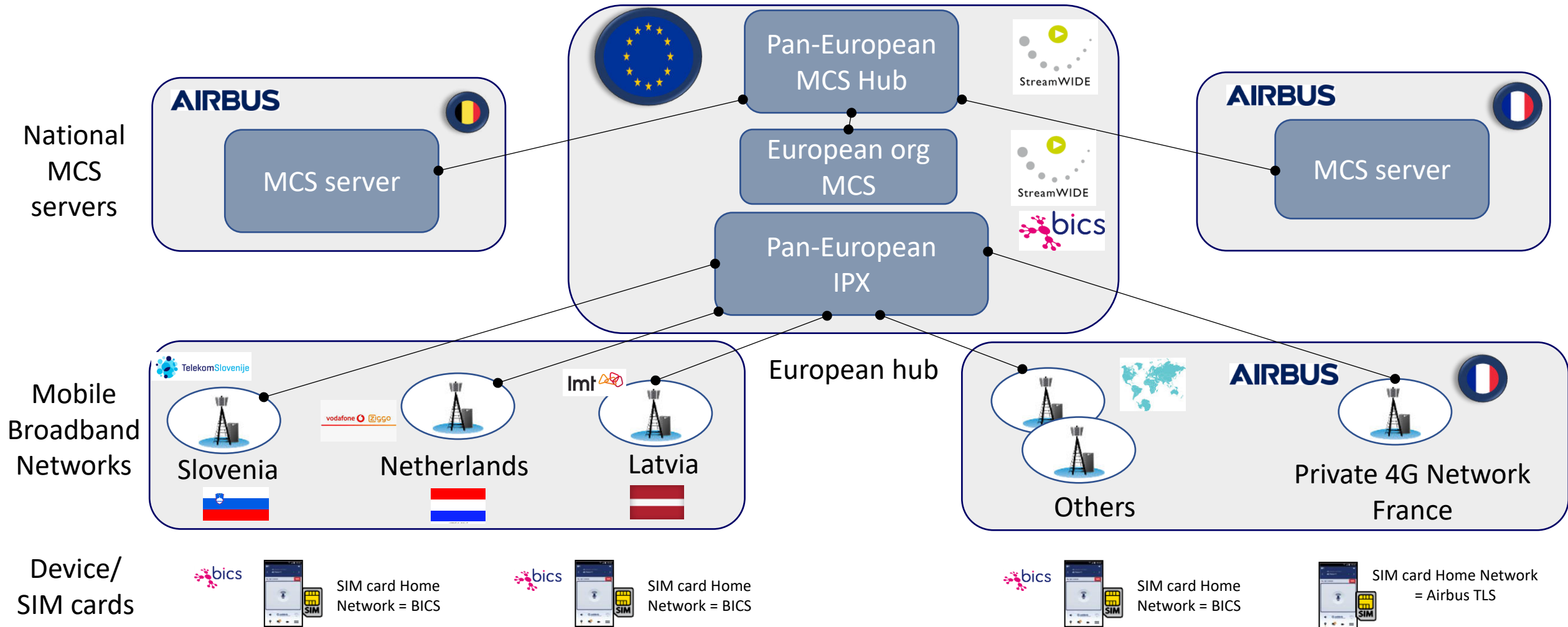
5. **European Mission Critical Services Hub**

   - Scalable, flexible and fast to deploy

From use cases to requirements

Airbus consortium solution core principles

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Airbus consortium prototype solution
Best combination of experts

National MCS servers

Mobile Broadband Networks

Device/ SIM cards

Key learnings so far and considerations for the future (technical)

- The use of <u>real production networks-based</u> unlocked very valuable learnings about what current mobile networks and infrastructure can offer today regarding:

  - Challenges to achieve Pan-European harmonised behavior wrt privileged access

    → Some technical issues to solve in 3GPP standards
    Commercial/regulatory motivators needed to ensure harmonisation on European level.

  - Challenges to meet Pan-European seamless operation targets (smooth and fast handover in border areas)

    → Technical challenges to overcome in current mobile networking set-up (3GPP and/or specialised solutions).
    Accelerated introduction of VoLTE/VoLTE roaming.

- Good understanding of roaming, roaming agreements, regulatory aspects important to ensure a <u>fast and efficient realisation of a Pan-European "network"</u>.
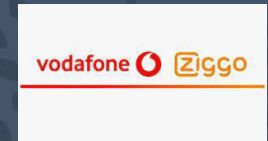
  → Instant roaming solutions to ensure fast service introduction.
  Use of commercial donor IMSI has a positive side effect with regards to security (not reveal the fact a public safety subscriber is moving along the border or travelling.)

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Key learnings so far and considerations for the future (technical)

- MCS-MCS Interoperability (Operational mobility) is positively evolving
    - 3GPP standards are published (Q1 2022)
    - Published standard does not mean Mature standard
    - Implementations are needed to detect bugs, some misconceptions and some gaps
    - Interoperability testing is required to detect ambiguities
    - Interoperability is not achieved just with compliance to standards
    - It cannot be expected that all solutions will implement all features

        - A common set of features is required to ensure interoperability between solutions
        - A common profile (including list of features and communication model e.g. regrouping) shall be specified for systems to be interoperable

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What's next?

- So far: Evaluation from a technical point of view

- Practitioner evaluation:

  - Evaluation of solutions of both consortia by means of scenarios
    - Airbus consortium: Wild Fire scenario (beginning of June; Slovenia)
    - Airbus/Frequentis consortium: Drug convoy pursuit (end of June; Netherlands)
    - Frequentis consortium: Fire on ferry (end of July)

- Other type of assessment/evaluation with new learnings to be expected

Thank you

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