Towards 6G in Europe

Session International views on 6G

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### Beyond 5G/6G: Global Context

<table>
<thead>
<tr>
<th>B5G/6G Initiative</th>
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<td><strong>United States</strong></td>
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<td>- “Secure 5G &amp; Beyond Act” March 2020</td>
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<td>- DoD Testbed programme, $ 600 million</td>
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<td>- Next-G initiative, industry federation (ATIS); RINGS (NSF)</td>
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<td>- Open RAN Drive, $2Bn</td>
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| **Japan** |
| - METI support |
| - $300+200million |
| - Open RAN Drive, $2Bn |

| **South Korea** |
| - MSIT 6G programme, September 2020, 5G Forum |
| - ≈ $200 million public support |

| **China** |
| - MIIT 6G programme, creation of IMT 2030 Promotion committee (2019) |
| - Multi € Billion until 2035, including industrialisation |

| **European Union** |
| - 6G Smart Networks and Services Partnership proposal: € 900 millions / 6 yrs |
| - **Drivers**: Strategic autonomy, Green Deal, Cybersecurity |
| - Member States Initiatives: Finland, Germany, France, Austria .. |
Factors of change

- Vertical industries growing presence in connectivity, new « convergence wave »
- Business models beyond operators
- IT industry expansion, Software as a key technology, disaggregation...
- New approach to security;
- Autonomy ➔ value in micro electronic components + Cloud
- Human centricity importance, Sustainable Development Goals
- ……

- ➔ Potential impact on stakeholders, industrial landscape, alliances and collaboration, standardisation, deployment stimulation models
6 Early Motivations for 6G

New classes of applications
- XR, Holographic coms, Digital twins
- Internet of Senses
- Deterministic E2E

Application focus

Vertical use cases beyond 5G
- Extending 5G KPI's in speed, latency, reliability, density, positioning
- Massive M2M

Automated & autonomous Infra/Service Mgt
- Programmability
- Intelligence connectivity

Management focus

Ultra low energy/EMF
- Connectivity
- Use cases

Societal focus, SDG's

Ultra high security/trust/Privacy
- E2E, From component to application

Application focus

Low OPEX

High Flexibility

Sustainable Development goals
- Affordability, Accessibility
- Openness..
Vision

Massive Digitisation: representation

Connected Intelligence: Awareness, RT status

Network Compute Fabric Decision, action

- https://5g-ppp.eu/5g-ppp-phase-3-6-projects/
- https://hexa-x.eu/deliverables/
Technology areas with strong impact on different 6G requirements and KPIs.
Towards a 6G European Initiative

5G PPP - Bridging phase
1 flagship + 8 6G exploratory projects = 60 M€

Industry 6G Partnership Proposal-Smart Networks & Services Joint Undertaking

Strategic Autonomy in critical technology areas
European Green Deal
Full digitalisation of the Industry
EU Industry global competitiveness

Accelerating 5G Deployment: CEF2, pan European corridors for Connected Cars
6G Vision and technologies across a comprehensive supply chain
Tentative Timeline

ITU early workplan
Vision of IMT beyond 2030: early 2023
Key Trends and technologies: mid 2022
Inputs: June 2021 and October 2021

Call for proposals 1 € 240 million
R&I + PoC + test platform
Thank You!

More info:

Smart Networks and Services (6G) Roadmap proposal

https://5g-ia.eu/sns-horizon-europe/

Horizon Europe Partnerships (23 Feb PR)


Smart Network and Services (6G) EC announcement