Societal, policy and business drivers for 6G

**SOCIETY**

- Sustainable / Energy Conscious Operation
  (Sustainable Development Goals, EU green Deal)
- Trustworthy
  (Trusted technology)
- Inclusive
  (Reduce digital divide)
- 6G Human-Centric Approach
- End-User Engagement
  (Ubiquitous presence, User acceptance)
- Artificial Intelligence
  (Notively integrated AI)

**POLICY**

- Based on EU Values
- Secure Infrastructure & Data
- Technological Sovereignty
  (Strong position in Global market with international collaborations)

**BUSINESS**

- Boosting EU Economy
  (6G to improve the economy of member States)
- New Business
  (Emergence of novel business models)
- Challenges/Crisis Protection
  (Cope with pandemics & other crises)
Main goals of 6G

- **CONNECTED INTELLIGENCE**
  (convergence of physical, human and digital)
- **PROGRAMMABLE**
  (Flexibility & customization)
- **INTEGRATED SENSING**
  (Native accurate localisation & sensing)
- **TRUSTWORTHY**
  (Secure, trusted & private infrastructure)
- **DETERMINISTIC**
  (Delivery of steady performance)
- **SUSTAINABLE**
  (Sustainable 6G & 6G for sustainability)
- **SCALABLE & AFFORDABLE**
  (Ubiquitous & inclusive)
Stretching 5G KPIs

- **Increased Number of Connected Devices**
  (Sensors, vehicles, home devices, robotics)

- **Increased Total Capacity**
  (New services/business, ubiquitous coverage)

- **Extreme Performance**
  (Immersive & tactile communications)

- **Improved Energy Efficiency**
  (Reduced consumption for increased traffic)

- **High-Accuracy Localization**
  (cm level localization & accurate sensing)
Indicative Key Technologies enabling 6G

**SYSTEM ARCHITECTURE & CONTROL**
(Communication/computation co-design, AI governance, etc.)

**EDGE & UBIQUITOUS COMPUTING**
(Responsiveness, reduced data flows, distributed microservices)

**RADIO & SIGNAL PROCESSING**
(THz & visible spectrum, refarming, modulation, beamforming, IRS, etc.)

**OPTICAL NETWORKS**
(Intrinsically secure, green and flexible transport networks)

**NETWORK & SERVICE SECURITY**
(Larger attack surface, micro-segmentation, Security as a Service, etc.)

**NON-TERRESTRIAL NETWORKS**
(Single access network, edge flying nodes (computing & storage), resource sharing)

**SPECIAL PURPOSE (SUB)-NETWORKS**
(Vertical sub-networks such as in-body, in-robot, in-car networks, etc.)

**DEVICES & COMPONENTS**
(Efficient Tx/Rx modules, optical & hybrid transceivers, Neural processing units, etc.)
### SNS JU – Strategic Objectives

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<tr>
<th>Ensure European Leadership for 6G Smart Networks and Services</th>
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<tbody>
<tr>
<td>- Advanced applications &amp; services</td>
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<td>- Competitive connectivity solutions</td>
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<td>- Full value chain approach</td>
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<th>Improve Digital Industries Operation</th>
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<td>- Identify needs and provide solutions</td>
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<td>- Advanced infrastructures</td>
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<td>- Create a fertile business ecosystem</td>
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<th>Address Societal Needs and Policy Objective</th>
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<td>- Identify and meet relevant Sustainable Development Goals (SDG)</td>
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<td>- Support EU Green Deal targets</td>
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<td>- Safeguard security and privacy</td>
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- Mobilise the European stakeholders
- Enable cross-sector collaboration
- Make Europe the center of gravity for international collaboration and global consensus