



# The European B5G/6G Agenda

***Europe accelerates towards 6G***  
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# 5G Public Private Partnership



**Last Work  
Programme  
ICT-52 Focus**

Completing phase 3: extra R&I focused on 5G innovations, connected and automated mobility, and connectivity beyond 5G

5G R&I for "Long Term Evolution"

Phase 3 b) Integrated Verification Trial  
- radio+network+applications -

*5G Connected Cars in EU:  
Cross border corridors*

Phase 3 a) Verification  
Demo/Trial Platform  
- Integration radio+ network

User needs, cross industry partnerships  
with vertical industries

Phase I Core Technologies

Phase 2 - Demos  
PoC\*- Core Techs  
Components

\*Proof of Concept

Y2015

2016

2017

2018

2019







2020

2021

2022



# Beyond 5G: Global Context

	B5G/6G Initiative
	<ul style="list-style-type: none"><li>- “Secure 5G &amp; Beyond Act” March 2020</li><li>- DoD Testbed programme, \$ 600 million</li><li>- Next-G initiative, industry federation</li></ul>
	<ul style="list-style-type: none"><li>- MIC “Roadmap towards 6G”, June 2020</li><li>- METI support</li><li>- \$380 million</li></ul>
	<ul style="list-style-type: none"><li>- MSIT 6G programme, September 2020</li><li>- \$200 million public support</li></ul>
	<ul style="list-style-type: none"><li>- MIIT 6G programme, creation of IMT 2030 Promotion committee (2019)</li><li>- Multi € Billion until 2035, including industrialisation</li></ul>
	<ul style="list-style-type: none"><li>- 6G Flagship launched in February 2019</li><li>- € 250 million / 7 years</li></ul>
	<ul style="list-style-type: none"><li>- <b>6G Smart Networks and Services Joint Undertaking proposal</b></li><li>- <b>€ 900 millions / 7 years</b></li></ul>

# 6 Key Dimensions of 6G

**New classes of applications**

XR, Holographic coms, Digital twins

Internet of Senses

Massive M2M

**Fully Automated Infrastructure**

Autonomous management

AI everywhere

**Ultra low energy/EMF**

Optical techs, architecture, optimizing computing vs networking, EMF aware..

**Vertical use cases beyond 5G**

>> capacity, xGbs speed, new spectrum, sub ms latency, location, reliability beyond 5x9, ultra high device density

**Ultra high security**

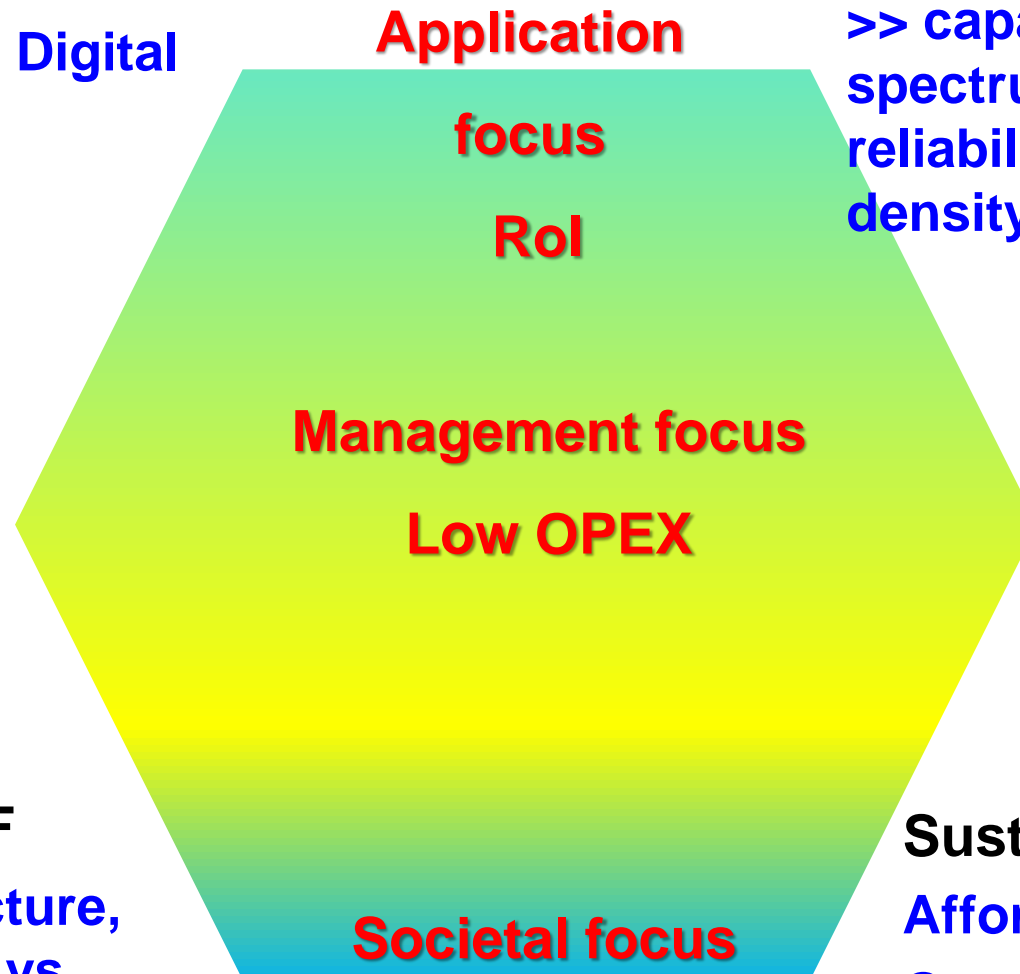
Quantum, blockchain, From component to application

**Sustainable Development goals**

Affordability, Accessibility

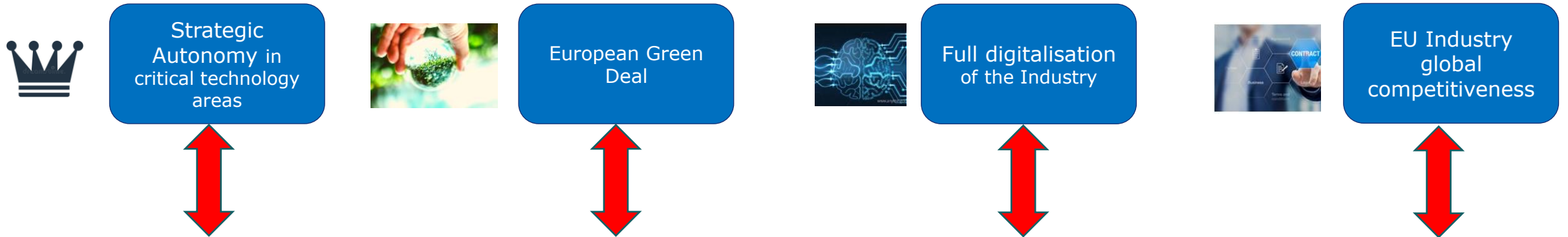
Openness

Climate change, agriculture..



# Towards a 6G European Initiative

5G PPP: ICT-52 implementation of 8 6G exploratory projects, 1 flagship= 60 M€ (bridging phase)



Industry 6G Partnership Proposal (Smart Networks & Services)

[https://ec.europa.eu/info/files/european-partnership-smart-networks-and-services\\_en](https://ec.europa.eu/info/files/european-partnership-smart-networks-and-services_en)



Accelerating 5G Deployment: CEF2, pan European corridors for Connected Cars

6G Vision and technologies across a comprehensive supply chain

# Smart Networks & Services: value chain approach

Requirements Industrial  
& Consumer  
Applications

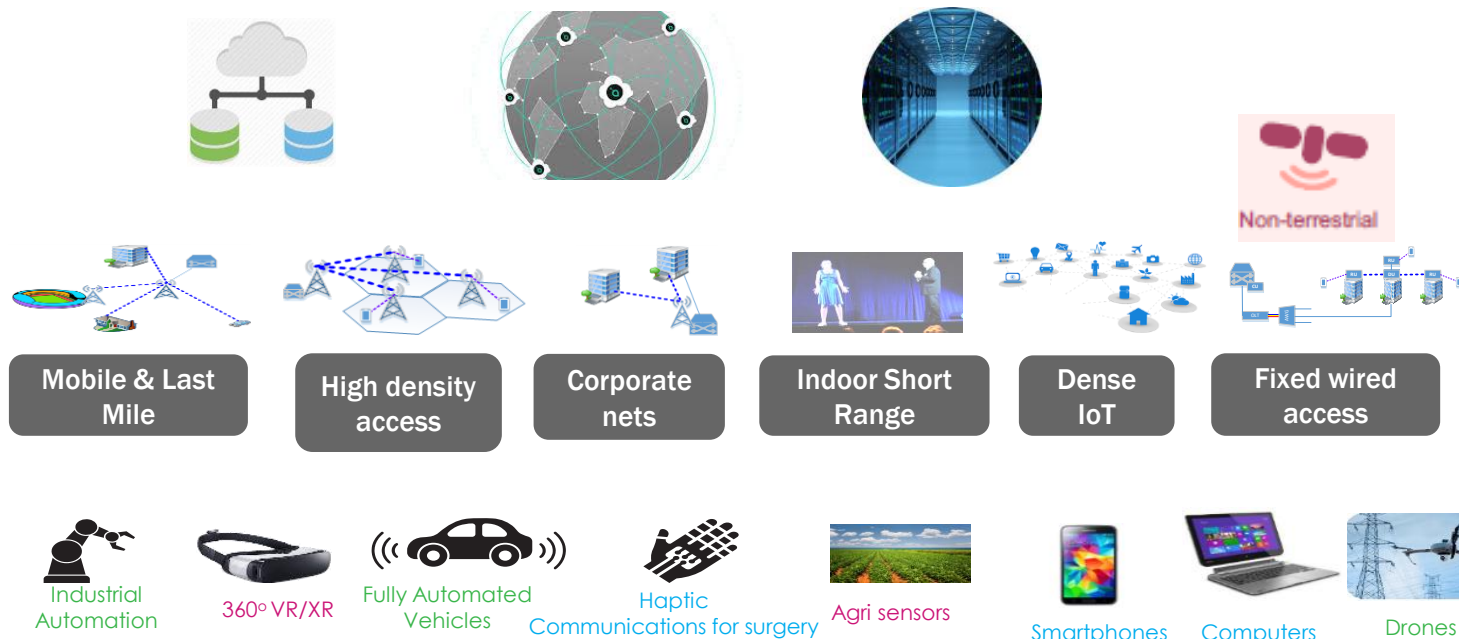


Service provisioning  
Computing and Storage Data  
Analytics

Networks  
Versatile Infrastructure &  
Multiple Topologies

Devices/transformation:  
myriad of Connected Devices

New opportunities Enabling  
Technology Components



End-to-end Resource  
Management and Energy  
Efficiency

End-to-end Security and  
Trust



# Indicative Timeline



## ITU early workplan

Vision of IMT beyond 2030: early 2023

Key Trends and technologies: mid 2022

Inputs: June 2021 and October 2021

# Partnership: Tentative Planning

## **Partnership and Work Programme status** (dates tentative)

- Kick off legal act (SBA) Council negotiations: 26 February
- Early draft Work Programme presentation to MS: end of March
- Regular consultation with MS on Work programme, every 6 weeks
- Stable draft Work programme: Summer 2021
- Final SBA Adoption: Q3 2021
- Launch of Calls after SBA adoption, Q3/4 2021



## More info:

### **Smart Networks and Services (6G) Roadmap proposal**

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

### **Horizon Europe Partnerships (23 Feb PR)**

[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_21\\_702](https://ec.europa.eu/commission/presscorner/detail/en/IP_21_702)

### **Smart Network and Services (6G) EC announcement**

<https://ec.europa.eu/digital-single-market/en/news/europe-puts-forward-proposal-joint-undertaking-smart-networks-and-services-towards-6g>



Virtual Conference (Porto, Portugal) • 8-11 June 2021

<https://www.eucnc.eu/>

