

# 6G Research & Innovation in Europe

one6G Summit 2022

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# MAIN MISSIONS

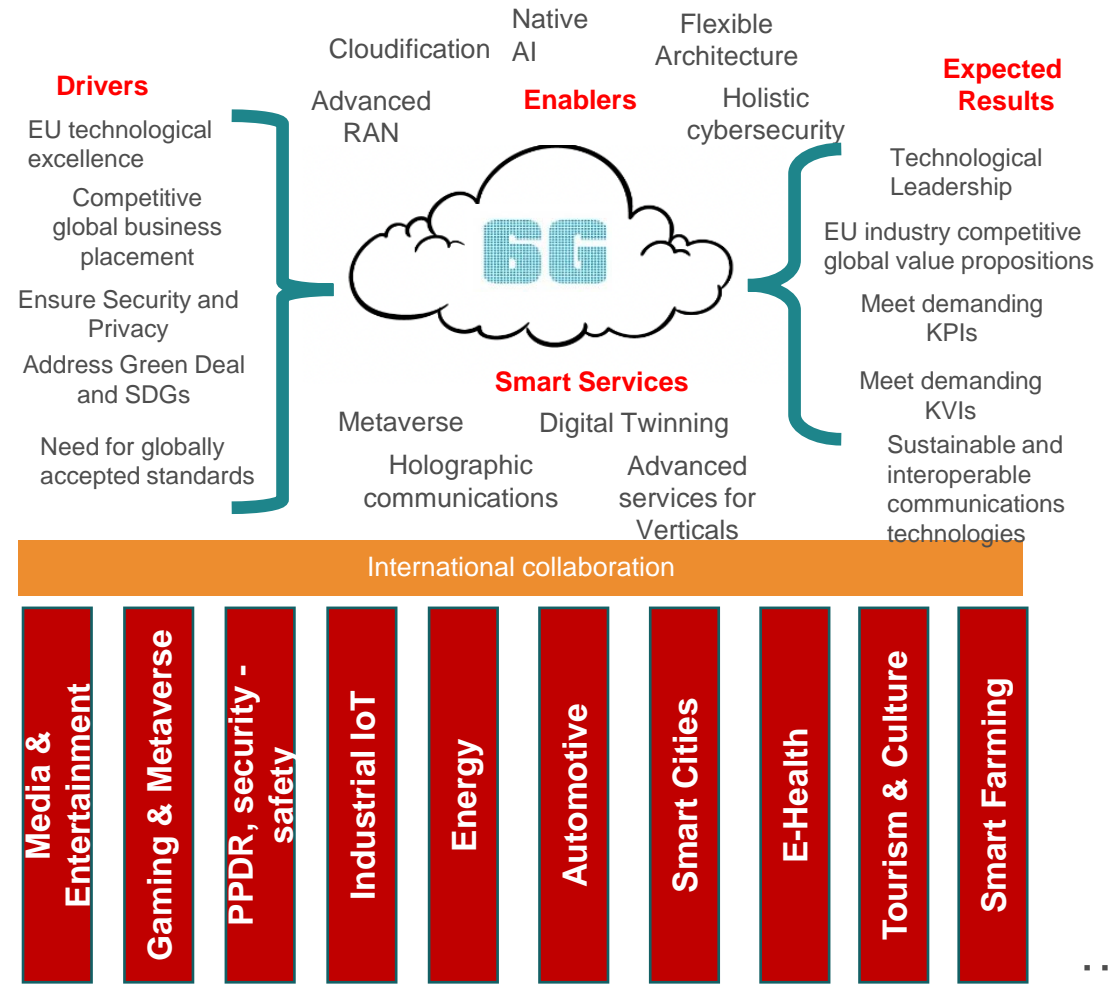
- Fostering Europe's technology sovereignty in 6G
- Boosting 5G deployment in Europe

# STRATEGIC OBJECTIVES

- Research & innovation for 6G networks - connectivity, devices and services infrastructures
  - New applications: "Internet of Sense", XR/VR, digital twins, holographic type communications
  - Reinforce Europe's technological leadership
  - Safeguard European values (security and privacy)
  - Enable a massive digital and green transitions towards low carbon footprint of vertical industries
- Cost Effective Affordable Solutions      Stronger European SNS Economy

## A joint undertaking for 6G Networks and Services

To facilitate and develop industrial leadership in Europe for 6G networks and services by 2030



EU R&I funding of € 900 million for the period 2021-2027, at least equally matched by private side resources

# 6G Vision and status

**6G in the R&I domain:** multiple programmes globally (US, CN, JP, RoK..) + EU MS's

**No declared commercial initiative yet,** deployment around 2030

**No globally established vision.** 5G-PPP EU vision from June 2021

Based on **convergence/twinning** Physical + Digital + Human worlds

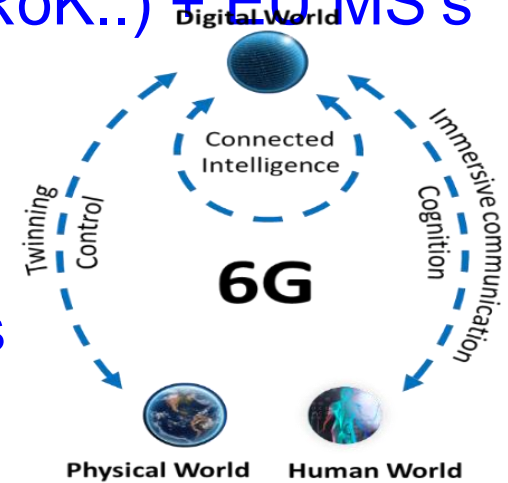
## Targets:

beyond 5G capabilities for verticals + totally new application domains

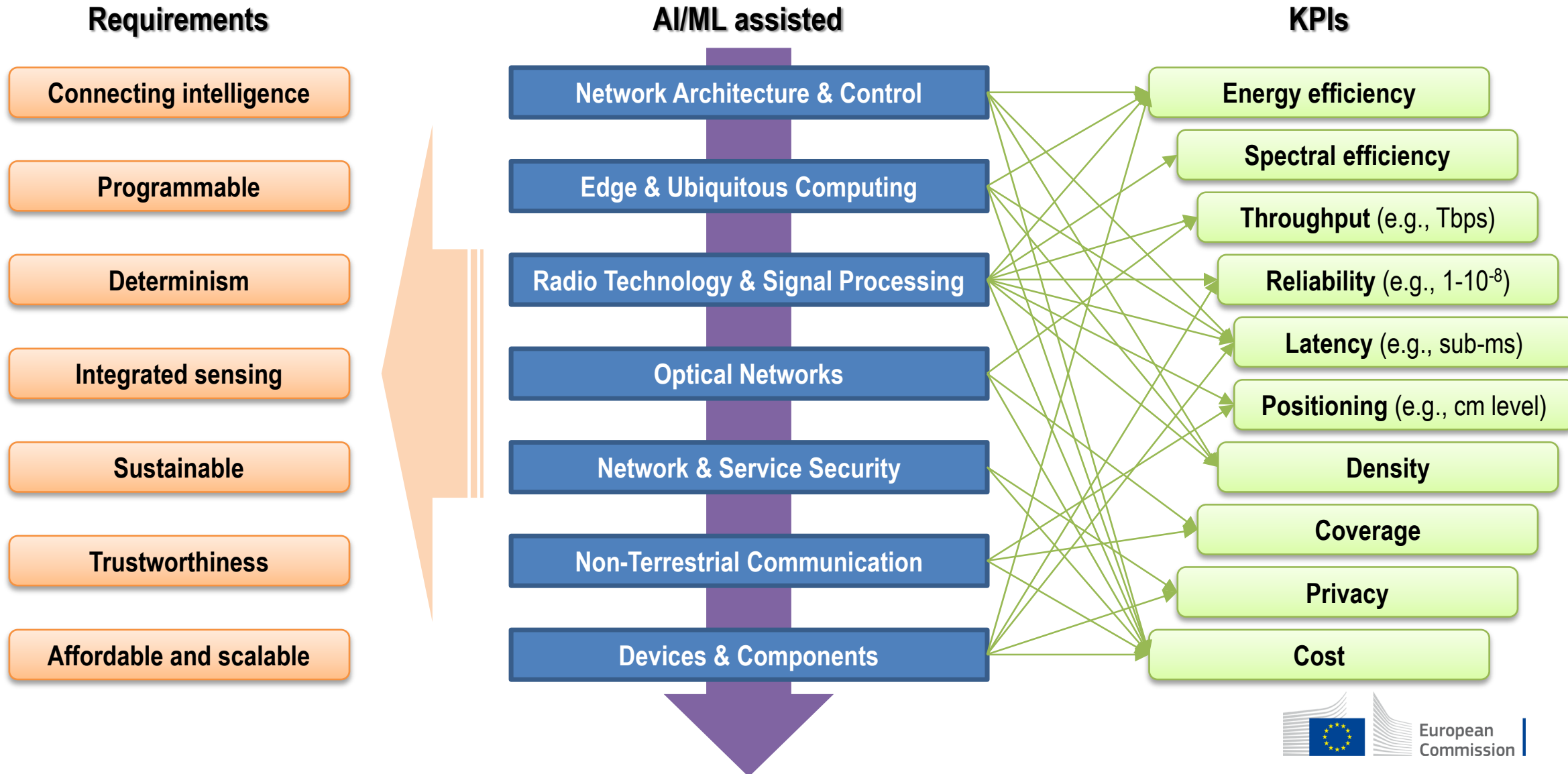
Step change in performances with AI, blockchain..

Systematic coverage of Sustainability issues (security, energy, affordability, access..)

→ Open opportunities to shape the future 6G landscape. Europe should be leading



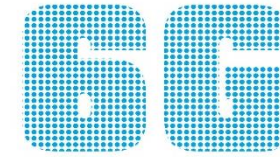
# (Core) Technological Areas



# 6G SNS Call 1



Evolution



**Stream A (RIA):** Smart communication components, systems and networks for 5G mid-term Evolution systems

**Radio:**  
Building Blocks and Systems

**System and Security:**  
Secure Softwarisation  
Real-time/ Zero touch  
Services

**Architecture:**  
Evolved Design  
Advanced Cloud/Edge  
Converged Optical Transport

**Stream D (IA):** Large Scale SNS Trials and Pilots with Verticals

**Stream B (RIA):** Research for Revolutionary 6G Technology and systems

System Architecture

Wireless Communication  
Technology and Signal  
Processing

Holistic System Perspective

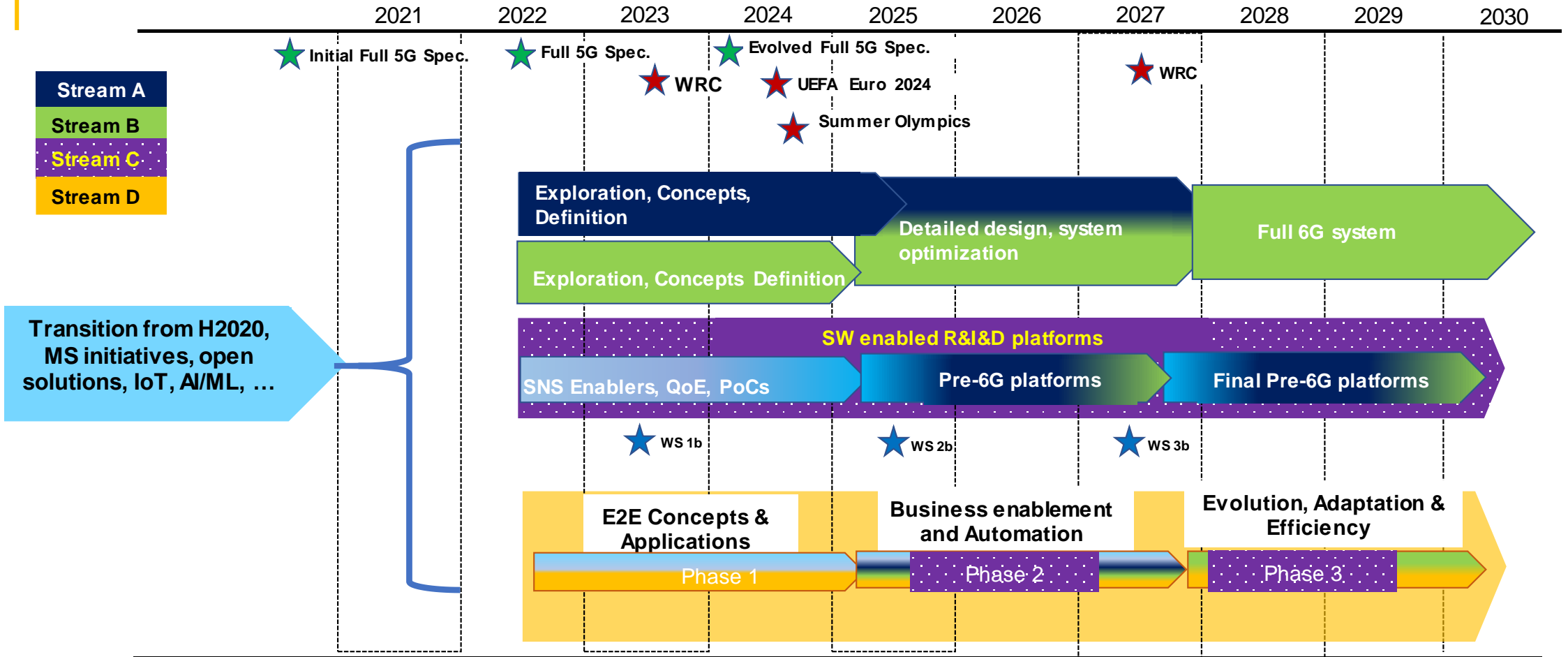
Trustworthy and Secure  
Service Development and  
Provision

Communication  
Infrastructure Technologies

**Stream C (RIA):** SNS experimental infrastructures

**See Results: [Europe scales up 6G research investments and selects 35 new projects worth €250 million](#)**

# SNS Roadmap

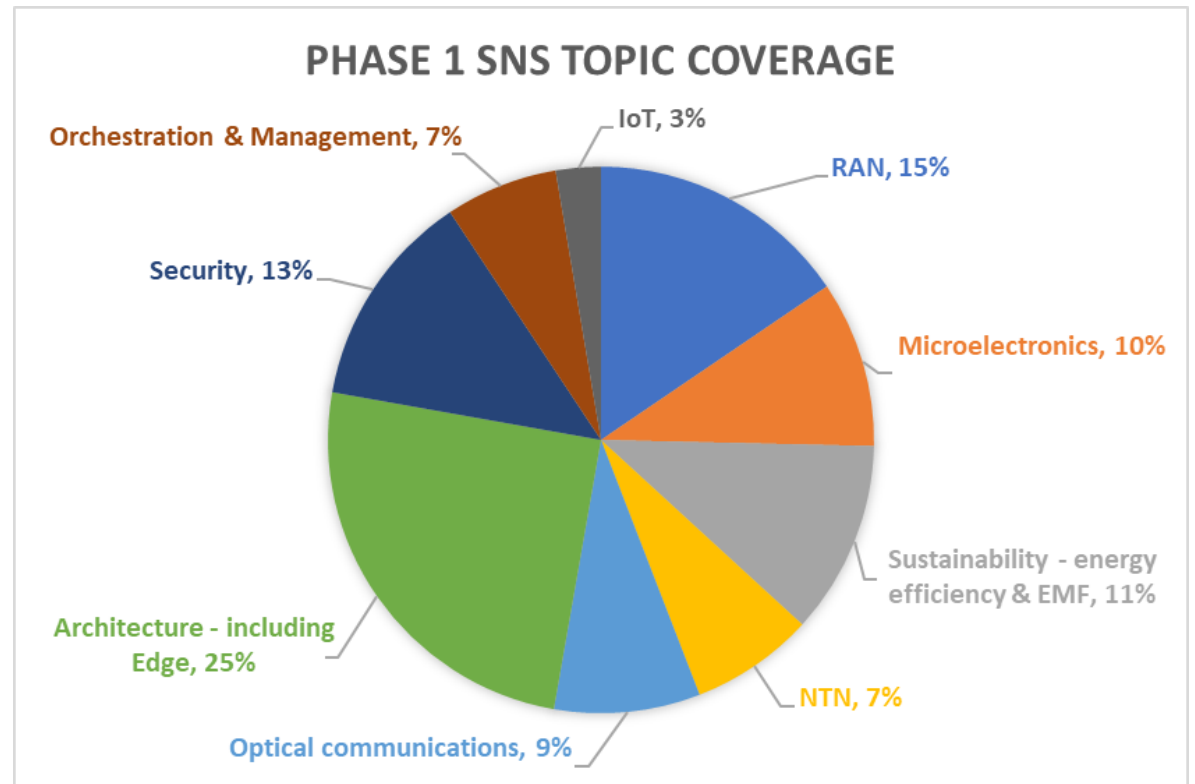
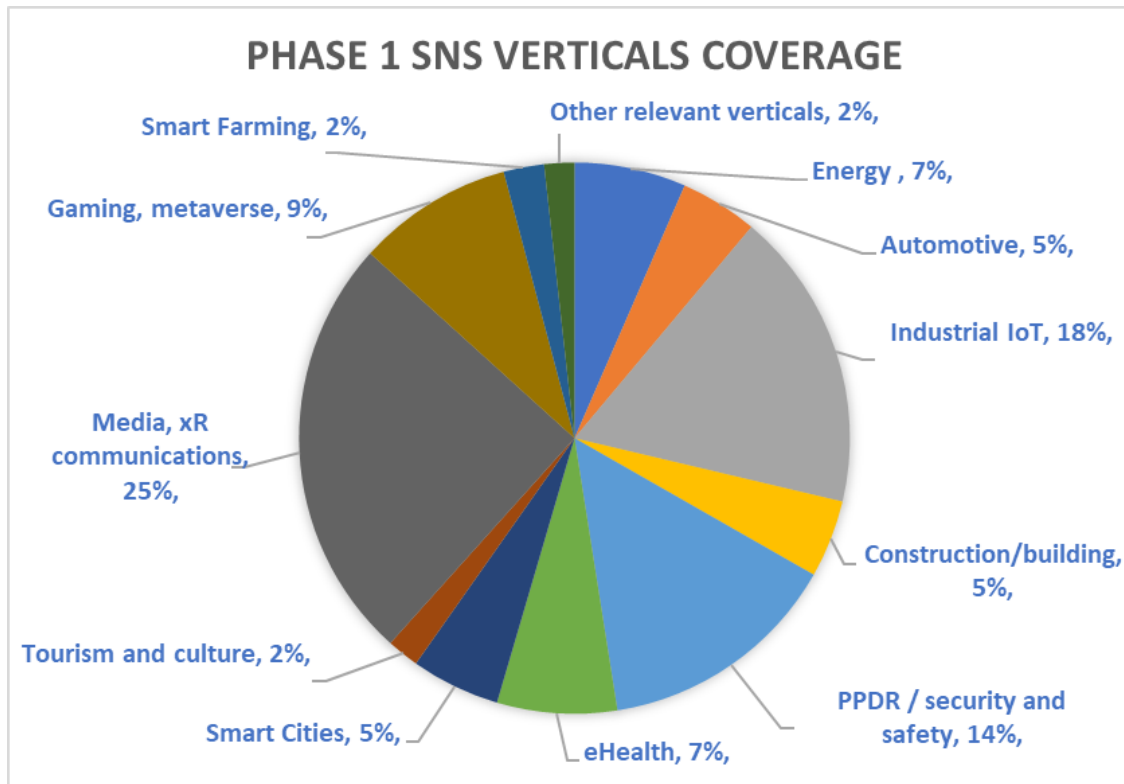


★ Workshop with EU Partnerships - IAFA

# SNS JU Call 1 in figures

## 10+ Vertical Industries

## Key technological Areas



288 unique beneficiaries

~18% funding for SMEs w/o considering cascade funding

~30% not 6G-IA members

# SNS JU Next steps

- SNS WP2023-24 is under preparation and publication target is Dec 2022
- Call 2 (~130M) to open mid-January 2023

## 2023

Low TRL topics including those not covered during the 1<sup>st</sup> call

Micro-electronics for 6G  
EU-US Cooperation

**Stream B (RIA):** Research for technology advancement towards 6G

Complement Phase 1 + federation

**Stream C (RIA): SNS experimental infrastructures**

Automotive  
Health, Smart Cities, Farming, Education

**Stream D (IA): Large Scale SNS Trials and Pilots with Verticals**

Societal challenges

**CSA :** Support Action

## 2024

PoC and Standardization

Collaboration JP&SK  
Sustainability

Microelectronics for 6G

Vertical use cases implementing 6G Vision

SNS Operational Support



# Conclusion

- Europe is fully committed to 6G with vibrant and running R&I, that capitalizes on 5GPPP results and is amplified by the 6G SNS JU
- Important new technologies and applications, societal and sustainability drivers, full supply chain from micro electronics to services
- Massive stakeholder efforts for SNS Call 1, will form a good basis for future calls
- First portfolio of 35 SNS research, innovation, and trial projects (around €250 million) to start in Jan 2023; SNS WP 2023-2024 to be published in Dec 2022.
- 2 years ahead of us as window of opportunity to shape the 6G technologies and prepare for standards; no time to waste.

# *Thank You!*

The Smart Networks and Services Joint Undertaking | Shaping Europe's digital future



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