



## SNS JU Phase 1 projects

***Webinar #4** – Wireless Communications and Signal Processing & Communication Infrastructure and Devices*

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## SOCIETY

**SUSTAINABLE / ENERGY CONSCIOUS OPERATION**  
(Sustainable Development Goals, EU green Deal)



## POLICY



**BASED ON EU VALUES**



**SECURE INFRASTRUCTURE & DATA**



**TECHNOLOGICAL SOVEREIGNTY**  
(Strong position in Global market with International collaborations)

## BUSINESS



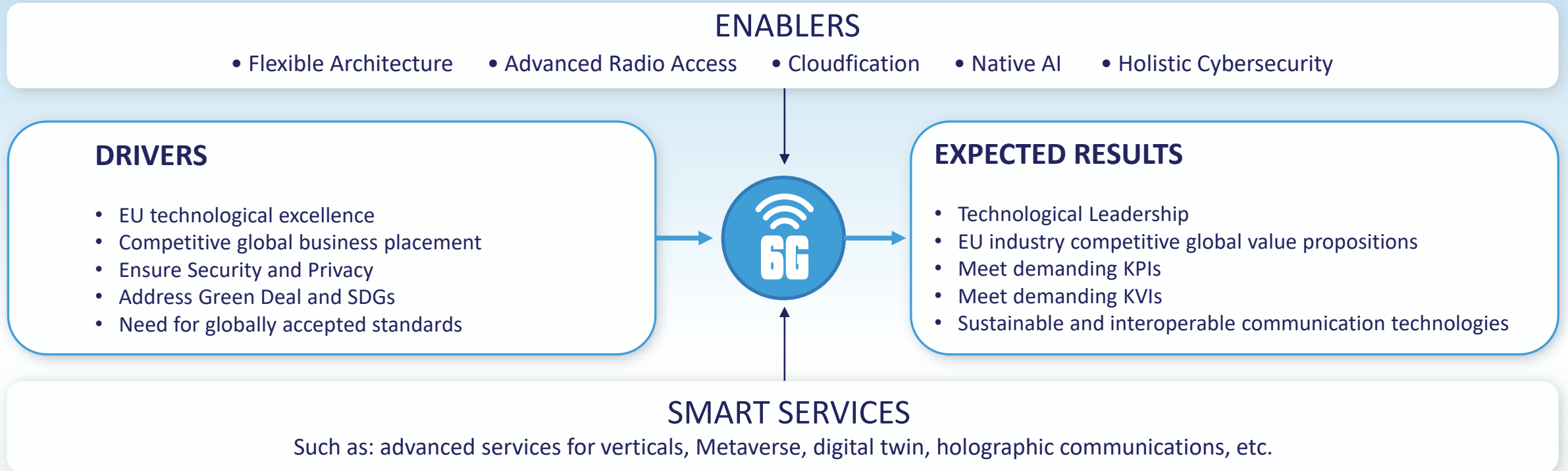
**BOOSTING EU ECONOMY**  
(6G to improve the economy of member States)



**NEW BUSINESS**  
(Emergence of novel business models)



**CHALLENGES/CRISIS PROTECTION**  
(Cope with pandemics & other crisis)



### INTERNATIONAL COLLABORATION



- The SNS Collaboration agreement is ready. The signing process has started in the following order
  - 6G-IA Board members – ongoing
  - SNS JU projects – not started yet
  - 6G-IA members – not started yet

- Three types of WGs are envisioned
  - a. SNS Projects WGs (similar to the 5G PPP WGs)
  - b. 6G-IA WGs
  - c. SNS Strategic WGs (To be created by the SNS GB)

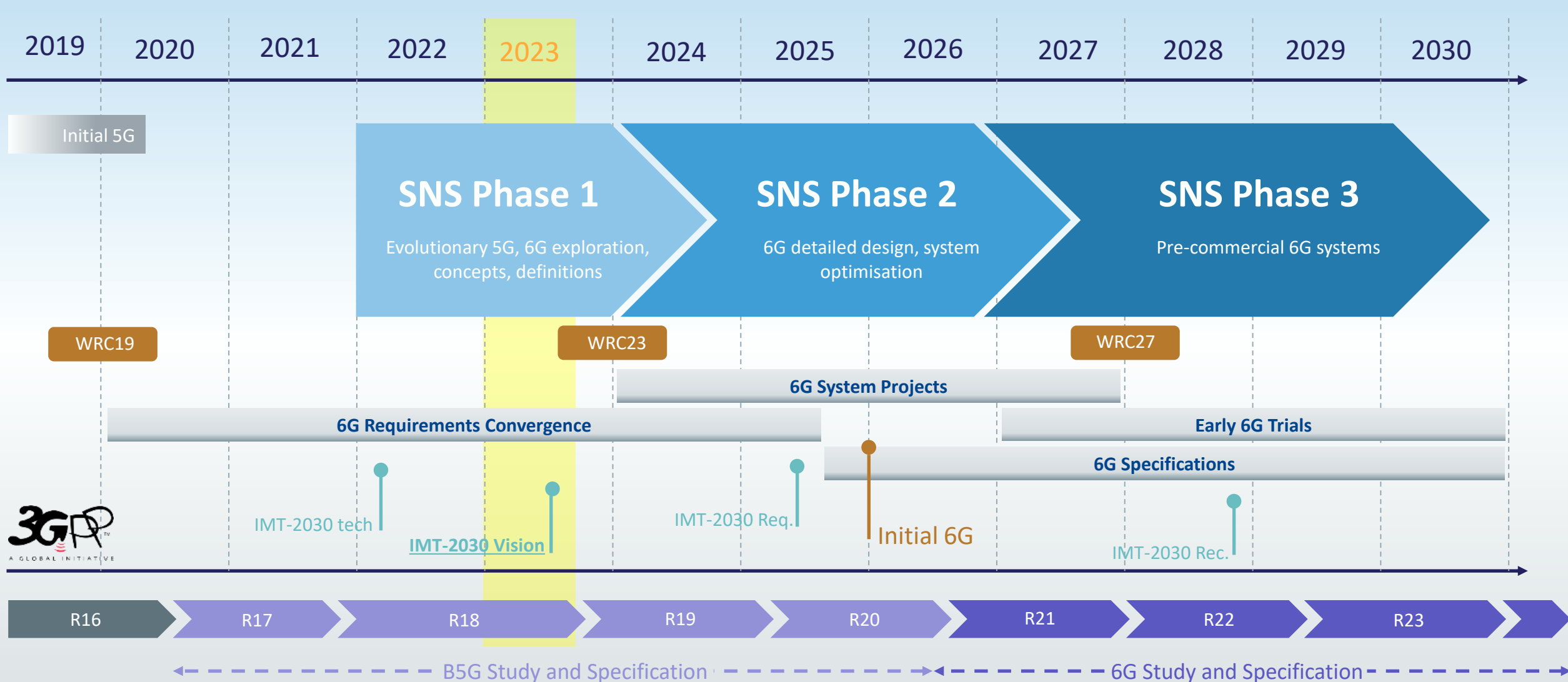
A plan is being prepared – SNS WGs will be discussed/decided involving the Projects

A webinar will take place (May 2023) to present the plan and open a consultation

Target to present the final structure at EuCNC 2023

Guarantee continuity from the 5G PPP era

- Next steps:
  - Until the collaboration agreement is signed by a critical mass of projects/project members an unofficial pre-SB will be setup to start the coordination among projects
  - When a 70% of projects will have signed the CA, an election process will open to select the Chairs for the SB/TB
  - After the SB is officially formed, the formal decisions for the SNS Project WGs will be taken





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

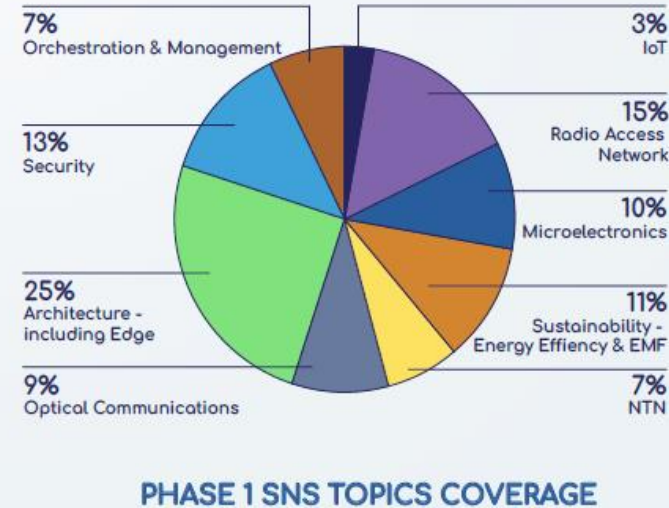
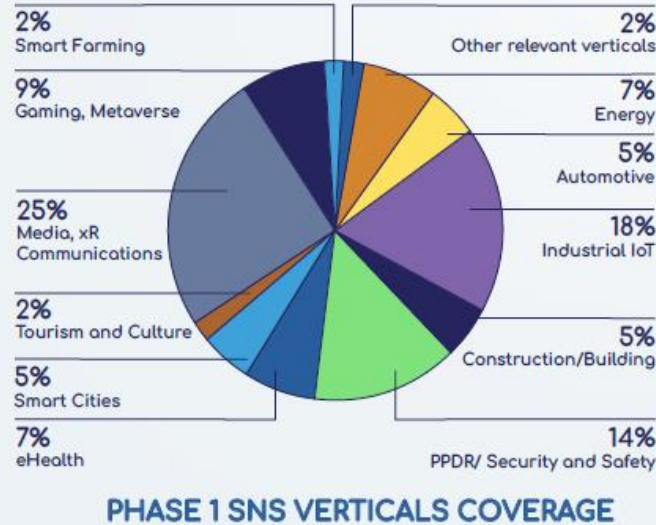
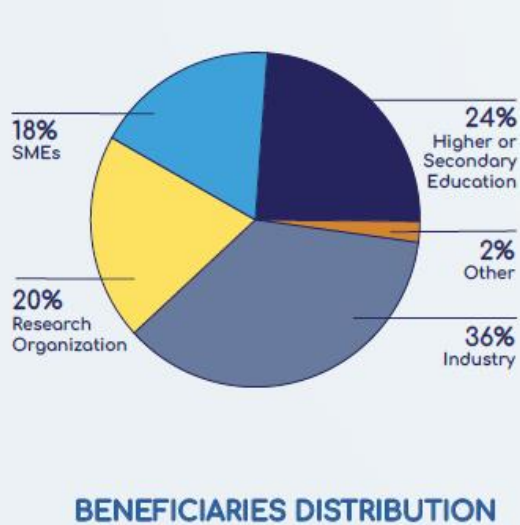
**See Results:** Europe scales up 6G research investments and selects 35 new projects worth €250 million





### PHASE 1 PROJECTS TO START 1/1/2023

35 R&I Projects, 9 Key Technological Areas, 250 M€ Investments



- 288 unique beneficiaries
- ~30% not 6G-IA members
- Covering 10+ different Vertical Industries

## Challenges cover:

- ▶ Wireless technologies and systems capable to meet expected 6G radio capabilities
- ▶ Exploitation of new spectrum
- ▶ New higher efficiency mobile communication approaches, such as cell free networking,
- ▶ microelectronics solutions and technologies at RF, Baseband, DSP, processing levels

## Scope:

- ▶ Terahertz Communications and Ultra-Massive MIMO
- ▶ Joint communication and sensing
- ▶ New Waveforms, Random and Multiple Access
- ▶ Enhanced Modulation and Coding
- ▶ Wireless Edge Catching
- ▶ Human-friendly Radio systems
- ▶ Spectrum Re-farming and Reutilisation



## Outcomes cover:

- ▶ 6G KPIs (bandwidth, capacity, latency, flexibility) compatible with the backhaul and longhaul networks
- ▶ NTN coverage of remote areas
- ▶ 3D scalable networks beyond current network solutions designed for 2D usage

## Scope:

- ▶ Flexible Capacity Scaling
- ▶ Ultra-high Energy Efficiency
- ▶ Integration of Optical and Wireless Technologies
- ▶ NTN infrastructures
- ▶ Integrated NTN service provision
- ▶ New IoT components and devices
- ▶ Troposphere Networking
- ▶ New Physical Layers and associated protocols
- ▶ Nano-things Networking

# 6G SNS Projects are instrumental to SNS communication!

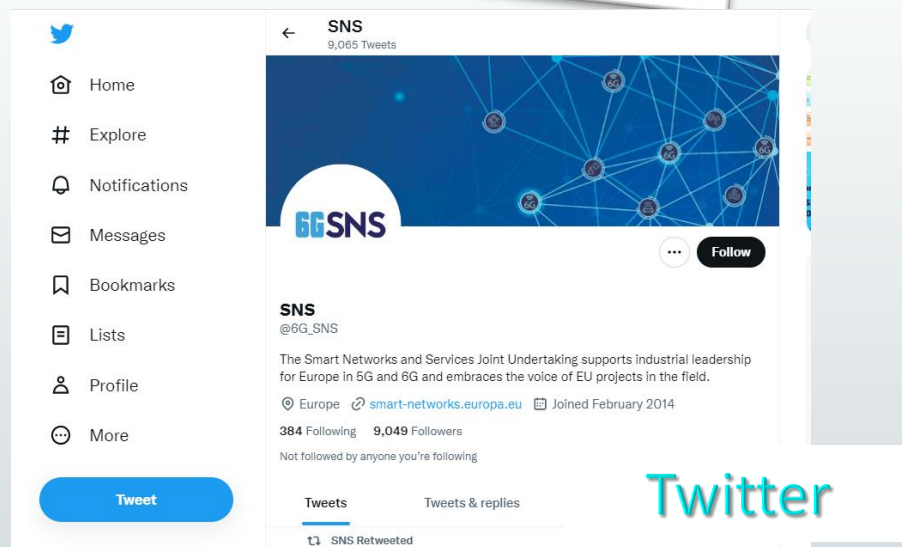
SNS brand and Projects communication guidelines

## Press releases



NEW

LinkedIn

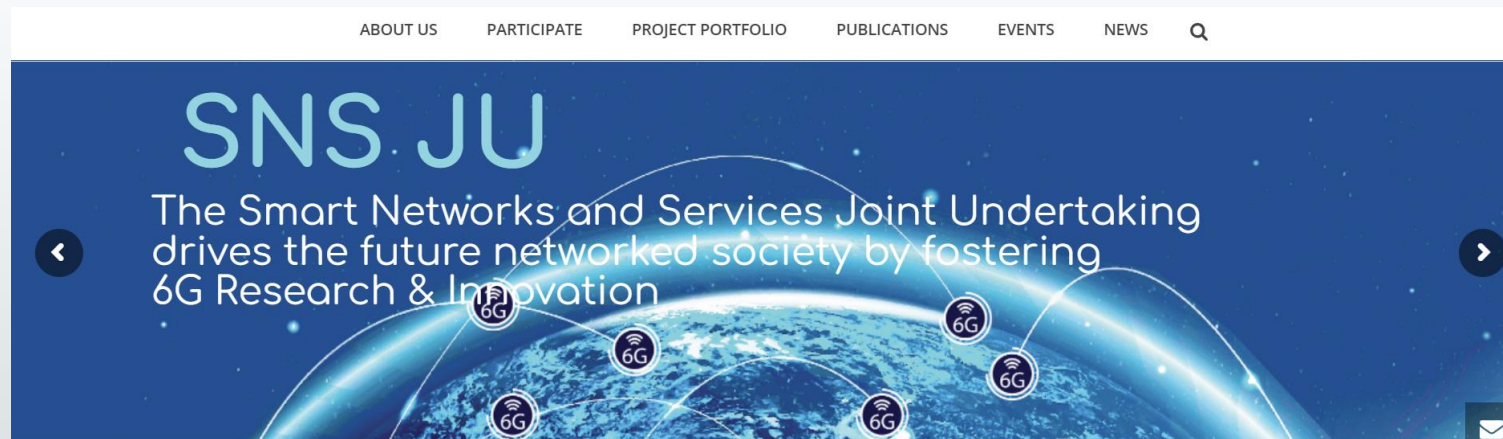


Website



# Thank you!

Visit SNS JU website: <https://smart-networks.europa.eu/>



Smart Networks and Services  
Joint Undertaking (SNS JU)



@6G\_SNS