

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

The Smart Networks and Services Joint Undertaking (SNS JU) selected its first portfolio of 35 research, innovation, and trial projects to enable the evolution of 5G ecosystems and promote 6G research in Europe. With a combined funding for this new portfolio of around €250 million under Horizon Europe, the aim is to build a first-class European supply chain for advanced 5G systems and build Europe's 6G technology capacities.



A total of 35 Research and Innovation (R&I) projects have been selected following the evaluation of proposals submitted under the first call of the EU's [Smart Networks and Services Joint Undertaking \(SNS JU\)](#). The launch followed the formal decision of the SNS Governing Board in July and today's presentation of the portfolio at the SNS States Representative Group (SRG).

The SNS JU aims at reinforcing European leadership in developing and deploying next generation network technologies, as well as connected devices and services through an ambitious R&I roadmap and a solid deployment agenda. In addition, it contributes to the UN's [Sustainable Development Goals \(SDGs\)](#) towards sustainable, resilient, and climate-neutral network infrastructures and services.

The R&I projects will develop smart communication components, systems, and networks for 6G following both, an evolutionary path through further enhancements of 5G advanced technology, as well as a more revolutionary path by investigating the benefits of promising technological enablers. Technology validation initiatives will develop SNS experimental infrastructures and carry out large-scale SNS trials and pilots in several business and industrial sectors such as media, industrial IoT, energy, construction, automotive, eHealth, culture, agriculture and education.

# Overview of the Project Portfolio

## **Stream A - Smart communication components, systems and networks for 5G mid-term Evolution systems.**

The seven (7) projects under this stream (BeGREEN, 5G-STARDUST, SEASON, 6Green, VERGE, NANCY, ACROSS) follow an evolutionary path towards the development of 6G networks. The selected projects demonstrate complementarity and have been selected in such a way as to create a complete system view. Research topics covered include energy efficient radio networks, adaptive Open RAN, integrated 5G-Non-Terrestrial Networks (NTN), AI-based edge platforms, and intelligent resource management ensuring security, privacy & trustworthiness.

## **Stream B - Research for revolutionary technology advancement towards 6G.**

The focus is on novel technologies that are expected to be adopted in commercial networks in a mid and/or long-term time period. Research topics considered in the nineteen (19) retained projects (EINSTEIN6G, ADROIT6G, DESIRE6G, PREDICT-6G, TERA6G, TERRAMETA, 6GTandem, CENTRIC, TIMES, FLEX-SCALE, ETHER, 6G-NTN, SUPERIOT, CONFIDENTIAL6G, RIGOUROUS, HORSE, PRIVATEER, Hexa-X-II, 6G-SHINE) include, inter alia, novel 6G system architectures, advanced wireless and optical communication technologies, advances in Non Terrestrial Networks, secure development of ultra-reliable, and low-latency communications (URLLC) applications.

## **Stream C - SNS experimental infrastructures.**

The three (3) projects in stream C (6G-SANDBOX, 6G-BRICKS, 6G-XR) aim at developing EU-wide experimentation platforms that can incorporate promising technical 6G enablers for their further validation. Key aspects for the projects are the reusability and ability to evolve of the experimental platforms over the lifetime of the SNS programme. Accessibility and openness with well-defined and clearly-documented technological and business interfaces are also considered key assets of the infrastructures to be developed.

## **Stream D – Large-Scale SNS Trials and Pilots.**

Four (4) projects (TARGET-X, TrialsNet, FIDAL, IMAGINE-B5G) are implementing large-scale SNS trials and pilots with specific verticals of high economic and societal importance. The aim is to explore and demonstrate 5G/6G technologies, advanced applications and services in vertical sectors such as energy, construction, automotive, manufacturing, eHealth, culture, and media. Additionally, these large-scale trials aim to become the catalyst for the creation of viable business ecosystems. Stream D projects incorporate technologies that are currently key enablers for 6G networks, such as AI/ML, cybersecurity, cloud/edge and advanced IoT solutions etc.

The project portfolio includes two (2) Coordination and Support Actions (SNS OPS & SNS ICE) focussed on internal operational aspects of the SNS Partnership as well as – on establishing dialogues with EU initiatives (e.g., related partnerships, national initiatives, etc.) and promote SNS results and achievements at a global level while working towards the formation of global standards.

## **Background**

In November 2021, the [Council Regulation 2021/2085](#) established the SNS JU as a legal and funding entity, one of the [European Partnerships](#) to step up the green and digital transition. This Partnership is jointly led by the EC and the [6G Smart Networks and Services Industry Association \(6G-IA\)](#). The 6G-

IA is the voice of European Industry and Research for next generation networks and services. The 6G-IA brings together a global industry community of telecoms & digital actors, such as operators, manufacturers, research institutes, universities, verticals, SMEs and ICT associations.

The SNS JU enables pooling EU and industry resources into Smart Networks and Services. It also fosters alignment with Member States on 6G Research and Innovation and deployment of advanced 5G networks. The SNS JU sets out an ambitious mission with an EU budget of EUR 900 million for the period 2021-2027. The private sector will contribute with at least equal resources (i.e., EUR 900 million) to the SNS JU activities.

The SNS JU has two main missions:

- **Fostering Europe's technology sovereignty in 6G** by implementing the related Research and Innovation (R&I) programme leading to conception and standardisation around 2025.
- **Boosting 5G deployment in Europe** in view of developing digital lead markets and enabling the digital and green transition of the economy and society. To this end, the SNS JU coordinates strategic guidance for the relevant programmes under the [Connecting Europe Facility](#) and in particular for [5G Corridors](#).

The States Representatives Group (SRG) is an essential part of the SNS JU governance. The SRG provides guidance on all strategic matters, as well as all relevant activities of the partnership. In particular, it provides guidance on R&I under Horizon Europe and on deployment activities under CEF2 Digital or other EU programmes. It is composed of representatives from Member States and Associated Countries.

The [first SNS call for proposals](#) under [Horizon Europe](#) was published on 18 January 2022 and closed on 26 April 2022. The opening of the second SNS call for proposals is planned for January 2023.

## Related topics

[Research and Innovation Connectivity Advanced Digital Technologies 5G/6G Connecting Europe Facility Funding for Digital Horizon Europe Smart Networks and Services Joint Undertaking](#)

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