

Ideas for the SNS Work Programme



5G IA
INFRASTRUCTURE ASSOCIATION

The voice of the European industry for the development, deployment and evolution of 5G

Proposed structure of the Work Programme



5G Evolution

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

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



6G

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

Stream C (IA): SNS experimental infrastructures

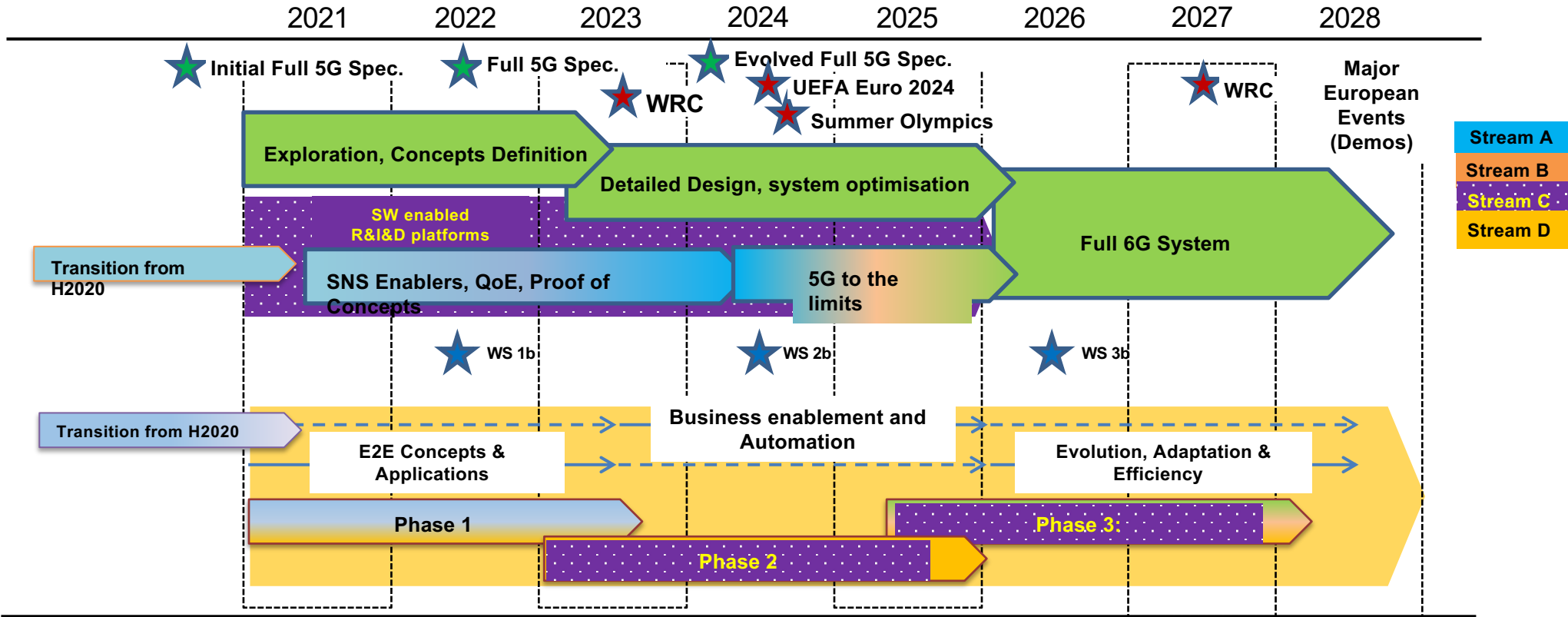
Proposed structure of the Work Programme

- **Stream A: (Evolutionary)** Follow an evolutionary path towards the development of 6G networks. The proposed research topics are selected in such a way to create a complete system view when these are considered all together
- **Stream B: (Revolutionary)** Research for radical technology advancement towards 6G. Low TRL technologies technologies that are expected to deliver in real life networks in a mid and/or long-term time period.
- **Stream C:** SNS experimental infrastructures to be used during the second phase of the SNS by other Streams
- **Stream D:** Large Scale SNS Trials and Pilots with Verticals. Explore and demonstrate technologies and advanced applications (e.g., Immersive communication, holographic telepresence & Augmented Reality / Virtual Reality (AR/VR), etc.). as well as advanced services in the vertical domains (e.g., connected mobility and smart transport and logistics, media and entertainment, public safety, e-Health, smart factories, smart cities etc.).

SNS Roadmap



The voice of the European industry for the development, deployment and evolution of 5G

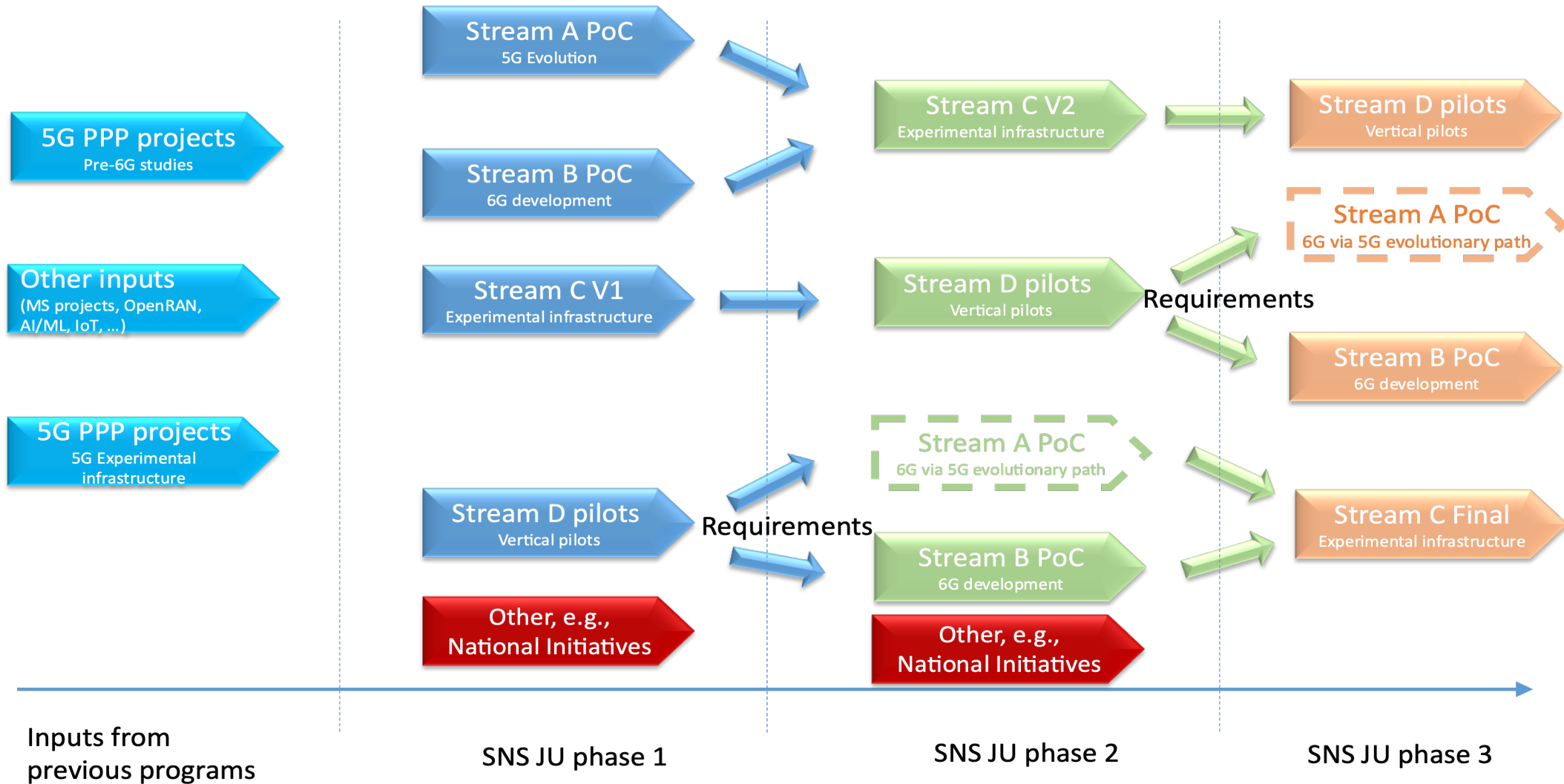


★ Workshop with EU Partnerships - IAFA



Interlinking of Streams in Phases

The voice of the European industry for the development, deployment and evolution of 5G



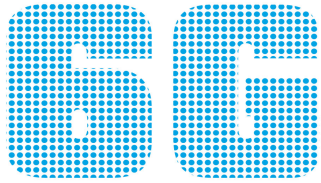


Stream A: 5G Evolution



- **Radio:**
 1. Address basic building blocks
 2. Develop of RAN systems considering integrated terrestrial and non-terrestrial components
- **Architecture and Core:**
 3. Evolved architectures
 4. Advanced cloud and edge solutions
 5. Converged packet-optical transport network
- **System and security:**
 6. Secure and reliable softwarization
 7. Real-time zero-touch service technologies

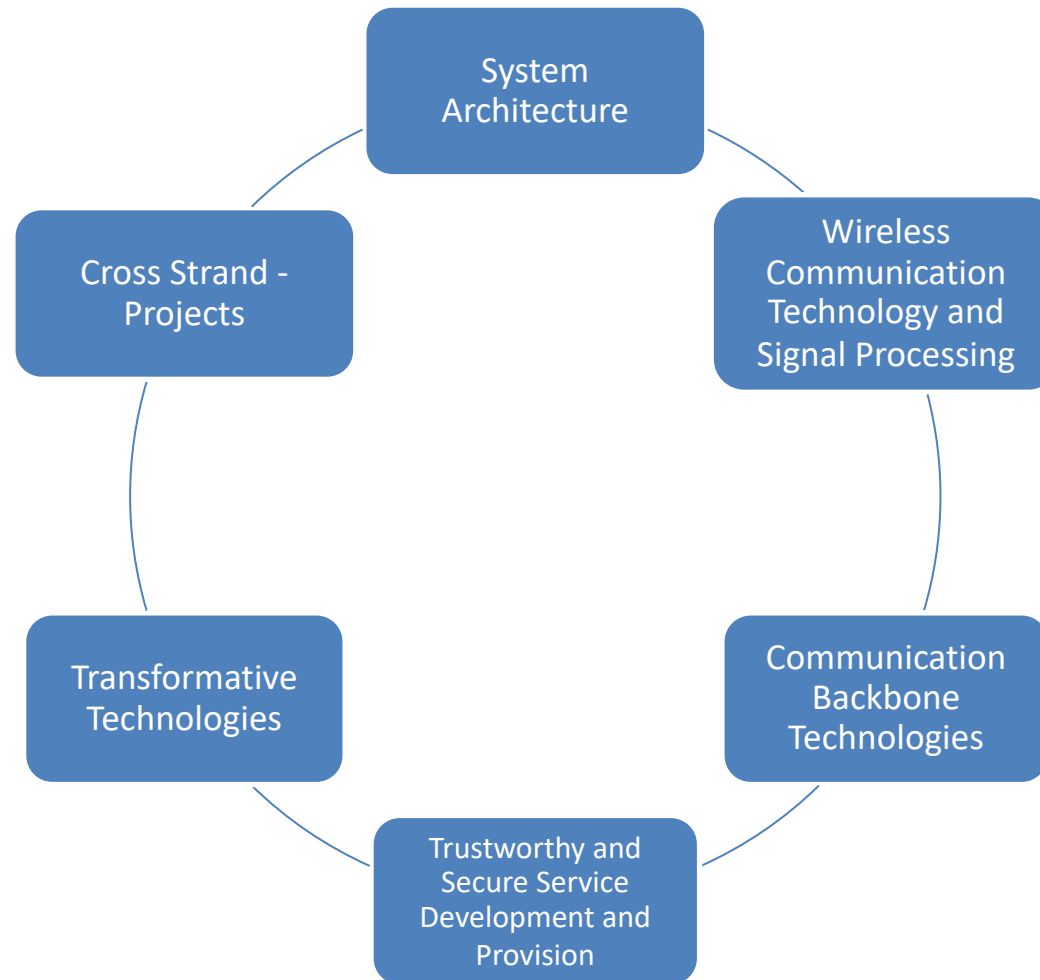
Investigate 6G related topics, following an evolutionary path and target a significant impact in standardization



Stream B: Research Foundations for 6G



Provide the **research foundations for low TRL technology** advancement in preparation for the upcoming 6G networks



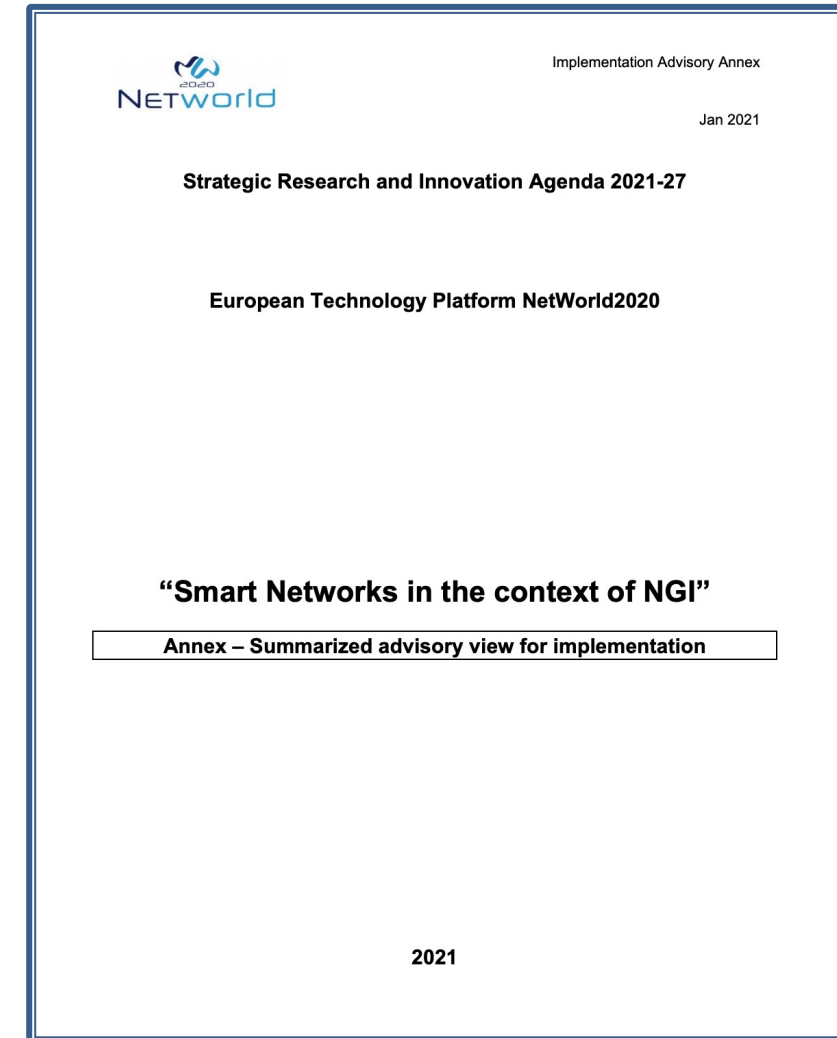
The voice of the European industry for the development, deployment and evolution of 5G



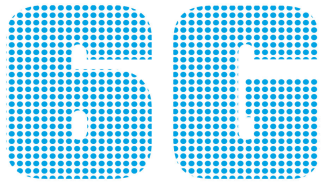
FOUNDATIONS FOR THE DEFINITION OF THE R&I TECHNICAL THEMATICS OF THE SNS WORK PLAN AND WORK PROGRAMME



The voice of the European industry for the development, deployment and evolution of 5G



Source: Networld2020 ETP, September 2020: <https://www.networld2020.eu/sria-and-whitepapers/>



Stream C

Experimental Infrastructures



- Provide pre-6G experimental infrastructures following an evolutionary approach
- Focus on the integration of new components/technologies on top of existing 5G experimental platforms, where applicable
- Use the outcome for further validation through specific vertical use cases and/or large-scale showcasing events (Stream D – Phase 2)
- Stream A and Stream B projects are expected to deliver proof of concepts (PoCs) to be used as input for Stream C phase 2 projects

In order to ensure reusability of the platform in further phases of the SNS by any consortium, it is required to use modular implementation methodology, potentially open-source solutions with well-defined interfaces clearly documented.



Stream D



Large Scale Trials and pilots with Verticals

- Demonstrate both technological and business validation with verticals
- Foster a close cooperation between ICT and other application domains stakeholders
- Potentially leverage existing relevant platforms projects such as 5G Infrastructure PPP, End-to-End Facility projects or/and Vertical Pilots projects, IoT & Cloud platforms
- Explore and demonstrate technologies, end devices, communication components and applications
- Demonstrate Europe's leading solutions
- SMEs, scaleups and startups are expected to play a key role in this process

In order to ensure reusability of the platform in further phases of the SNS by any consortium, it is required to use modular implementation methodology, potentially open-source solutions with well-defined interfaces clearly documented.