



6G Smart Networks and Services

The Voice of European Industry and Research for Next Generation Networks and Services

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The **VOICE** of **EUROPEAN INDUSTRY** for the
DEVELOPMENT and **EVOLUTION** of **5G&6G**

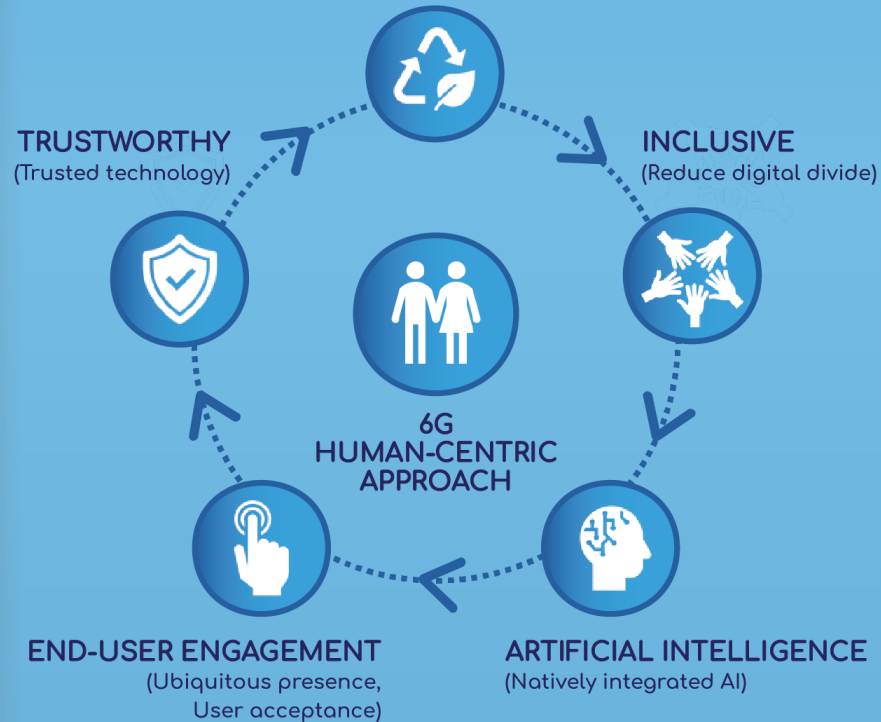




[Download the White Paper here](#)

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)

INCREASED NUMBER OF CONNECTED DEVICES

(Sensors, vehicles, home devices, robotics)

INCREASED TOTAL CAPACITY

(New services/business, ubiquitous coverage)

EXTREME PERFORMANCE

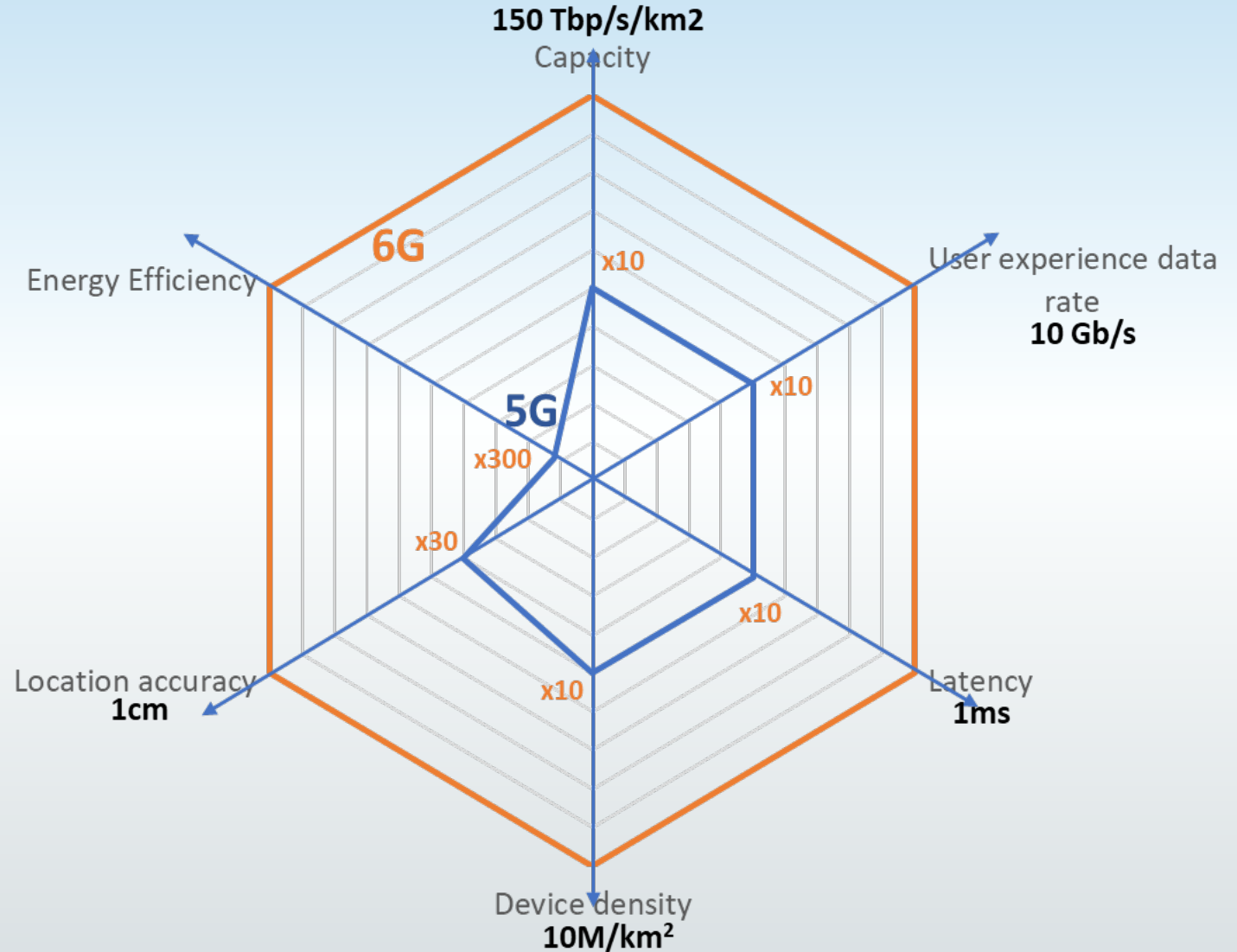
(Immersive & tactile communications)

IMPROVED ENERGY EFFICIENCY

(Reduced consumption for increased traffic)

HIGH-ACCURACY LOCALIZATION

(cm level localization & accurate sensing)



Driven by societal, business and policy needs

Sustainable 6G and 6G for Sustainability

Security and privacy

Monetize the opportunities that advanced networks will be offering

AI/ML

High Performance Computing

Cybersecurity



SYSTEM ARCHITECTURE & CONTROL

(Communication/computation co-design, AI governance, programmability, deterministic networking etc.)



NETWORK & SERVICE SECURITY

(Larger attack surface, micro-segmentation, Security as a Service, etc.)



EDGE & UBIQUITOUS COMPUTING

(Responsiveness, reduced data flows, distributed microservices)



NON-TERRESTRIAL NETWORKS

(Single access network, edge flying nodes (computing & storage), resource sharing)



RADIO & SIGNAL PROCESSING

(THz, VLC, spectrum, re-farming, 6G RAN modulation, beamforming,, cell free JCAS, RIS, disaggregated RAN etc.)



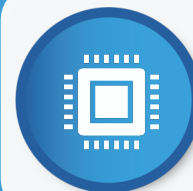
SPECIAL PURPOSE (SUB)-NETWORKS

(Vertical sub-networks such as in-body, in-robot, in-car networks, etc.)



OPTICAL NETWORKS

(Intrinsically secure, green and flexible transport networks)



DEVICES & COMPONENTS

(Efficient Tx/Rx modules, optical & hybrid transceivers, advanced micro-electronics, Neural processing units, etc.)

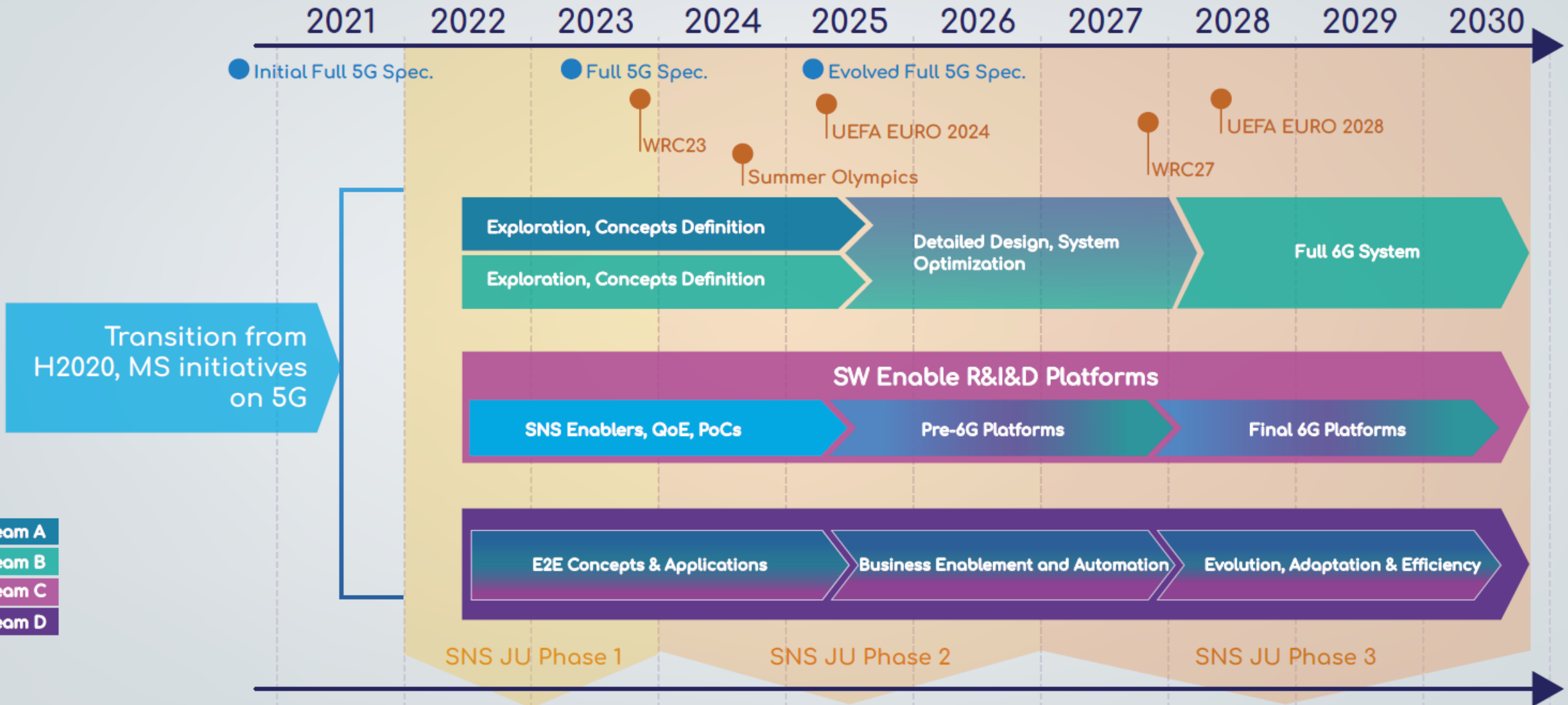


	5G	6G
Type of resources	Communication	Communication + Compute + Sensing
Architecture	RAN + Core	RAN + Core + Terminal
Cloud-Native	Only control plane	E2E and cross-plane
Microservices	No	Yes, E2E, all planes
Resource awareness	Only air-interface	All employed resources (compute, transport, wireless)
Trustworthiness	Trustworthy nodes	Trustworthy adaptive services / network
AI/ML Integration	Over the top	Natively integrated
Admission control	Access control	Execution control
Node disaggregation	CU/DU, IAB	Fully flexible

6G SNS

[Know more here](#)

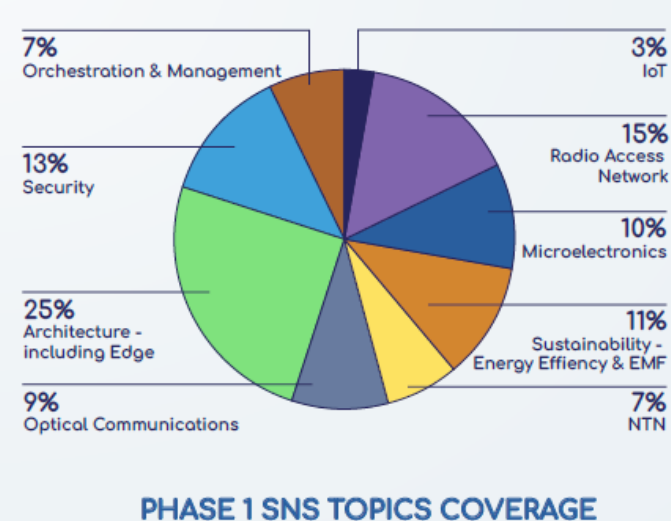
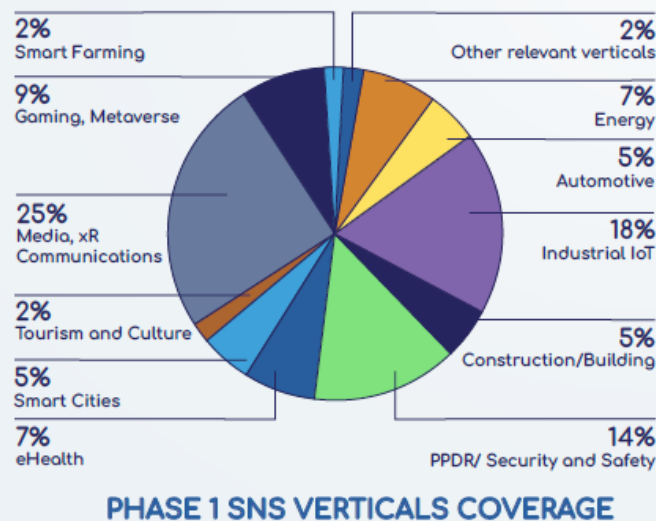
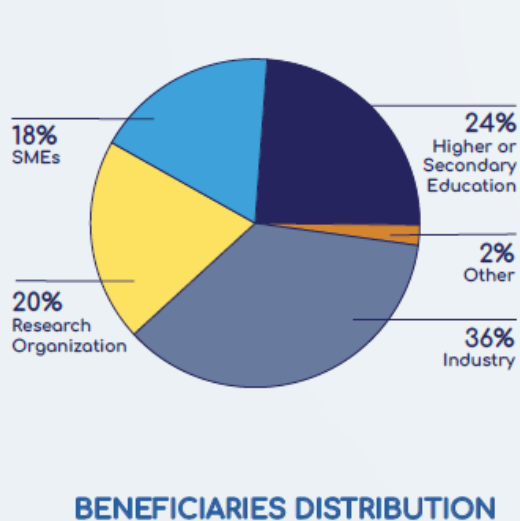
- **The Smart Networks and Services Joint Undertaking has started**
- **1.8 B€ publicly funded research program for Next generation networks [equal resources from the private side and public side]**
- **First group of projects started as of January 2023 (call 2022)**
- **Second group of projects has been retained during the 2023 call**
- **Third group of projects to be selected in 2024 (expected pre-publication in late November 2023)**





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

- Align technological efforts
- Enable a coherent HEU
- Strengthen European efforts
- Mobilize stakeholders
- Promote SNS vision & results

SRG

SNS Stakeholder group

Related Partnerships

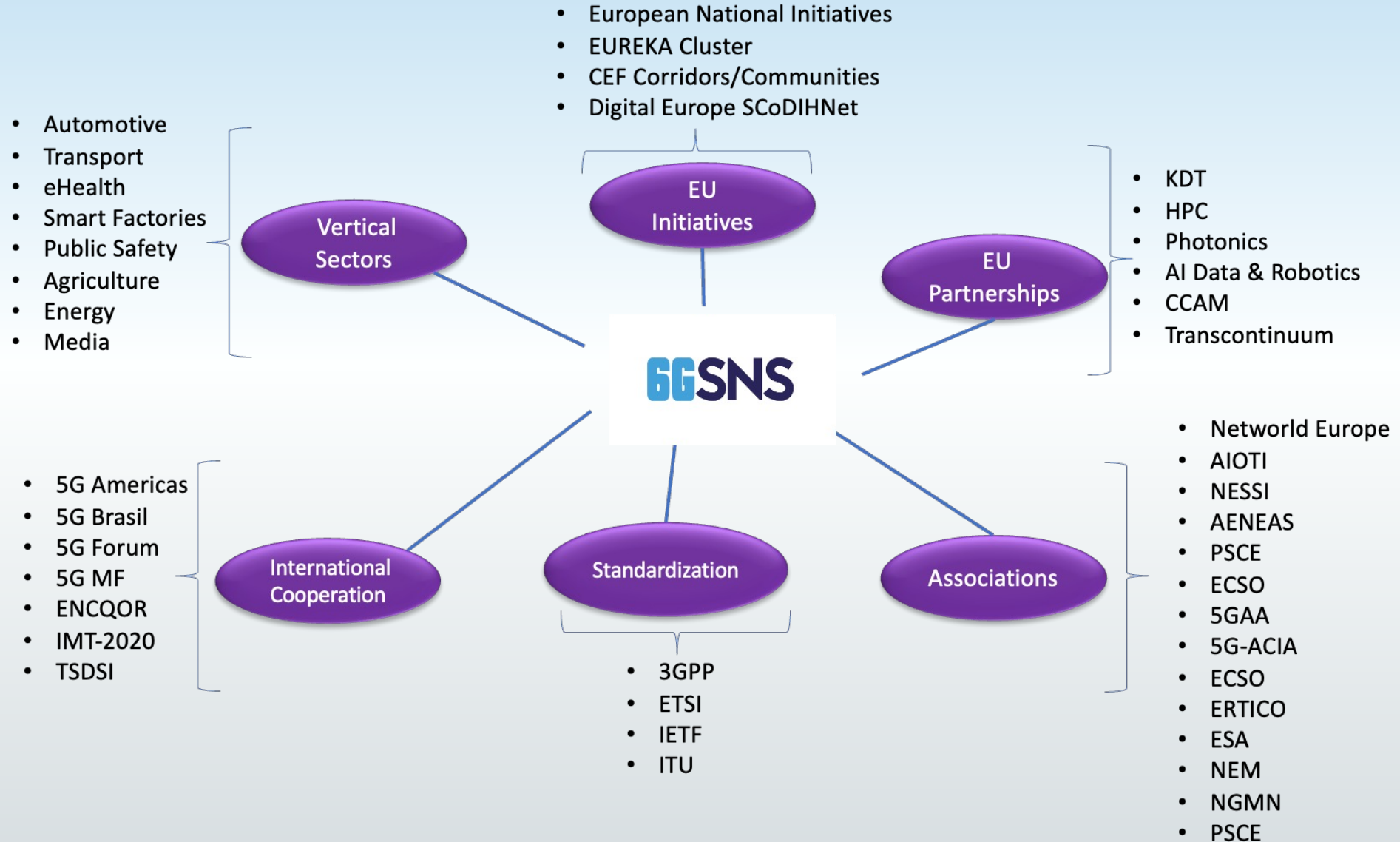
National Initiatives

Vertical Stakeholders

International Activity

Standardization bodies

Outreach Target



Other Partnerships: KDT/Chips act, Photonics 21, CCAM, HPC, ADRA

Member States: Germany, Finland, ...

Standardization bodies: ETSI, ITU, ...

Vertical Industries: 5GAA, 5G-ACIA,...

Progressing on international collaboration with various regions



Collaboration is the way forward!



Thanks for your attention!

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