



A global and open association to accelerate 6G research in Europe

ONE6G SUMMIT



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ONE6G ASSOCIATION OVERVIEW



one6G Association

The one6G Association was launched in March 2021 and is a global, non-profit and membership fee free association to work on 6G mobile network technology. It targets to address technologies such as AI, IoT, symbiotic share of resources by mobile/wireless/satellite coms, cloud computing, time sensitive networking etc, which will play key roles in future innovation for developing the fundamentals of 6G.

Compared to other 6G related organizations, One6G was founded to enter into an early and open dialogue with various industrial stakeholders for functional gaps and new requirements beyond 5G. 6G is in discussions since 2019 and based on the long history of wireless communication it is anticipated that 6G products are standardized and available by end of this decade.

Hence, one6G will support industry and digital economies to develop the essential technology components needed for the 2030 and contribute to a fully connected and intelligent world. Through open, fertile dialogue and contributions, the association aims to become a forum which will explore a vision of how to expand current technology and business boundaries for new growth over the next few years.

More information available on <https://one6g.org/> .



one6G envisions a future where 6G technologies and solutions allow to unleash the potential of smart connectivity for a secure, resilient and sustainable development of our society and economy.

The one6G Association's mission is to **evolve, test and promote next generation cellular and wireless technology-based communications** solutions.

- By **supporting global 6G research and standardization** efforts, the goal is to accelerate its adoption and overall market penetration, while addressing societal and industry-driven needs for enhanced connected mobility.
- This with the ambition to **speed up the development of new services and applications** in domains such as advanced autonomous driving, advanced manufacturing, advanced wireless e-health, remote education, etc.

SECURE, SUSTAINABLE AND RESILIENT CONNECTIVITY (one6G)

one6G TO DRIVE 6G RESEARCH AND INNOVATION EFFORTS

one6G is a non-profit and open association offering a collaborative framework to explore how to move beyond current communication networks technologies and business boundaries **for a secure, sustainable and resilient growth of our economy and society.**

EMPOWERING SMART CONNECTIVITY FOR A BETTER FUTURE

- ✓ The one6G initiative will help unlock the full potential of both public and private organizations in the digital decade, empowering international co-creation.
- ✓ one6G will foster participation of visionary researchers from academia and industry, global operators, major market players in selected verticals, regulatory agencies, market analysts, as well as innovative SMEs.
- ✓ one6G will on-board major players from several vertical industries to be engaged from the beginning.
- ✓ one6G will promote cutting-edge technologies through joint initiatives, working groups, pre-standardization efforts, testbeds, user engagement, trials, demonstrations, dedicated liaisons and other activities.



One6G as a “6G Innovation Hub”:

Bring together stakeholders from various research, innovation and technological areas and vertical domains – facilitate partnerships for 6G solutions targeting economy and societal needs (knowledge transfer, verification and validation for 6G solutions):

- ✓ Smart networks for green transition
- ✓ Energy sector
- ✓ Automotive, Transportation, Maritime sector
- ✓ Industrial-smart factory sector
- ✓ Health sector
- ✓ Cities and public sector
- ✓ Tourism, culture and heritage sector

ONE6G – AN ACCELERATOR FOR THE DIGITAL TRANSFORMATION



Digital transformation landscape.....

✓ Europe:

- ✓ Digital Europe Programme: overall budget of €7.5 billion (in current prices) aims to accelerate the economic recovery and shape the digital transformation of Europe's society and economy, in particular to small and medium-sized enterprises.
- ✓ Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion

✓ North America:

- ✓ "Secure 5G & BeyondAct" March 2020
- ✓ DoD Testbed programme, US\$ 600 million
- ✓ Next-G initiative, industry federation

✓ China:

- ✓ MIIT 6G programme, creation of IMT 2030 Promotion committee (2019) - Multi €billion until 2035, including industrialization

✓ Japan:

- ✓ MIC "Roadmap towards 6G", June 2020 - METI Support - US\$ 380 million

✓ Australia:

- ✓ Australian Digital Economy Strategy, AU\$ 1.2 billion
- ✓ Modern Manufacturing Initiative, AU\$ 1.3 billion
- ✓ 5G & 6G Security and Testbed, AU\$ 31.7 million / 4 years

one6G supports vertical industries and digital economies and societies to develop the core technology components needed to evolve to a more secure, sustainable and resilient economy and society, contributing to a fully connected, intelligent and more inclusive world. this includes - among others:

- ✓ Non-Terrestrial Networks
- ✓ Higher Frequencies
- ✓ Optical Wireless Communication
- ✓ 6G Network Building Blocks
- ✓ Integrated Sensing and Communication
- ✓ Next Generation MIMO
- ✓ Flexible Programmable Infrastructures
- ✓ Distributed / Federated AI
- ✓ E2E software-defined security approach
- ✓ Secure execution in not entirely trustworthy environments
- ✓ Massive/Industrial IoT
- ✓ AR/VR enabling immersive use cases
- ✓ Body area networks

one6G open call for stakeholders' engagement

- ✓ The survey has been launched: Initial vertical domain stakeholders from automotive, smart cities, maritime, transport, Health. Main topics:
 - ✓ What are the main gaps/issues the vertical stakeholders face with current 5G technology
 - ✓ What are the business issues that vertical stakeholders are expected to face based on their projected growth plans
 - ✓ What is the dependency of their business and growth plans on the communication systems
 - ✓ What are the expectations regarding the network convergence
 - ✓ What are the stakeholder priority use cases for the next 5 years
 - ✓ What are the capabilities of mobile networks the stakeholder finds important for its business value chain projected in the next 5 years
 - ✓ Willingness to actively participate in 6G requirements and solutions co-creation process

Entering the 6G terrain....

- ✓ Tight integration between the Physical and Digital world.... “on-the-go”
- ✓ Haptic, Holographic Communications, Internet of Intelligence, 6G will be the fuel of the global digital economy.
- ✓ 6G wireless is expected to be secure by design; connect intelligence, AI-native and prosumer centric;
- ✓ Based on lessons learned from previous Gs.... :
 - ✓ Early cooperation and collaboration between regions and stakeholders, globally, is required
 - ✓ Integration of communication systems associations, alliances of vertical sectors, standardisation development organizations, R&I, public and private ecosystem
 - ✓ One6G will play a role in accelerating the process: 1) of compliance and interoperability of heterogeneous components and assets that will form part of 6G systems; 2) standardised security evaluation criteria; 3) tailor the 6G capabilities to the vertical sector needs.

TO LEARN MORE

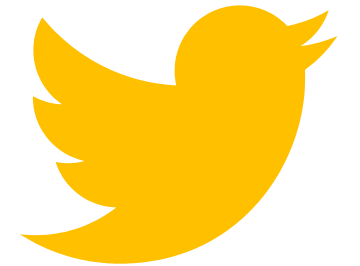
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