

Workshop: Preparing the State of the Digital Decade Report 2023

Questions and Answers

Disclaimer: These responses are for information only and do not necessarily reflect the position of the European Commission.

1. When we talk about future trends, do we consider also Next Generation services, like Wi-Fi 6E, Wi-Fi 7 but also Augmented Reality (AR)/Virtual Reality (VR)?

Yes. The Digital Decade Policy Programme should not be seen as a rigid instrument that cannot adapt to the future of digitalisation coming this decade. Instead, it reflects the reality of our digital transformation which comes with new developments and technologies. The targets and foreseen trajectories to reach these targets will be reviewed and adjusted where necessary to address technical, economic or societal developments in order to achieve a successful digital transformation reflecting this future reality. Furthermore, the State of the Digital Decade will be a yearly opportunity for the Commission to address the adequacy and need for additional digital policy on Member State and Union level.

With reference to the specific technologies mentioned, the latest Wi-Fi standard Wi-Fi 6E, which supports the 6 GHz band as well as the next-generation standard Wi-Fi 7, make use of large frequency channels and achieve gigabit speeds necessary for the provision of next-generation wireless services like AR/VR. Pursuant to the Commission Implementing Decision (EU) 2021/1067, 480 MHz of EU-harmonised spectrum in the 6 GHz band are already available for new Wi-Fi generations. The Commission stresses the principle of technology neutrality in achieving the Union's gigabit connectivity targets, which ensures the equal treatment of all technologies and transmission systems able to contribute to those targets, including the current and upcoming advancements of fibre, satellite, 5G, next-generation Wi-Fi, or any other future ecosystem, with a view to delivering equivalent network performance.

2. Is there any kind of Fog Computing considered in the EU (by means of public dedicated and secured-by government-provided connections)?

The Digital Decade Policy does not specifically refer to Fog Computing but instead to Edge Computing. In this regard, the target is to have more than 10.000 edge nodes deployed across Europe distributed in a way that will guarantee access to data services with low latency (few milliseconds) wherever businesses are located. This target complements other metrics for secure, performant and sustainable digital infrastructures in relation to connectivity and to the

digitalisation of public services. Otherwise, Fog Computing is an area of research considered under the Horizon Europe programme.

3. Speaking of this "tipping point" for the digital transformation and the increased use of digital technologies in other sectors (in particular to reduce their environmental footprint), will there be an equivalent and adequate emphasis on sustainability and the reduction of the environmental footprint of digital technology?

As we reach a "tipping point" in digital transformation and the use of digital technologies expands across various sectors to decrease their environmental footprints, there is indeed an equivalent and substantial emphasis being placed on the sustainability of digital technology itself. For instance, digital technologies are being actively employed to foster sustainability in sectors like energy, mobility, and agriculture, with methods such as creating shared European data systems for better resource management. At the same time, there is a concerted effort to reduce the environmental impact of the digital technology industry. This includes initiatives aimed at improving energy efficiency, promoting green data centres, and devising strategies to minimise electronic waste. Furthermore, current sustainability strategies extend to developing energy-efficient solutions across the entire computing spectrum, with a focus on reducing energy consumption, notably at central computing capacities. One such strategy is the decentralisation of computing resources, including edge computing, which can reduce the load on both networks and central computing facilities. Software optimisation is another approach, providing additional potential for energy savings. These integrated efforts, reflected in the EU's action plan "Digitalising the Energy System," underscore a comprehensive commitment to sustainable practices in digital technology. By placing an equivalent emphasis on the environmental footprint of digital technology and its applications, we can strive towards a greener and more sustainable digital future.

4. The digital transformation should be accompanied hand by hand with the user perspective co-designing future solutions. It is of paradigm importance to have the user communities onboard for the real uptake overall society, how the digital compass is considering these potential involvements in the strategy?

In line with the European Declaration on Digital Rights and Principles for the Digital Decade, the European Parliament, Council, and Commission have committed to a digital transformation that leaves nobody behind. In fact, one of the Digital Decade's ambitions is to bring all the different actors on board. Within the Digital Decade Policy Programme (DDPP), the Commission is committed to consult private and public stakeholders, including representatives of SMEs, the social partners and civil society to collect information and develop recommended policies, measures and actions for the purposes of implementing the programme. Member States carry an identical commitment vis-à-vis these groups, as well as regional and local representatives,

when preparing and adopting their national roadmaps and the adjustments thereto, for reaching the Digital Decade targets and objectives at Union level.

- 5. The talent pipeline is key on this process as has been said. Digitalisation is now serving new value chains in other vertical sectors covering the needs for actionable intelligent solutions that indeed will require a highly skilled workforce on different levels. An educated workforce will enable innovative and knowledge-based businesses and adapt more readily to the challenging technological environment that digitalisation is bringing forward. How is skills development considered in the strategy which is being planned?**

It is indeed true that skills are a key overarching enabler for targets, also those outside the digital skills dimension of the Digital Decade. And, only with increased efforts can the EU's ambitious Digital Decade targets related to the digital skills be achieved, including the aim that at least 80% of all adults will have basic digital skills to use tech for everyday tasks by 2030 and that 20 million ICT experts will be employed in the EU, with more graduates and a better gender balance. The European Commission has, therefore, considerably stepped up its efforts for boosting EU talents over the last years - thanks to a number of funding instruments and many initiatives, including declaring 2023 as the European Year of Skills. To name a few examples, this year's work programme of the Digital Europe Programme (DEP) will continue supporting specialised education programmes in key capacity areas such as data, AI, HPC and quantum. This program also supports more inter-disciplinary courses that can equip professionals with relevant advanced digital skills and increase diversity among students and future digital experts (for example data analytics skills for professionals in different sectors). The Commission has also recently adopted a digital education and skills package including a proposal for a Council Recommendation on improving the provision of digital skills in education and training which calls on Member States to start providing digital skills early to develop digital skills in a coherent way through all levels of education and training, including recommendations on ICT specialists.

- 6. Continuing the discussion with the consumers' perspective, is there a group or think tank that discusses or studies consumers' needs and perspectives specifically?**

Yes. For instance, BEUC, The European Consumer Organisation:

<https://www.beuc.eu/>

7. You are discussing on providing guidelines for the national roadmaps (MS), helping them on the process for their own strategies and providing indicators, but how will you align these indicators with other international agendas, for example working closely with the Digital compact for the UN2030 Agenda or other continental blueprints such as the Agenda 2063, that also have elements of digitalisation?

The Digital Decade Policy Programme (DDPP) is a joint commitment by EU democracies to follow a clear direction for their digital transformation by 2030. It will reinforce our capacities to globally promote a human-centred, inclusive, and secure digital environment, and a use of technology that respects human rights and freedoms. It also gives a renewed strategic focus to the EU's international digital partnerships with like-minded partners: concrete examples include the Global Gateway investment strategy for creating trusted and sustainable connections with partner countries, with digital connectivity as one of the five priority sectors for action.

Furthermore, the EU has submitted its Contribution to the Global Digital Compact (GDC) to the UN Tech Envoy's office on 31 March 2023.

- The EU contribution to the GDC is underpinned by the **European Declaration on Digital Rights and Principles**, signed on 15 December 2022;
- The Declaration presents the EU vision for the digital transformation and concrete commitments by EU institutions and Member States about how human rights and universal values should be applied in the online world. **The Declaration promotes a human-centred, secure and sustainable digital transformation, where no one is left behind.** The EU wants to make sure that digital transformation is a positive force that benefits all. This declaration is also grounded in EU legislation and policies, which provide tools to verify that it trickles down in concrete actions. It will guide the implementation of the EU digital targets for 2030 on digital skills, digital infrastructures, and digitalisation of businesses and of public services;
- The European Union aims to promote this human-centric vision of digital transformation in its relations with other international partners and organisations, such as the United Nations;
- We are sure that the EU experience and learned lessons on digital services, platforms, and infrastructure, notably through the EU-UN cooperation in the implementation of the Global Gateway, can boost the development of the Global Digital Compact;
- The same vision, of a human centred digital transformation and of empowering businesses and people in a human-centred, sustainable and more prosperous digital future is behind the Digital Decade Policy Programme (DDPP). To accelerate EU's transformation towards that vision, the Programme has turned it into concrete objectives and targets for 2030, and has put in place several mechanisms, including a cooperation cycle with the Member States, based on national roadmaps and annual reporting that includes the Digital Economy and Society

Index. The data collection process involves occasional international benchmark exercises and exchanges with partners such as the OECD or the World Economic Forum.

- 8. What is the overlap between the digital decade targets and other legislations in the EU? In the pipeline or just adopted, we have the DMA, DSA, AI Act, DGA, DA, NIS2, etc... Ultimately all of these acts have an impact on different aspects of the digital sector, how will consistency and coherence be ensured and is it being ensured?**

The Digital Decade Policy Programme (DDPP) has been designed to foster coherence, and is setting an overarching digital policy framework fully compatible with and building on existing policy – at that time – proposals in the field of digital transformation, such as the DGA, DSA, DMA and those under the Cybersecurity Strategy, as well as Union budget instruments, the relevance of digital transformation in the Recovery and Resilience Facility, and also other relevant strategies such as the EU Skills Agenda and the Strategic Foresight Reports. As to future initiatives, the European Parliament, the Council, the Commission and the Member States have, in the DDPP decision, agreed to cooperate with a view to achieving the digital targets, as well as the general objectives laid out in the DDPP. In this way consistency and coherence has been ensured in the adoption of the targets and objectives and will be ensured in the future. In addition, the Digital Decade Board, an expert group made of Member State authorities, was formed to establish cooperation and coordination between the Commission and Member States on digital transformation issues and relevant legislation, policies, measures, actions, and reports.

Finally, the Commission shall review the digital targets and the relevant definitions by June 2026, allowing flexibility to address technical, economic, or societal developments in order to achieve a successful digital transformation of the Union.

- 9. There is an ongoing EU initiative under the umbrella GAIA-X that addresses digital sovereignty and security. I am doing research in the automotive field to improve development times using digitalisation. I feel that the approach is a bit reactive since industries are not being coerced enough to jump on the boat and trust data sharing. What does the roadmap here look like?**

Gaia-x is a private initiative which the Commission follows, as other industry-led initiatives in that area. While not linked to Gaia-X, two targets defined in the Digital Decade Policy share a similar ambition: first, having more than 10.000 climate neutral highly edge nodes deployed across Europe, to guarantee that every business has access to low latency data services; second, achieving a 75% of cloud uptake by EU enterprises. These two targets aim at supporting the implementation of the European Data Strategy by ensuring that more data becomes available for use in the economy and society, while achieving data sovereignty.

10. Could we indeed underline the importance of updated EU policies about spectrum allocation, and the role that the EU can play in view of the upcoming World Radio communication Conference 2023?

EU-harmonised spectrum allocation is a key enabler of major EU policies such as the Digital Decade and the European Green Deal. WRC-23 will discuss spectrum topics relevant to EU law, programmes and policies (e.g., mobile broadband, Galileo, Copernicus). Therefore, it is paramount that Member States safeguard the EU interest in a coordinated way to the benefit of EU's internal market, economy and citizens, on the basis of a Council Decision pursuant to Art. 218.9 of the Treaty on the Functioning of the European Union (TFEU). The Commission's proposal for a Council Decision, which is now discussed in the Council, must establish the EU position for WRC-23 and set the basis for Member States' coordination, thus enabling the Union to make effective and sovereign decisions in line with its priorities.

11. Within this trend of combining the digital and green transitions, will there be European-level commitments and/or engagements towards measurable indicators regarding the digital environmental footprint? If we are talking about sustainable and green technology, we should be looking at concrete ways to measure what are the impacts, not only on power consumption of data centres, but also regarding durability of terminals, e-waste, their carbon footprint throughout their lifecycle, etc.

Several actions are already undertaken at EU level regarding sustainability and reduction of the energy and material efficiency of digital technology, in particular for datacentres, and reparability that aims at e-waste reduction. Criteria have been included in the EU Taxonomy Delegated Act on Climate mitigation related to datacentres and ICT solutions. Further measures are in preparation for the telecommunication services, low energy chips, eco-design criteria for mobile phones and tablets and take back schemes of old unused devices to be used for reuse, refurbishment, remanufacturing and recycling. Measures to increase the use of green public procurement of digital products and services will also be examined. The European Green Digital Coalition supported by the European Parliament Pilot project is developing science-based methodology to measure the net environmental impact of digital solutions. This work involved the calculation of direct (negative) impacts of ICT as well as the enabling (positive) impacts.

12. When we talk about energy, material impacts and e-waste, how would we proceed already with an approach that accounts for the global impact and savings rather than solving impact in the EU alone? We have seen the impact of industrialisation of developed countries on the resource providers that often live under poor living conditions and climate impact.

The global deployment of digitalisation, in both developed and developing countries, should follow specific guidelines and purpose to ensure net positive contribution also to environmental

sustainability in addition to economic and social. Such guidelines should not only point to the use of the greenest possible digital technologies but also to additional measures (governance) that minimise the rebound effects. Such guidelines are being developed for the global community by a Green Digital Coalition that brings together leading ICT companies as well as expert groups and other relevant stakeholders.