



Concept note

DIGITAL ASSEMBLY 2019: WORKSHOP: DIGITAL 4 LEADERSHIP

13 June 2019 (10:00-12:45)

Romexpo, Bucharest

Programme:

10.00-10.05 Welcome & introduction by the moderator

Fabian Zuleeg, Chief Executive and Chief Economist, European Policy Centre (EPC)

10.05-10.15 Kick-off talk: *What challenges is Europe facing in digital technologies?*

Nicolas Mialhe, Co-Founder & President at The Future Society, Senior Visiting Research Fellow with the Program on Science, Technology and Society at the Harvard Kennedy School of Government, and Fellow with the Center for the Governance of Change at IE Business School in Madrid

10.15-11.05 Discussion 1: *How to develop key technologies in Europe?*

Magali Vaissiere, Director, Telecommunications and Integrated Applications, European Space Agency

Luis Ignacio Vicente del Olmo, Director of Patent Office & Return on Innovation Manager, Telefonica

Radu Surdeanu, Senior Director Digital Economy, Siemens AG

Adam Piotrowski, President of the Board, Vigo System

Lucilla Sioli, Director, Artificial Intelligence and Digital Industry, DG Connect, European Commission

11.05-11.20 Q&A

11.20-11.30 Coffee Break

11.30-12.30 Discussion 2: *Where can Europe lead in the future? – The case of quantum communication*

Magali Vaissiere, Director, Telecommunications and Integrated Applications, European Space Agency

Luis Ignacio Vicente del Olmo, Director of Patent Office & Return on Innovation Manager, Telefonica

Mathias Van Den Bossche, Director, Telecommunication and Navigation Systems R&D, Thales

Friedhelm Serwane, Leader of the next projects on Quantum Communication and Sensing, Airbus

Helmut Leopold, Head of Center, Austrian Institute of Technology

Stephanie Wehner, Roadmap Leader of the Quantum Internet and Networked Computing initiative, Delft University of Technology

Francesco Saverio Cataliotti, Professor Department of Physics and Astronomy, University of Florence

12.30-12.40 Q&A

12.40-12.45 Concluding remarks

12.45 End

Questions for discussion 1: 'How to develop key technologies in Europe?'

- What would be the most strategically important technologies for Europe, where greater development and deployment is needed?
- Is there a role for a comprehensive European industrial action plan for digital technologies? Including elements from competition, trade, innovation/R&D policy – which policy tools would be the most efficient?
- How can we make a better use of existing tools, such as the Important Projects of Common European Interest (IPCEI), strategic public procurement, European standards and the single market in developing key technologies in Europe?
- What additional and new policy tools would be needed at the European level as well? (Education, skills, taxation, labour?)
- Should we 'protect' or better defend key digital technologies in Europe? How could tools such as the screening of foreign direct investments, the International Public Procurement Instrument and additional regulation be used to address distorted competition and ensure reciprocity?
- How can the EU's financial instruments (such as the Digital Europe Programme) be utilised in boosting the development and deployment of key technologies in Europe?
- How to foster dialogue and engagement with partners to advance the global governance of new technologies and of the flow of data?

Questions for discussion 2: 'Where can Europe lead in the future? – The case of quantum encryption in communications'

Opening statements (3 minutes for each panellist) to answer these questions:

- Why is it important for the EU to launch an initiative on quantum communication?
- What would be the main benefits for Europe?
- What does the EuroQCI initiative represent for you?

Questions for - **Magali Vaissiere**

- Would QCI have to consider both a terrestrial segment and a space segment and why?
- What would then have to be the main infrastructural elements on which QCI could be built, for the terrestrial and the space segments?

Questions for - **Helmut Leopold, Stephanie Wehner and Francesco Saverio Cataliotti**

- What are the main challenges and roadblocks that QCI will have to face?
- What could be the main use cases of QCI (see also below) – what would be the main services that QCI could eventually provide beyond QKD?

Questions for - **Mathias Van Den Bossche, Friedhelm Serwane and Luis Ignacio Vicente del Olmo**

- Does Europe have the capabilities and technologies for building QCI?
- How should in your view QCI be planned for a successful design and deployment?
- How could the Quantum Communication Infrastructure contribute to the development of a high-quality and competitive cybersecurity industry and quantum technologies in Europe?

General Questions – all panellists

- What are the main takings of this debate?
- What are the next steps for building the EuroQCI?
- Beyond quantum, which new ambitious EU programmes should be launched on emerging technologies?

Background

In an international context marked by deep interdependence, spreading connectivity, multiple levels of competition and renewed geopolitical tensions, the European Union (EU) needs to take more responsibility for its prosperity in order to stay relevant on the world stage. For the EU, strategic autonomy can be broadly defined as the ability to define and achieve its priorities in ways that do not primarily depend on the decisions and assets of others. If the EU is serious about increasing its digital industry competitiveness and achieving sustainability, key priorities for the future, it would require also an adequate degree of strategic autonomy in the digital domain. The EU should be able to develop and deploy technological solutions for achieving its strategic priorities. The assessment of the feasibility, desirability, and extent of strategic autonomy in an interconnected world changes depending on the issue areas at hand. In all domains, however, the EU's strategic autonomy should not be understood as isolation. On the contrary, strategic autonomy should be the basis for a positive agenda of engagement with partners and for strengthening Europe's resilience and competitiveness.

Technology has always been a primary source of prosperity and power. Today, new and emerging technologies are re-shaping the domain, terms, and tools of cooperation and competition on the international stage. The diffusion of technological innovation to new economic powerhouses will carry far-reaching implications for economic growth, normative reach and political influence in different parts of the world. In particular, the acceleration of digital innovation in areas such as Artificial Intelligence, the Internet of Things, Blockchain and 5G affects economic, social and political trends in profound ways, at both the domestic and international level. It creates unprecedented opportunities for sustainable human development, political participation, and international cooperation, but it also affects the international distribution of power, expands the grounds for economic and political competition and creates new vulnerabilities.

The EU will struggle to advance towards strategic autonomy if it is not at the forefront of both technological innovation and the efforts to regulate the applications of new technologies in ways consistent with its interests and values. Digital innovation is simultaneously a key driver of Europe's competitiveness and normative power, and the domain of growing competition. Advancing the EU's strategic autonomy will, therefore, require a far-sighted and joined-up approach to develop an industrial policy for Europe focused on cutting-edge technologies, as not only an enabler of growth, competitiveness, and well-being but also a key dimension of Europe's influence on the international stage.

In the EU

Europe is well-placed to become a leader in new emerging technologies. Its high-tech industry, the research community, and single market hold great potential in mustering up the investments, knowledge, and people needed to develop the technologies of tomorrow. However, increased global competition, lack of investments in soft and hardware, gaps in digital skills and opposition to new business models have contributed to the EU falling behind in the development and deployment of advanced digital technologies. Picking up speed in this field will be a decisive task for the next European Commission.

Developing key technologies in Europe can help in securing digital infrastructure and in making sure that digital technologies are cyber-proof across the EU. Developing digital technologies is also important in achieving the strategic priorities that the EU has set for itself, such as raising EU competitiveness, sustainability and innovation. Digitalising the EU industry and improving the uptake of digital technologies across Europe is decisive in ensuring a future-proof European industry.

The digital sector should be integrated into the discussion on the future of a European industrial policy. Given growing competition and third countries being increasingly willing to promote their own digital industries through industrial initiatives, an adequate answer will have to be formulated at the European level. A failure to act at the EU level could potentially undermine Europe's global competitiveness and eventually lead to fragmentation in the single market, with member states going their own ways in supporting national industries. In promoting Europe's digital industry, there is a need to look into how EU tools can be used in a more efficient ways – including competition rules, the single market, investments/MFF, R&D/innovation and trade.