G7 INDUSTRY AND TECHNOLOGIC INNOVATION MINISTERIAL MEETING

Rome 10 October 2024

Tech7 Statement

FOREWORD

The Tech7 welcomes the G7's effort to organize a Ministerial meeting on Industry and Technologic Innovation. We believe that the global economy is in the midst of a profound transformation, driven by the emergence of new technologies such as AI and Quantum Technologies. We applaud the commitment of the G7 Presidency to gather input from the industry for the drafting of its "AI Report on the driving factors and challenges of AI adoption among companies". As stated in our April Joint Declaration, with this statement, we want to reaffirm our priorities and offer our suggestions for this global governance process.

EMERGING TECHNOLOGIES FOR THE FUTURE OF THE GLOBAL ECONOMY

Resource efficiency and cooperation on critical raw materials

We appreciate the efforts of the G7 Presidency in addressing critical raw materials, encouraging international partnerships to make their supply chains more diversified, transparent, resource-efficient, and sustainable.

Critical raw materials are indispensable for industry and the development of clean technologies. Without lithium and rare earths, there will be no energy transition (e.g., wind farms), electric mobility (e.g., batteries), digitization (e.g., semiconductors), and Industry 4.0. Additionally, the expansion of infrastructure and maintenance of an effective defense industry would be compromised.

G7 countries should cooperate with each other and work with industry to minimize these risks, boost supply chain resilience, and improve resource efficiency.

Finding the path to an inclusive AI Growth: empowering emerging economies and SMEs globally

The rapid development of artificial intelligence (AI) marks a pivotal moment in human history, offering unparalleled opportunities for progress and innovation across industries and societies. As we enter this technological revolution, it is crucial to recognize the continued transformative potential of AI and its profound impact on global productivity, development and innovation which includes enhancing human creativity and accelerating scientific discovery.

Finding the balance between global competition and cooperation is paramount in harnessing the full potential of AI. Encouraging international collaboration and convergence to spearhead transborder AI projects aimed at addressing global challenges is essential for fostering innovation and sustainable development. We want to re-affirm that, as a concrete step in support of this goal, G7 countries should consider working with the Global Partnership on AI – a G7 founded initiative - to establish intergovernmental AI taskforces on shared international challenges. For example: G7 countries should support the development of international standards for public sector datasets to facilitate the use of interoperable, large-scale datasets for beneficial AI applications.

In this regard, the Tech7 fully supports the G7's initiative to create an AI Hub for Sustainable Development. We believe that AI has tremendous potential to accelerate economic growth in developing countries and drive global progress. To maximize its positive impact, AI's value must be channelled effectively, ensuring growth and addressing global challenges.

We believe that the G7 can build upon the information it has gathered on AI adoption in companies foster the development of innovation ecosystems globally. Nowadays companies, especially MSMEs and start-ups face a number of challenges in dealing with adopting AI solutions, such as: accessing high quality data, infrastructure limitations, complex regulations or lack of AI skills in the workforce.

Given these challenges, it is important that countries pursue strategic agendas in support of AI development and use. While we support efforts to develop policy frameworks for AI governance, we need a policy strategy that aims at tackling the challenges that companies are facing for AI to deliver its full potential.

The G7 presidency has a unique opportunity to provide policy recommendations that can be implemented across diverse economic contexts worldwide. These recommendations should aim to create an environment conducive to AI innovation and adoption while addressing the challenges faced by businesses of all sizes.

Moreover, supporting AI development and use can help achieve specific objectives, such as improving' environmental sustainability. Some key areas where AI and digital technologies can contribute to environmental sustainability include energy optimization in manufacturing, supply chain efficiency, and circular economy and resource usage optimization.

As representatives of the G7 countries' Tech Industries, we stand ready to actively participate in the drafting process of these policy recommendations. Our industry's expertise and practical experience in AI development and deployment can provide valuable insights to ensure that policies are both effective and implementable across various sectors and economies.

Advocating for a common G7 effort on Quantum computing and quantum secure communications

Quantum computing is an area where G7 countries should work together to ensure that the technology can be adopted successfully and that challenges are addressed. For example, mutual recognition of existing and to-be-built computing infrastructure, streamlining supply chains and facilitating common access to computing resources will be key to supporting cooperation and research across economic sectors from health to financial services; together with the necessary specified know-how to develop dedicated applications it will represent a competitive advantage.

Furthermore, a highly focused education plan is pivotal to the growth of competitiveness in this area where new skills such as Quantum Scientist, Quantum Engineer, Quantum Developer are needed.

On the other hand, Quantum secure communications are already under development and application. In this regard, we can reference to several technologies, like Quantum Key Distribution (QKD), Quantum Random Number Generation (QRNG) as two quantum technologies with a high level of maturity which are able to create solutions of the highest level of security.

Moreover, there's high strategic interest in fostering the development of Post Quantum Cryptography (PQC). National authorities[1], such as the European Union Agency for Cybersecurity (ENISA)[2] and the US Cybersecurity and Infrastructure Security Agency (CISA) have both initiated PQC initiatives.

We are firmly convinced that for an effective transition towards PQC, efforts should be synchronized ensuring the roadmaps are aligned, with concrete timelines for every transition step.[3]

G7 countries should enhance collaboration on post-quantum encryption standards and quantum-proofed infrastructures, while adopting a tailored approach that acknowledges varying technological risks and opportunities. This requires public-private cooperation, targeted investment, and skill development in critical technologies, as a one-size-fits-all solution is inadequate for addressing the complex challenges in this evolving field.

1 https://www.bsi.bund.de/SharedDocs/Downloads/EN/BSI/Crypto/Quantum_Positionspapier.pdf?__blob=publicationFile&v=4

2 Post-Quantum Cryptography: Current state and quantum mitigation — ENISA (europa.eu)

3 https://digital-strategy.ec.europa.eu/en/library/white-paper-how-master-europes-digital-infrastructure-needs,