ICT Solutions for Brilliant Minds

CSC

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Policy Programme "Path to the Digital Decade"
CSC – IT Center for Science Ltd.

Digitalisation as a systemic change, and its deep societal impact, must be taken into account in all policymaking. CSC therefore welcomes the Commission's proposal that draws the attention of politicians, civil servants and other stakeholders to the various dimensions of digitalisation both at European and national levels. While it is important to emphasise the significance of digitalisation, this must not be discussed in a silo. **The Digital Decade policy programme must be tightly connected to other relevant EU policies**, such as the European Green Deal[1], the European Strategy for Data[2] and the various policies related to education, research and innovation.

In order to reinforce the connection with the Green Deal, the digital targets for 2030 (Art. 4) must be complemented with a target concerning the **carbon footprint of the ICT sector**. The sector currently uses 4-10 per cent of the world's electricity and generates 1.5-5 per cent of its greenhouse gas emissions, according to various estimates[3]. However, due to complex cross-border operations in the sector, it has proven difficult to identify appropriate measurement or reporting practices for the sector's energy consumption or carbon footprint[4]. Therefore, a two-fold target is needed: first agreeing on a shared method for measuring the footprint and then setting a target for reducing it with a view to eventually removing it altogether.

Data as the core element of digitalisation must be recognised in the policy programme: the societies are becoming increasingly data-intensive, and therefore we need more and more capacity, infrastructure, skills and policies to turn data into new innovation and business. Therefore, the digital targets for 2030 must be more clearly linked with the European Strategy for Data and promote the development of European data economy and a single market for data. Concrete targets must be set for ensuring the free flow and re-use of data across borders and sectors, e.g. by developing the **common European data spaces and shared data management practices** in line with the MyData principles[5], FAIR principles[6] and the European Interoperability Framework[7].

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[1] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593073685620&uri=CELEX:52020DC0066
[3] https://www.lvm.fi/-/the-two-faces-of-the-ict-sector-consuming-energy-and-materials-while-also-paving-the-way-to-a-carbon-neutral-society-1210283
[4] https://www.etla.fi/en/research/ict-and-its-energy-consumption/
[5] https://mydata.org/declaration/
[6] https://www.nature.com/articles/sdata201618
[7] https://ec.europa.eu/isa2/eif_en

In order to promote data sharing in the health sector in particular, the target regarding citizens' access to their own **electronic health records** (Art. 4.1.4.b) must be extended to guarantee access to all health care professionals dealing with the individual in question as well as for secondary use, especially for research purposes, provided that appropriate methods for anonymisation/pseudonymisation are in use. This is a key prerequisite in developing and improving the primary health care, for the benefit of all European citizens.

As to linking the digital targets to education, research and innovation policies, the targets related to **digital skills** must be expanded horizontally to promote continuous opportunities to update one's competences at all levels and in work life as well. Competence development must not be limited to only technical skills but also those related to e.g. legal, policy and business expertise required in the digital era. In order to ensure that competence development responds to the needs of the increasingly digitalised society, targets must also be set for improving the skills and competences of teachers and trainers, as well as for creating tighter links between education, research and innovation, e.g. in the form of increased partnerships between higher education institutions and the private sector. European competence development must be seen as a key asset in building the European technological sovereignty.

When it comes to the **infrastructure targets** for 2030, the rather narrow targets concerning edge nodes and quantum capabilities must be complemented with or even replaced by a more comprehensive target **for developing an interoperable ecosystem** of data management, edge computing capacities and more consolidated cloud, AI, High-Performance Computing and quantum infrastructures, allowing for data to be analysed and re-used in the most appropriate environment, taking into account the needs of different beneficiaries.

As to Europe's quantum development, the target of having a first computer with quantum acceleration by 2025 is not enough to really "pave the way for the Union to be at the cutting edge of **quantum capabilities**". A higher level of ambition is needed to match the current state of development better. The aim must be to develop an ecosystem of different types of quantum capabilities and to achieve significant progress already in a year or two. In parallel, development of European **High-Performance Computing** capabilities must continue and concrete targets set for that as well.

The requirement for Member States to draw up national Digital Decade strategic roadmaps is very welcome as it helps to boost policy debate and measures on national level as well. It must be noted, however, that one size does not fit all when it comes to digitalisation policies. Some countries are more advanced than others and should therefore be encouraged to be more ambitious than the Union level targets would require. For this purpose, Art. 7.2 should be extended to include a requirement for Member States to set their own **digital targets on national level** taking into account their starting point in relation to the respective EU-level targets.

Another way to offer more incentives to the more advanced member states would be to set a target for their participation in the **Multi-Country Projects** (MCPs). In any case, the

MCPs must be developed with high ambition and clear added value, **seeking synergies but avoiding duplications with existing projects**. Previous work done and investments made in, for example, EOSC[8] and GAIA-X[9] in the field of data infrastructures as well as EuroHPC[10] in the field of supercomputing must be fully leveraged. The MCPs must also seek synergies with one another, aiming to support the goal of building an interoperable ecosystem allowing for shared usage of infrastructures, data, skills, competences, tools and methods across borders and sectors.

The Digital Decade Policy Programme must not lose sight of the underlying principle of **human-centricity**. Digital services must be responsive to users' needs and preferably developed via **co-design** processes. Another way to boost human-centricity would be to develop the target for **digital identification** to specify that the identification solutions allow for cross-border use across the Union, in line with the Commission's recent proposal for a European digital identity scheme[11].

As to the monitoring of progress towards the digital targets, CSC welcomes the use of **DESI index** but considers it essential to critically evaluate its current scope to make sure that it provides relevant information in relation to the targets to be set in the Policy Programme. When evaluating the index, stakeholders must be consulted in line with Art. 11 of the proposal. When it comes to **stakeholder consultations** in general, attention must be paid to openness, transparency and ensuring a diverse and balanced representation of public and private interests as well as civil society and various fields of academia, in order to ensure comprehensive analysis and advice.

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[8] https://eosc-portal.eu/about/eosc
[9] https://www.gaia-x.eu/
[10] https://eurohpc-ju.europa.eu/
[11] https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM%3A2021%3A281%3AFIN