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COUNCIL

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REVISED RECOMMENDATION OF THE COUNCIL ON DIGITAL TECHNOLOGIES AND THE ENVIRONMENT

(Adopted by the Council at Ministerial level on 4 June 2025)

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THE COUNCIL,

HAVING REGARD to Article 5 b) of the Convention on the Organisation for Economic Co-operation and Development (OECD) of 14 December 1960;

HAVING REGARD to the standards developed by the OECD in the areas of digital policy, including data governance and privacy, digital security, broadband connectivity, and artificial intelligence, science, technology and innovation policies, consumer policy and environmental sustainability;

HAVING REGARD to the Sustainable Development Goals set out in the 2030 Agenda for Sustainable Development adopted by the United Nations General Assembly (A/RES/70/1) and the resolutions by the United Nations Human Rights Council (A/HRC/RES/48/13) and the United Nations General Assembly (A/RES/76/300) on a human right to a clean, healthy and sustainable environment;

RECOGNISING the interlinkages between the digital and green transitions and their potential synergies, as well as their benefits and challenges;

CONSIDERING that digital technologies and their underlying infrastructure can help advance environmental sustainability and combat climate change across sectors, including by increasing energy efficiency, managing scarce resources, monitoring environmental standards and fostering systemic behavioural change, such as empowering consumers to make environmentally sustainable choices;

CONSIDERING that, at the same time, digital technologies and their underlying infrastructure, including increasing data generation and use, can negatively affect the environment, such as through greenhouse gas emissions, energy demand increases, raw material extraction, land and water use and pollution, biodiversity disruption, electronic waste and rebound effects leading to increased resource use despite efficiency improvements;

RECOGNISING the rapid pace of digital technological development and its impact on the relevance and effectiveness of digital policies and guidance in the medium- to long-term;

RECOGNISING the limited availability of comprehensive data and the methodological challenges in measuring the environmental impact of digital technologies, as well as the importance of appropriate safeguards, including on data protection, digital security and consumer protection;

RECOGNISING that the digital and green transitions are inherently global issues with varying impact across countries that require co-ordinated, international and multistakeholder collaboration;

RECOGNISING that Members and non-Members having adhered to this Recommendation (hereafter the "Adherents") have different legal and institutional frameworks through which they will implement this Recommendation, as well as different regional and national contexts.

On the proposal of the Digital Policy Committee:

I. AGREES that, for the purpose of the present Recommendation, the following definitions are used:

- **'Digital technologies'** refers to different types of communication networks and systems, including information processing and compute capacity and the technologies used in them. This entails both the underlying "physical layer" (e.g. communication infrastructures and devices, including semiconductors, network equipment, data centres, servers, smart sensors, Internet exchange points) and the "digital layer" (e.g. cloud and edge computing, software) of technologies, goods and services that enable the digital technology ecosystem. The digital technology ecosystem encompasses all forms of communication, information and computing technologies such as the Internet of Things, artificial intelligence systems, immersive technologies, online platforms and distributed ledger technologies, among others.

- **'Life cycle'** refers to the following stages of digital technologies: design, production (including raw material extraction), transportation, deployment, operation and maintenance, and end-of-life (including electronic waste management).

II. RECOMMENDS that Adherents put in place policies that enhance the contribution of digital technologies to improving environmental sustainability and mitigating their environmental footprint. To this effect, Adherents should:

1. Apply a comprehensive life cycle perspective by:

a) Considering the positive and negative impact of digital technologies on the environment, taking into account: i) their direct effects, ii) the enabling effects of their application across sectors, and iii) their systemic effects (e.g. behavioural changes induced by their use, rebound effects).

b) Assessing the environmental impact of digital technologies, encompassing effects occurring throughout their life cycle, including energy mix and consumption, greenhouse gas emissions and natural resources such as water and rare earth materials.

2. Foster innovation in digital technologies for environmental sustainability by:

a) Supporting fundamental research and research and development for leveraging digital technologies to improve environmental sustainability and mitigate their environmental footprint, including through appropriate regulations and policy measures to promote investment (e.g. tax incentives, grants) and by fostering open-source and multi-stakeholder research collaboration.

b) Promoting co-operation, knowledge exchange, and efficient and responsible data generation, storage, access and sharing, including between and within the private sector, research institutions, governments, civil society and other stakeholders on the environmental impact of digital technologies.

c) Facilitating rapid deployment, diffusion and scale-up of environmentally sustainable digital technologies and solutions.

3. Promote skills and public awareness for the digital and green transitions by:

a) Advancing interdisciplinary education, training and skill development, including re-skilling and up-skilling programmes, to equip individuals, including developers of digital technologies, with the skills to harness digital technologies for environmental sustainability and mitigate their footprint, thereby fostering digital inclusion.

b) Providing information, training and technical assistance to promote capacity building in environmental sustainability and digital skills in the public sector.

c) Communicating accurate and accessible information on the impact of digital technologies on the environment and promoting good practices to empower the public and private sectors, civil society, and individuals, including consumers, to mitigate the environmental footprint of digital technologies.

4. Leverage digital technologies to advance environmental sustainability goals by:

a) Harnessing digital technologies to improve environmental performance and enhance sustainability, including by optimising water, energy and transportation usage, minimising electronic waste, enhancing resilience to climate-driven extreme events and enabling remote participation in economic and social activities.

b) Promoting the use of digital technologies for environmental modelling and monitoring (e.g. earth and ocean observation) to help understand and forecast environmental effects to inform policy measures, including to track, collect and analyse data on climate patterns, biodiversity, pollution and environmental conditions in real-time and to respond to environmental challenges.

c) Developing and adopting standards and guidelines and exchanging information and good practices with respect to personal data protection, intellectual property protection, digital security and consumer protection in the use of digital technologies for this purpose.

5. Reduce the environmental footprint of digital technologies by:

a) Supporting environmentally sustainable by design approaches, including relating to the production process, efficient energy use, data management, infrastructure sharing and network management, and software development, as well as through practices that empower consumers such as environmental information instruments (e.g. labelling).

b) Encouraging the adoption of environmentally sustainable practices by all relevant stakeholders throughout the life cycle and decommissioning of digital technologies, including through circular economy considerations such as the extension of digital technologies' lifespan, the re-use, repair, refurbishment, remanufacturing, recycling and sharing of products and components that minimise electronic waste.

c) Leading by example through the adoption of environmentally sustainable digital approaches, applications and services in the public sector, including the consideration of environmental criteria in the public procurement and use of digital technologies.

6. Advance a harmonised measurement approach by:

a) Furthering the development, adoption and implementation of internationally harmonised definitions, common standards, frameworks, indicators and methodologies for measuring, anticipating and reporting on the impact of digital technologies on the environment throughout their life cycle, and sharing good practices for measurement.

b) Encouraging all relevant actors in the digital technology ecosystem to measure, collect data, report periodically and foster transparency on the environmental impact of their activities.

7. Adopt a whole-of-government and multi-stakeholder approach by:

a) Co-ordinating digital, environmental, energy and other related policies, including through integrated national strategies and regulatory frameworks, where appropriate, to harness the potential of digital technologies to advance environmental sustainability goals while mitigating their environmental footprint.

b) Developing and regularly reviewing such strategies and policies and fostering the development of common frameworks by other actors (e.g. industry codes of practice) through a multi-disciplinary and multistakeholder approach to encourage all relevant actors in the digital technology ecosystem to consider the environmental impact of digital technologies, including through technology- and sector-specific guidance.

c) Including transparent, clear, and measurable policy objectives, performance targets and mechanisms in national strategies to monitor compliance and improve accountability, including self-reporting where appropriate.

8. Co-operate at the international level by leveraging the OECD and other global and regional fora to advance an integrated approach to digital technologies and the environment, including by bolstering the evidence base through the collection and exchange of data, knowledge and information on national policies and good practices, in particular with regard to measurement, across countries including developing countries, stakeholders and sectors.

III. ENCOURAGES relevant stakeholders in the digital technology ecosystem to disseminate and follow this Recommendation.

IV. INVITES the Secretary-General and Adherents to disseminate this Recommendation.

V. INVITES non-Adherents to take account of and adhere to this Recommendation.

VI. INSTRUCTS the Digital Policy Committee to:

a) serve as a forum to exchange information and good practices with respect to the implementation of this Recommendation;

b) monitor developments and emerging trends affecting the implementation of this Recommendation;

c) advance measurement and develop guidance to support the implementation of this Recommendation; and

d) report to Council on the implementation, dissemination and continued relevance of this Recommendation five years following its revision and at least every ten years thereafter.