The nexus of Green transition & Digital Transformation

Synergies

- **Digital transformation for climate neutrality. It can reduce 15-20% of total GHG emissions**
- **Green transition for sustainable financing and new jobs in green digital transformation**

Conflicts

- ICT footprint: >3% of total emissions; electricity consumption increasing (currently ~9%); ewaste growing
- Green transition may block certain digitalisations patterns (built in obsolescence, blockchain mining, single use electronics, etc).

- Today's focus is mostly on the Conflicts because they are measurable.

- What is needed: To realise benefits of Synergies for sustainability and digital sector

- How: Science based methods to measure the contribution of digital to environment
  -> leading to sustainable finance for green digital (EU Taxonomy, Green Public Proc.)

Reducing energy consumption of Digital Technologies

Climate Neutral and highly energy efficient datacentres by 2030: review **JRC's CoC,** the Energy Efficiency Directive and the Taxonomy Regulation

Greener electronic communications by 2030:
➢ Energy efficient telecommunications (5G, 6G)

Low power processors, software, quantum computing and AI: investing in new ultra-low-power

Manufacturing less electronics (Circular Electronics Initiative) Better durability, reparability, refurbishment, recycling for consumer and industrial electronics & IoT
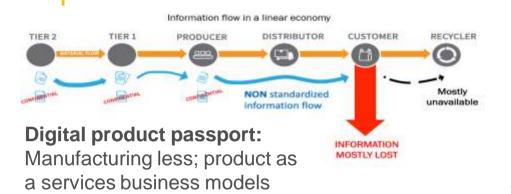
"Right to repair" for consumers.

Digital solutions to reduce energy consumption

Information flow in a linear economy

Digital contribution: reduction by up to 15%-20% of total emissions with deployment of today's technology.

Digital product passport: Manufacturing less; product as a services business models

Smart mobility: reduction of transport emissions up to 37%; **smart buildings** with emissions reduction by 17%;

Destination Earth / digital twins: High Performance Computing, AI for better anticipation of extreme events prediction, energy demand/supply modeling

Also: smart energy networks; Precision farming, Energy-lean Blockchain for emissions accounting, smart cities; AI for climate; smart manufacturing;

RRPs: Missed opportunity to use digital solutions for climate action

European Commission

European Green Digital Coalition

35 CEOs of ICT companies, that lead their own transition to climate neutrality by 2040, have committed on behalf of their companies to take action in the following areas:

- Investing in the **development and deployment** of green digital solutions with significant energy and material efficiency that achieve a net positive impact in a wide range of sectors.

- Developing **methods and tools** to measure the net impact of green digital technologies on the environment and climate by joining forces with NGOs and relevant expert organizations.

- Co-creating, with representatives of others sectors, **recommendations and guidelines** for green digital transformation of these sectors that benefits environment, society and economy.

https://digital-strategy.ec.europa.eu/en/policies/european-green-digital-coalition
https://www.greendigitalcoalition.eu/

Data Centre – Other ongoing activities

- Digitalisation of Energy Action Plan
  - Will address benefits and challenges of digitalisation of the energy system (data exchange in energy to support the energy transition and consumer empowerment, cybersecurity)
  - Aims to put forward some further elements on Data Centres.
  - Will look beyond data centers at the ICT value chain
  - Adoption June 2022 (tbc)
- Code of Conduct 2022
  - Adoption in the coming days
- Taxonomy section on Data Centres
  - Up and running
- Recovery & Resilience Facility
  - Green Data Centre requirements mainstreamed accross plans
- Regulation laying down ecodesign requirements for servers and data storage products:
  - Preparatory work for the review is ongoing. Conclusion of the review to be presented at the Consultation Forum by ~Q3/Q4 2023.
- Study
  - Publication in February 2022

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