Event Report

Greening ICT: What can the EU do?

Online Policy Dialogue – 22 February 2022

Summary

Aligning the EU's twin green and digital transitions offers great possibilities for Europe: joining up the agendas could help the EU to get on track to achieve a sustainable, competitive climate-neutral economy. However, while the European Green Deal recognises that the two transitions are closely linked, more efforts are needed to use data and digital solutions to address our greatest sustainability challenges and reduce the climate and environmental footprint of Information and Communication Technologies (ICTs) themselves. For the digital transition to become a true driver of the Green Deal, addressing the energy consumption, emissions, and e-waste from digital solutions themselves will be key.

This Policy Dialogue reflected on the current climate and environmental footprint of digitalisation (including data centres and digital devices) and ways to reduce it. It addressed the prospects for making electronic devices more circular and energy efficient, ICT infrastructure greener and software more sustainable. Moreover, it considered the role for EU policies to support these efforts.

Full report

Moderator **Stefan Sipka**, *Policy Analyst, European Policy Centre* noted that ICT devices, gadgets, apps, and algorithms - all supported by ICT infrastructure – make our lives easier and can support the green transition. Increased dependence on ICT, however, can also lead to more emissions due to higher energy consumption and increased e-waste. We need to reap the benefits of the digital transformation, while keeping the negative side effects in check.

Gerard de Graaf, *Director, Digital Transformation, DG Connect, European Commission* stressed that our climate ambitions cannot be met without a massive deployment of ICT, along with smart energy and mobility systems. The EU has set the goal of ensuring that all data centres - massive consumers of electricity – will be carbon neutral by 2030.

A key issue is that the interests of the electronics sector are not always aligned with the European Green Deal. For example, there is still pressure on consumers to buy new products and dispose of old ones. The Commission is looking into reinforcing eco-design requirements to reduce the carbon footprint of products and extend their lifecycle. There should be an obligation to keep software up to date, as well as a right to repair. The Commission plans to come forward with proposals at the end of March and in September.

Kim Van Sparrentak, *Member of the European Parliament (the Greens/EFA)* noted that Europe's digital strategy and the European Green Deal are not always combined. One issue is the separation of legislation; eco-design doesn't regulate AI for example.

It is critical that we ensure that the digital sector is built in a sustainable manner now. More focus is needed on how AI and digitalisation can be used to accelerate the climate transition without hampering environmental goals. In practice, this means focusing on issues such as the right to repair, and eco-design standards for both hardware and software. Devices need to be interoperable, and reuse needs to be incentivised.

Page Motes, *Head of Global Sustainability, Dell Technologies* highlighted the company's public commitment to achieving net zero by 2050 across its entire value chain. Dell is also seeking to achieve more circularity in terms of the recycling and reuse of materials used. One key target is to use at least 50 % recycled or renewable material in products by 2030.

Motes also discussed Concept Luna, a proof-of-concept laptop that is designed to be long-lived, easy to fix and more energy-efficient. Consumers also need to be incentivised to recycle products. Further legal requirements should balance their additional value with the need to enable manufacturers to conduct business and innovate, and public procurement targets for sustainable technologies should be explored.

Max Schulze, *Founder, Sustainable Digital Infrastructure Alliance* said that a key issue was transparency. At the moment, consumers cannot make informed choices based on environmental impact. It is very difficult to compare products, as information is not available. Transparency is also needed for software developers to determine the impact they are having. The lack of connection between infrastructure and software makes it difficult to assess energy use and waste. The EU has an opportunity to make environmental impacts more transparent, and regulation can accelerate this.

Extending the lifetime of products from an accounting / financing perspective, perhaps from five years to ten years, is an easy fix. Manufacturers also need more incentives to reuse and repair their own products. Data centres should be integrated into the energy system through incentives or regulation, and the power consumption of infrastructure should be adapted to the availability of renewables. Heat recovery from data centres, especially relevant in northern Europe, should be mandatory.

Discussion

Van Sparrentak agreed that the global supply chain perspective must be considered, and that lifecycle assessments should cover the entire lifecycle of a product, from sourcing materials to the consumer. Having an accurate and thorough lifecycle assessment would deliver transparency and provide more incentive for change.

De Graaf said that the requirement to comply with EU rules and standards to access the market gives Europe global influence. Putting in place a carbon border adjustment mechanism, however, would require data from the likes of steel producers in China, which could prove complicated. **De Graaf** agreed that the European Green Deal and the digital transformation have for too long been seen as two separate tracks. The Commission plans to stretch eco-design measures to cover electronics and include requirements to keep software up to date and provide information on reparability.

Motes agreed that Europe has an opportunity to lead on the green agenda, and to work through international bodies such as the OECD and UN. A global approach to greening ICT would be positive from a business perspective, and greater regulatory alignment is indeed needed.

Schulze stressed the importance of adopting a global perspective when assessing the environmental impacts of ICT, in part because the digital economy is global. Coming together on the global stage makes sense. Transitioning to service models of business is also important. A good example of this is the printing sector – many European offices now pay by the number of pages printed, which gives manufacturers an incentive to come by every six months to check that the printer works. **Schulze** again stressed the importance of being able to accurately measure the amount of power consumed by ICT devices.

On the question of shifting from data centres to edge computing, where data processing is more decentralised, **Schulze** noted that there has been a constant shift back and forth from centralised computation to decentralised computation. A risk in moving towards edge computing is that smaller server rooms might slip through environmental regulation.

Motes called for greater standardisation of methodologies used to measure product emissions and circularity. This could be an interesting space for policy makers to look at. Most public contracts are still awarded based on purchasing price, so additional incentives for circularity, such as mandatory criteria and targets, are needed. Standardising producer responsibility schemes in Europe and across the world would be helpful.

Van Sparrentak agreed that better standards to measure environmental impact are needed. Industry wants a level playing field, and sustainability efforts should not put businesses at a disadvantage. The environmental impact of AI in software needs to be considered. We need to make sure that we do not programme massive but unnecessary systems that guzzle energy. We should be more critical about how and when we use digitalisation in the world. ICT innovation needs to be made sustainable now - climate and digital transitions must go hand in hand.

De Graaf called for procurement that supports greening. The public sector has a huge role to play here, not only through regulation, but also through the deployment of sustainable energy and mobility systems, and through achieving energy efficiency in buildings.