

Call to Action

From commitment to action: Implementing standards for a sustainable future

Introduction:

The digital era has brought unprecedented technological advancements, reshaping our lives and societies. However, this rapid digitalization also poses significant environmental challenges, necessitating a concerted effort towards sustainable practices. Reaching the 1.5-degree Celsius target outlined in the Paris Agreement is becoming increasingly challenging.

The window for effective action is closing rapidly, requiring global collaboration and bold action for immediate and substantial reductions in greenhouse gas emissions in order to prevent irreversible damage. Digital technologies can help fight the climate crisis but can also be part of the problem if such challenges as energy consumption and e-waste are not managed.

The Green Digital Action Track recognizes that a sustainable digital future is one where technology advances human capabilities, and preserves and enhances the natural environment. This Call for Action document is a testament to this vision. Recognizing this urgent need, the Green Digital Action has been established to accelerate the ICT sector's commitment to collaborative climate action, put the sector on the forefront of climate action, and inspire other industries to follow suit.

The Green Digital Action objectives are as follows:

- Increase multi-stakeholder collaboration to advance digital-technology-driven climate action.
- Co-create and fast-track practical solutions and to tangibly support the climate agenda.
- Mobilize commitments and strengthen accountability to promote the green and digital transitions among governments, businesses, civil society and others, including through the Partner2Connect Digital Coalition.
- Catalyse opportunities for partnerships and broader coordination with key existing mechanisms like the Marrakech Partnership, the World Standards Cooperation, the Digital with Purpose movement or the UN Early Warning for All initiative.

The core objective of this Call To Action is to identify and promote widely recognized and already adopted green standards within digital technologies. This endeavour is not just about listing existing standards; it delves deeper into understanding the implications of these standards in real-world scenarios and exploring opportunities for improvement or identifying standardization gaps. By identifying gaps in standardization, the document aims to create a roadmap that will guide future work and call on experts to contribute post-COP28. It is also a call to experts to share best practices that are not yet standardized.

Recognized Standards for Green Digital Practice

This section is crucial in setting the stage for a sustainable digital environment. The purpose here is multifaceted: to identify green standards that are relevant and have already been recognized from Standardization organizations. These identified standards are identified and promoted to create a common language and understanding among different stakeholders; and to encourage the adoption of these standards across the ICT sector and beyond.

Recognizing these standards is the first step towards a collective commitment to sustainable digital practices. It is about laying down a foundation upon which future innovations and policies can be built. This section is not just about listing standards; it is about understanding their role in shaping a sustainable digital ecosystem and ensuring these standards are adaptable, relevant, and effectively implemented in a rapidly evolving technological landscape. See Annex.

Identification of Standardization Gaps

This section aims to shed light on those areas that current standards and practices have not yet clearly or completely covered, highlighting the need for new or improved standards. The purpose here is twofold: first, to pinpoint the gaps that hinder the full realization of a sustainable digital environment; and second, to propose potential directions for future standardization efforts. This proactive approach is crucial for staying ahead of emerging challenges and ensuring that our standards evolve in tandem with technological advancements. By identifying these gaps, we provide a roadmap for future research and development, fostering innovation that is not only technologically advanced but also environmentally conscious.

1. **Gap Name:** Energy allocation from hardware to software

Description: While standards exist for measuring carbon in hardware, there are no standards that exist for translating and apportioning a hardware's electricity consumption to application and software consumption.

Potential Solutions or Directions: Define apportionment models from hardware standards into practices that can be used in software

Organizations Involved: Green Software Foundation, Cloud providers, SaaS providers, HSBC is in the process of releasing a methodology

Reference Source: N/A

2. **Gap Name:** Energy Proportionality

Description: In essence this is the rate at which energy is consumed relative to the rate at which useful work is done. The Concept is described well here, with plenty of links to additional information: https://en.m.wikipedia.org/wiki/Energy_proportional_computing

Potential Solutions or Directions: Consolidation of existing efforts into a larger programme that looks at the problem from a systems level rather than from a component level.

Organizations Involved: Here is the Uptime Institute Strategy Guidance that references this gap: <https://uptimeinstitute.com/creating-a-sustainability-strategy-report> - Note that you will need to provide an e-mail address.

Reference Source: <https://www.computer.org/csdl/magazine/co/2007/12/mco2007120033/13rUxASu79>
<https://link.springer.com/book/10.1007/978-3-031-01761-2>

3. Gap Name: Software Carbon Efficiency

Description: Alongside the energy standard for software highlighted above, there is no common methodology agreed for assessing the carbon efficiency of a software product / application / SaaS solution.

Potential Solutions or Directions: Agree a methodology for deriving the carbon intensity scoring for software – and the corresponding Carbon Efficiency – so that a consistent approach can be determined. Interlock this with the software use of hardware energy consumption per above for completeness.

GoCodeGreen has a method and framework for achieving this based on ISO standards, the GHG protocol ICT sector guidance and Product standard. There is complimentary alignment with the SCI scoring per GSF.

Organizations Involved: GoCodeGreen, GSF, WRI, WBCSD, and other software businesses wanting to measure and understand the carbon impact of digital products.

Reference Source: <https://www.computer.org/csdl/magazine/co/2007/12/mco2007120033/13rRUxASu79>
<https://link.springer.com/book/10.1007/978-3-031-01761-2>

4. Gap Name: Green metrics

Description: From ICT there is a need for clear metrics that need to align to current or future standardization efforts, with a clear objective to simplify implementation, integration, consider accuracy and reduce assumptions.

Potential Solutions or Directions: N/A

Organizations Involved: N/A

Reference Source: N/A

Next Steps after COP28

In this section, we outline the proactive steps to be undertaken following COP28. These steps will be focused on creating and launching a peer-learning Working Group, with the objective of following up on the efforts of the Green Digital Action Alliance. This peer-learning working group is expected to work closely with other GDA pillars, such as the Greenhouse Gas (GHG) pillar, and more. The working group is expected to meet throughout next year until COP29, with the purpose of accelerating the implementation of identified standards, sharing best practices, addressing the gaps, and continuously monitoring and revising our approach to ensuring the effectiveness and relevance of the mentioned efforts. As next steps, we also want emphasize the importance of ongoing collaboration among all stakeholders, highlighting the need for a collective and concerted effort to achieve our sustainability goals.

Conclusion

As we conclude, this Call To Action, it is imperative to reflect upon the significance of our mission. This document is not just a compilation of standards and practices; it is a statement for change in the digital world. The Green Digital Action Track stands committed to leading this change, fostering a digital environment that is not only efficient and innovative but also responsible and sustainable.

The **4.a Green Standards pillar** is pivotal in this journey. It represents a focused effort to bring sustainability to the forefront of digital practices. By setting and adhering to green adopted standards,



we can mitigate the environmental impact of digital technologies, foster eco-friendly innovation, and drive the industry towards more responsible practices.

The journey ahead is challenging but essential. We call upon all stakeholders – governments, businesses, civil society and individuals – to join us in this endeavour. Together, we can pave the way for a digital future that is green, inclusive and sustainable.
