

Action Plan for a Sustainable Planet in the Digital Age


Executive Summary



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Digitalization – the use and adoption of digital technologies – is driving massive economic, social and environmental changes. The future of humanity and the health of planet Earth depend to a large extent on how we undergo this digital transformation. We have an opportunity to drive this transformation in a manner that helps build a healthier, safer, cleaner and more equitable future, rather than one of exacerbated environmental degradation, inequality and social division. However, achieving global sustainability is not an inevitable or an obvious outcome of digitalization. Indeed, digital technologies, through their energy and material requirements and influence on consumer demands, have accelerated the exponential rise of the human impact on the natural environment that now threatens the resilience of our ecological systems, alongside worsening societal inequalities and escalating social injustice.¹ Digitalization has the potential to help transform society and business models to a more sustainable and equitable world but only if there is a conscious and deliberate effort to steer it in that direction. This Action Plan offers a vision on three systemic shifts needed to achieve this goal together with a set of 9 Impact Initiatives to spark immediate collective action and multi-stakeholder collaboration.

Coalition for Digital Environmental Sustainability (CODES)



The Coalition for Digital Environmental Sustainability (CODES), is an international multi-stakeholder alliance created in March 2021 in response to the UN Secretary General's Roadmap for Digital Cooperation. CODES' purpose is to advance digital sustainability, understood as the design, development, deployment and regulation of digital technologies to accelerate environmentally and socially sustainable development while mitigating risks and unintended consequences.² CODES is specifically striving to reorient and prioritize the application of digital technologies to meet the 2030 sustainable development agenda and to achieve the multiple global environmental agreements that have been adopted by UN Member States. Digitalization will be crucial in achieving the UN Sustainable Development Goals (SDGs) by 2030. An assessment in 2020 found 70 per cent of 169 targets base-lining the world's sustainability goals can be positively influenced using digital technology applications.^{3,4} This requires facilitating collective action that can lead to systemic transformation and to removal of barriers and perverse incentives that undermine the adoption or scaling of digital technologies for sustainability.

To date, CODES is the only entity of its scale and credibility to undertake and progress this mandate, and is uniquely positioned to facilitate this work. CODES offers an inclusive trans-national platform backed by the impartiality of the UN, where key global stakeholders across governments, private sector, academia, and civil society convene and align to forge the collective action needed to make digitalization itself sustainable and to harness digital innovations for sustainability.

The founding co-champions of CODES include the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), the International Science Council, the German Environment Agency, the Kenya Ministry of Environment and Forestry, Future Earth, and Sustainability in the Digital Age. The co-champions act as the Secretariat for CODES in close coordination and cooperation with the Office of the Secretary General's Envoy on Technology.

CODES Action Plan



The CODES Action Plan for a Sustainable Planet in the Digital Age marks the 50th anniversary of the Stockholm Conference on the Human Environment and the establishment of the United Nations Environment Programme (UNEP) set-up to promote global environmental sustainability. The goal of the Action Plan is to offer a vision and set of priorities to advance digital sustainability through a series of multi-stakeholder Impact Initiatives that require collective action and collaboration.

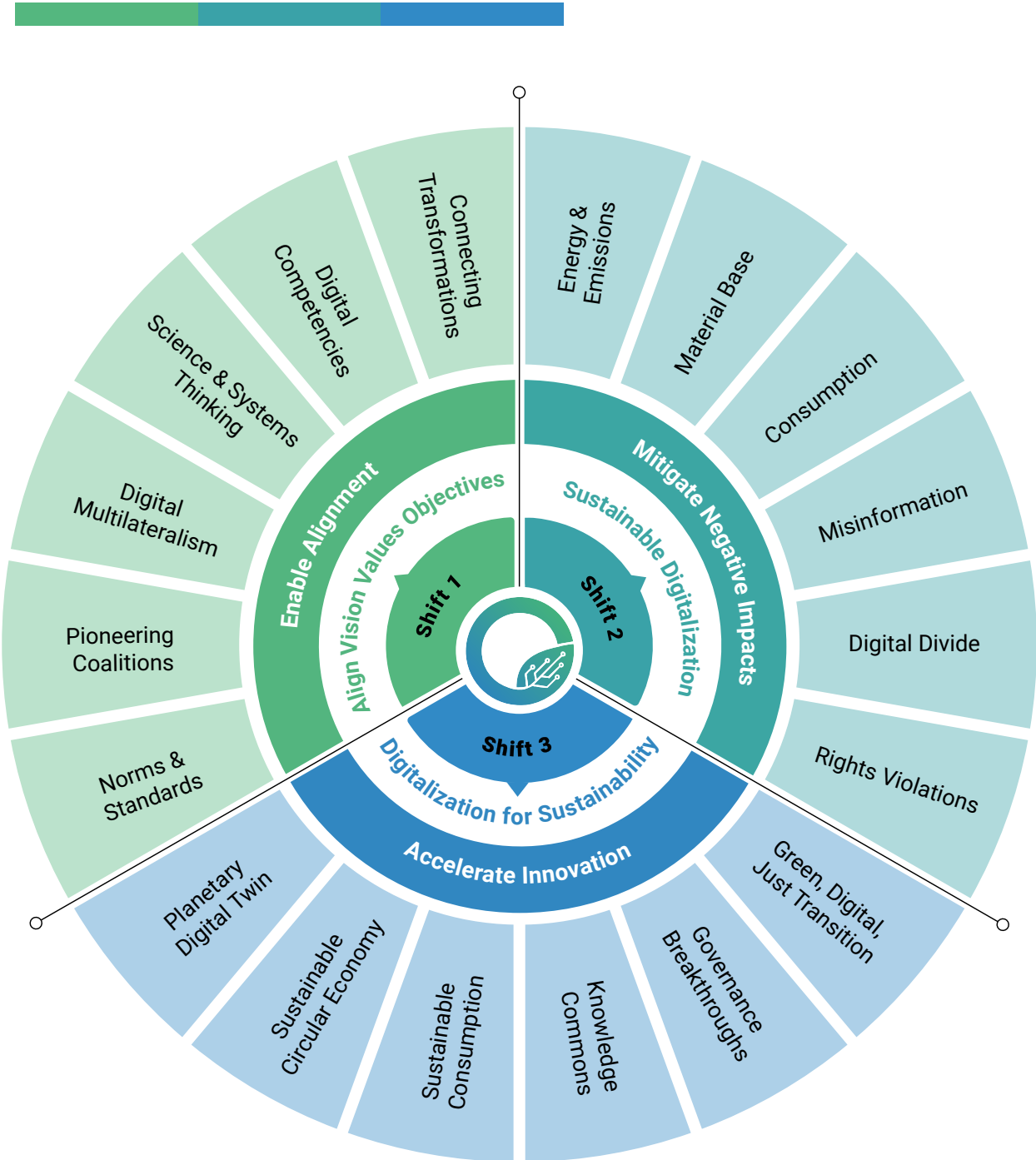
As a result of a consultative process over the past 12 months, this Action Plan describes 3 systemic shifts and 6 strategic priorities within each shift that are needed to harness digital transformation as a positive and exponential force for progressing environmentally and socially sustainable development (see Figure A). This is followed by a set of 9 global Impact Initiatives as actionable items with measurable targets that have the potential to trigger systems-level or sector-level transformations through multi-stakeholder collaboration at the regional and global scales (see Table).

This Action Plan is meant to inform the emerging set of priorities for the Global Digital Compact proposed by the UN Secretary-General’s latest report “Our Common Agenda”, which calls for a new landscape of digital governance and collaboration. It will also contribute to the long term legacy initiatives of the Stockholm +50 conference. The contents of this Action Plan have also been designed to inform on-going deliberations in the UN Environment Assembly, the UN Human Rights Council, the International Telecommunications Union and by the UN Development Programme linked to digital transformation and the recognized human right to a clean, healthy and sustainable environment.⁵

This Action Plan is being published with two supplements. The first supplement “*Accelerating Sustainability Through Digital Transformation - Use Cases and Innovations*” includes a number of use cases and innovations on digital sustainability on policies, partnerships and applications. The second supplement “*Mapping Global and Regional Stakeholders Working on Digital Sustainability*” includes an ongoing mapping of key international and regional stakeholders against the three shifts and 6 priorities within each shift. These supplements are living documents that will be continuously updated on www.sparkblue.org/CODES.



Three Systemic Shifts and Priorities



Three Shifts and 18 Strategic Priorities to Achieve a Sustainable Planet in the Digital Age. These shifts and priorities were identified by CODES stakeholders through a 12 month consultation and co-creation process. To catalyze these shifts, CODES stakeholders recommended nine global Impact Initiatives requiring collective action and multi-stakeholder collaboration.

CODES Impact Initiatives



SHIFT 1	1. World Commission on Sustainability in the Digital Age	Undertake new research and/or leverage existing bodies of research to provide science-driven recommendations on accelerating sustainability in the digital age.
	2. Clearing House for Digital Sustainability Standards	Platform to co-define key standards for digital sustainability and offer a clearing house, taking into account the recommendations put forward by the World Commission and other bodies.
	3. Education for Digital Sustainable Development	Decentralized approach to develop literacy and education programmes on digital sustainability that are needs based, localized and contextualized.
SHIFT 2	4. Harmonization of Digital Companies' GHG Inventories	New international platform(s) to facilitate harmonization, interoperability and adoption of GHG inventories and reporting standards for digital companies, products and services.
	5. Sustainable Procurement and Green Digital Infrastructure Pledge	International framework to enable standardization and harmonization of sustainable procurement principles and green digital infrastructure across governments and corporations.
	6. Digital Product Passport for Circularity	Initiate the design and development of standards and pilot testing for digital product passports that track a product's climate, environmental, and social impacts throughout the value chain.
SHIFT 3	7. Digital Sustainability Innovation Hubs and Accelerators	Global network of connected and collaborative Innovation Hubs to accelerate digital sustainability innovations and offer real-world laboratories and scaling opportunities for digital sustainability solutions.
	8. Data and Assessments as Digital Public Goods for Sustainability	Open global standards and governance frameworks for environment and climate data, as digital public goods, to drive sustainability assessments, global stock taking and decision-making.
	9. Decentralized Financing of Sustainable Solutions	Decentralized financing and matchmaking for sustainability solutions, including crowdfunding, payment for ecosystem services, sustainability filters, algorithms, etc.

Every Shift Needs Collective Action Now!



These 9 examples were developed to inspire action. CODES cannot drive and implement these initiatives alone. We need an even bigger coalition now, agile pioneers and established organizations are welcome! Help us spur global collective action to lead these initiatives and build more.

Contact CODES@un.org to get involved. Visit www.sparkblue.org/CODES for more information.

Criteria for impact initiatives

- **Catalytic** to leverage transformational change in one or more shifts.
- **Global** to stimulate change across the globe and in different geographical and socio-political contexts.
- **Multi-stakeholder** to rely on broad actor coalitions to effectively implement change.



CODES Engagement Pathways

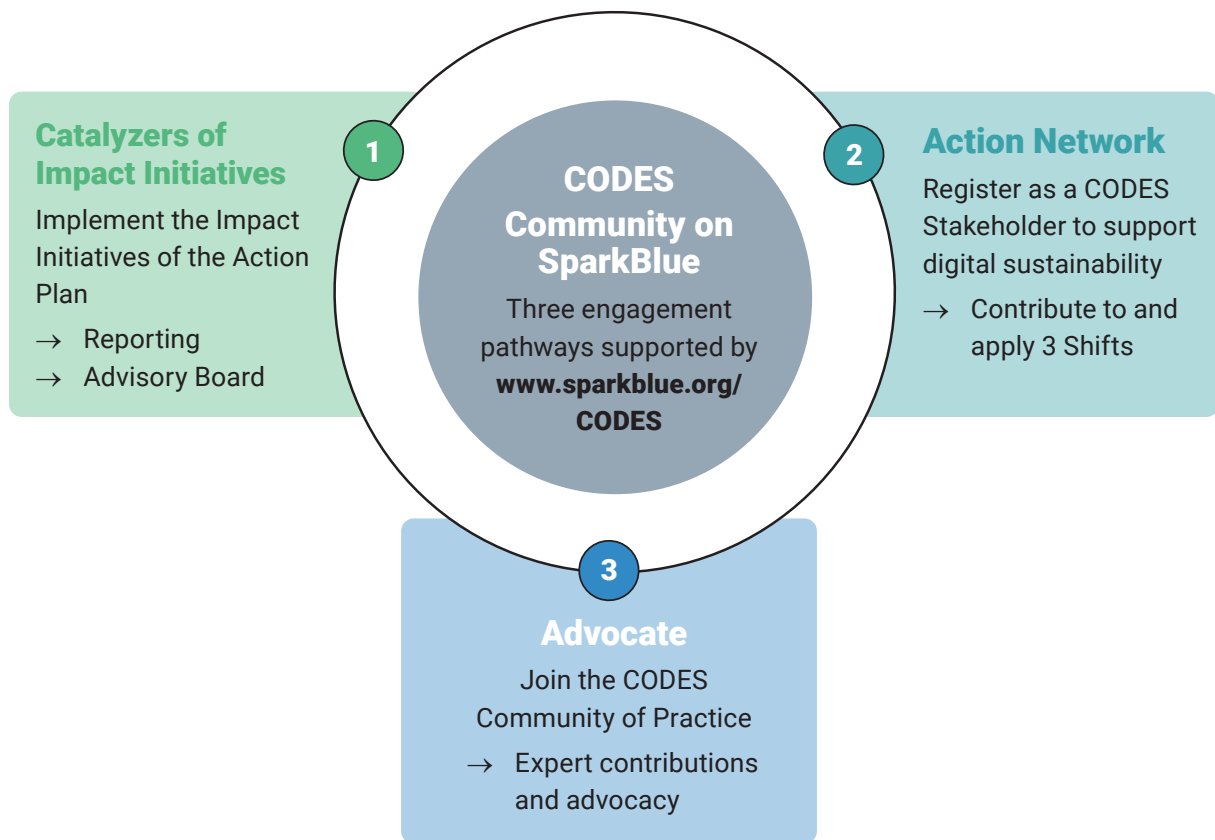


The founding co-champions of CODES collectively initiate and engage in multi-stakeholder consultations to pool academic, policy and industry-oriented knowledge from across the public and private entities, civil society and indigenous groups on advancing digital sustainability. CODES aims to conduct collective intelligence and co-creation processes with stakeholders as the basis for collective action, with an emphasis on diversity, inclusion and gender balance.

To date, the CODES co-champions have mapped over 240 stakeholders working on digital sustainability at the global and regions levels and have engaged over 1,000 people from 100 countries working on the digital transformation and sustainability nexus.

CODES stakeholders are invited to join and collaborate with CODES through 3, intersecting engagement pathways.

- **Catalyser:** Stakeholders seeking to engage directly with one or more of the Impact Initiatives that are proposed in the Action Plan or future iterations.
- **Action Network:** Stakeholders contributing to and leveraging the 3 shifts proposed in the Action Plan to support the progression of digital sustainability.
- **Advocates:** Stakeholders seeking to contribute their expertise to the CODES community and become an advocate for the CODES vision and values.



References

1. Future Earth. Sustainability in the Digital Age. <https://futureearth.org/initiatives/other-initiatives/sustainability-in-the-digital-age/> (Accessed: 14 February 2022).
2. Mondejar, M. E., Avtar, R., Diaz, H., Dubey, R. K., Esteban, J., Gómez-Morales, A., Hallam, B., Mbungu, N. T., Okolo, C. C., Prasad, K. A., She, Q., & Garcia-Segura, S. (2021). Digitalization to achieve sustainable development goals: Steps towards a Smart Green Planet. *The Science of the total environment*, 794, 148539. <https://doi.org/10.1016/j.scitotenv.2021.148539>.
3. PwC (2020). Over two-thirds of Sustainable Development Goals could be bolstered by emerging tech, including AI and blockchain. <https://www.pwc.com/gx/en/news-room/press-releases/2020/blockchain-sdgs-wef.html> (Accessed: 14 February 2022).
4. Other assessments have come to similar conclusions for example, the GESI Digital With Purpose Report (2019) found that 103 of the 169 SDG targets are directly influenced by seven digital technologies: digital access, faster internet, cloud, the internet of things (IoT), cognitive, digital reality, and blockchain. See also <https://www.sciencedirect.com/science/article/pii/S0048969721036111>; <https://www.nature.com/articles/s41467-019-14108-y>; https://eo4society.esa.int/wp-content/uploads/2021/01/EO_Compendium-for-SDGs.pdf.
5. General Assembly resolution 48/13, The human right to a clean, healthy and sustainable environment, A/HRC/RES/48/13 (8 October 2021), available from undocs.org/A/HRC/RES/48/13.

From the CODES Co-champions



“Digital transformation must be governed as one of the key sustainability issues for the global community today. We can’t afford to fail to align the disruptive forces of digital change with our common sustainable development goals.”

Dirk Messner, President of the German Environment Agency and CODES Co-Champion

“One of the many strengths of the CODES Action Plan is that it was co-created with a strong emphasis on equity and on the needs of the Global South. Digital technologies must ultimately support our well-being everywhere on the planet. The regional network of Digital Sustainability Innovation Hubs proposed by the Action Plan are a critical pillar to meet the needs of the Global South in an inclusive and just manner for both urban and rural communities.”

Philip Thigo, Senior Digital Advisor to the Kenyan Government and CODES Co-Champion



“The CODES Action Plan is a critical part of implementing the Secretary-General’s Roadmap for Digital Cooperation. In addition, it provides much valued inputs to be considered for the Global Digital Compact that the United Nations is working on now, as part of the Summit of the Future next September; as well as the way forward on these issues. This is a long-term collective effort and we are proud to be part of this global movement.”

Maria Francesca-Spatolisano, Acting Secretary-General’s Envoy on Technology and CODES Co-Champion

“Digitalization is changing the way the world works, but the new world of work must be a sustainable one. It is critical that digital innovations and technologies accelerate environmental sustainability. UNEP is committed to supporting CODES and digital sustainability as a core part of our new Digital Transformation programme.”

Inger Andersen, Executive Director, United Nations Environment Programme and CODES co-champion



“Digitalization - the use and adoption of digital technologies – is driving massive economic, social and environmental change that can either deepen or close inequalities. The future of humanity and the health of planet Earth will be significantly shaped by this transformation. UNDP is committed to support a transformation that offers a greener and more just future that leaves no one behind.”

Achim Steiner, Administrator of the United Nations Development Programme and CODES co-champion

“To unlock the vast potential of digital innovations to accelerate the implementation of the 2030 Agenda, we need a common science-based framework of global action aimed at systems transformation to leverage digitalization in our efforts towards a sustainable planet.”

Geoffrey Boulton, International Science Council and CODES co-champion



“Stockholm+50 is a critical forum and international milestone to update, integrate and mainstream digitalization opportunities and risks into the sustainable development policy agenda. It is a pivotal moment to forge a common vision and set of values to navigate the close interplay of digital technology, environment and sustainable development concerns.”

Eliane Ubalijoro, Global Hub Director, Future Earth Canada & Executive Director, Sustainability in the Digital Age, and CODES co-champion

