Environmental sustainability in a digital world.

The CODES Action Plan for a Sustainable Planet in the Digital Age

David Jensen, 20 September 2022
Coordinator, Digital Transformation
Planet Positive 2030, IEEE

Anyone ever wondered what it must be like to be the Secretary General of the UN ?

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Use this (40+ UN funds, programmes):

The United Nations System

UN Principal Organs

- General Assembly
- Security Council
- Economic and Social Council
- Secretariat
- International Court of Justice
- Trusteeship Council[6]

Subsidiary Bodies
Main and other sessional committees
Disarmament Commission
Human Rights Council
International Law Commission
Standing committees and ad hoc bodies

Funds and Programmes[1]
UNCTAD United Nations Conference on Trade and Development
- **ITC** International Trade Centre (UNCTAD/WTO)

UNDP United Nations Development Programme
- **UNCDF** United Nations Capital Development Fund
- **UNV** United Nations Volunteers

UNEP United Nations Environment Programme
UNFPA United Nations Population Fund
UN-HABITAT United Nations Human Settlements Programme
UNHCR Office of the United Nations High Commissioner for Refugees
UNICEF United Nations Children's Fund
UNODC United Nations Office on Drugs and Crime
UNRWA[2] United Nations Relief and Works Agency for Palestine Refugees in the Near East
UN-Women United Nations Entity for Gender Equality and the Empowerment of Women
WFP World Food Programme

Research and Training Institutes
UNICRI United Nations Interregional Crime and Justice Research Institute
UNIDIR[2] United Nations Institute for Disarmament Research
UNITAR United Nations Institute for Training and Research
UNRISD United Nations Research Institute for Social Development
UNSSC United Nations System Staff College
UNU United Nations University

Other Entities
UNAIDS Joint United Nations Programme on HIV/AIDS
UNISDR United Nations International Strategy for Disaster Reduction
UNOPS United Nations Office for Project Services

Subsidiary Bodies
Counter-terrorism committees
International Criminal Tribunal for Rwanda (ICTR)
International Criminal Tribunal for the former Yugoslavia (ICTY)
Military Staff Committee
Peacekeeping operations and political missions
Sanctions committees (ad hoc)
Standing committees and ad hoc bodies

Advisory Subsidiary Body
Peacebuilding Commission

Related Organizations
CTBTO Preparatory Commission Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization
IAEA[1, 3] International Atomic Energy Agency
OPCW Organisation for the Prohibition of Chemical Weapons
WTO[1, 4] World Trade Organization

Functional Commissions
Crime Prevention and Criminal Justice
Narcotic Drugs
Population and Development
Science and Technology for Development
Social Development
Statistics
Status of Women
Sustainable Development
United Nations Forum on Forests

Regional Commissions
ECA Economic Commission for Africa
ECE Economic Commission for Europe
ECLAC Economic Commission for Latin America and the Caribbean
ESCAP Economic and Social Commission for Asia and the Pacific
ESCWA Economic and Social Commission for Western Asia

Other Bodies
Committee for Development Policy
Committee of Experts on Public Administration
Committee on Non-Governmental Organizations
Permanent Forum on Indigenous Issues
United Nations Group of Experts on Geographical Names
Other sessional and standing committees and expert, ad hoc and related bodies

Specialized Agencies[1, 5]
FAO Food and Agriculture Organization of the United Nations
ICAO International Civil Aviation Organization
IFAD International Fund for Agricultural Development
ILO International Labour Organization
IMF International Monetary Fund
IMO International Maritime Organization
ITU International Telecommunication Union
UNESCO United Nations Educational, Scientific and Cultural Organization
UNIDO United Nations Industrial Development Organization
UNWTO World Tourism Organization
UPU Universal Postal Union
WHO World Health Organization
WIPO World Intellectual Property Organization
WMO World Meteorological Organization
World Bank Group
- **IBRD** International Bank for Reconstruction and Development
- **ICSID** International Centre for Settlement of Investment Disputes
- **IDA** International Development Association
- **IFC** International Finance Corporation
- **MIGA** Multilateral Investment Guarantee Agency

Departments and Offices
EOSG Executive Office of the Secretary-General
DESA Department of Economic and Social Affairs
DFS Department of Field Support
DGACM Department for General Assembly and Conference Management
DM Department of Management
DPA Department of Political Affairs
DPI Department of Public Information
DPKO Department of Peacekeeping Operations
DSS Department of Safety and Security
OCHA Office for the Coordination of Humanitarian Affairs
OHCHR Office of the United Nations High Commissioner for Human Rights
OIOS Office of Internal Oversight Services
OLA Office of Legal Affairs
OSAA Office of the Special Adviser on Africa
SRSG/CAAC Office of the Special Representative of the Secretary-General for Children and Armed Conflict
SRSG/SVC Office of the Special Representative of the Secretary-General on Sexual Violence in Conflict
UNODA Office for Disarmament Affairs
UNOG United Nations Office at Geneva
UN-OHRLLS Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UNON United Nations Office at Nairobi
UNOV United Nations Office at Vienna

To work with this (193 countries and SH)

To achieve this (169 targets):

Of everything on his agenda, what global issue keeps him awake at night?

Digital transformation:

1. Speed & Scale
2. Direction
3. Resource consumption

Accelerating or solving ?

Triple planetary crisis:

1. Climate change
2. Nature loss
3. Pollution

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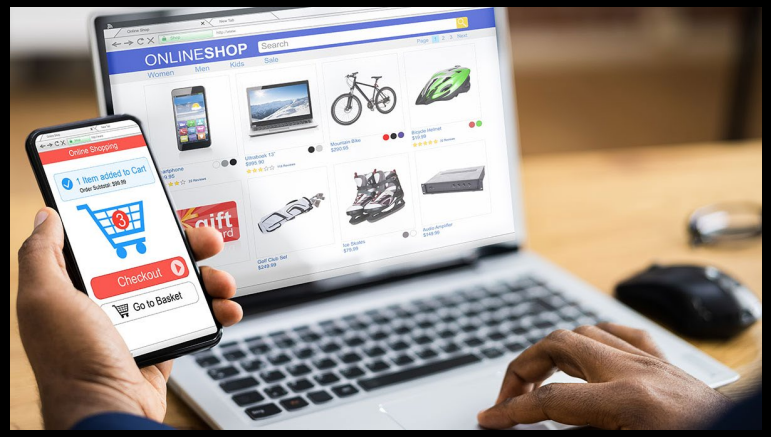
We are at a pivotal moment in human history:

Digital technologies are fundamentally changing the way we live, work, learn & relate to each other

Human Behavior

8000 Days

of screen time
21 years of our life



Economic Transactions

60%

of economy passes through digital channels

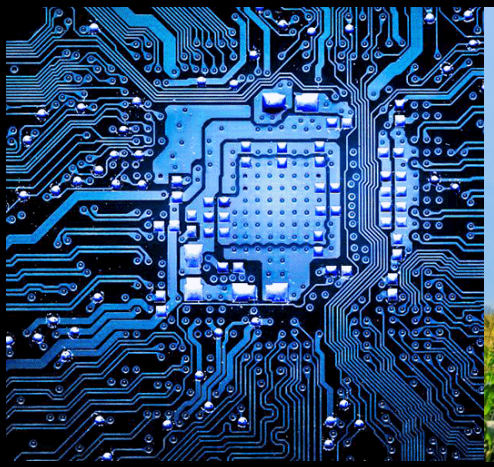
Social Relationships

4 Billion

people connected on social media

The global march of digital technologies is also fundamentally disrupting every economic sector and business model on the planet

Information



Food

Transport

Energy

Materials

This is could be the **single greatest window of opportunity** to achieve the kinds of systemic changes needed for environmental sustainability and climate action.

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We now have a fundamental choice to make between two future pathways: :

Green digital future & competitive sustainability

Digital technologies accelerate sustainable production, consumption and a circular economy.

Acceleration of triple planetary crisis

Digital technologies accelerate resource consumption, inequality and social division.

“Harnessing the power of digital transformation for environmental sustainability will require unprecedented leadership and collaboration across governments, companies and civil society.

Completely new forms of collective action, stakeholder collaboration and multilateralism are needed to solve the five hard problems of environmental sustainability.”

Inger Andersen, UNEP Executive Director

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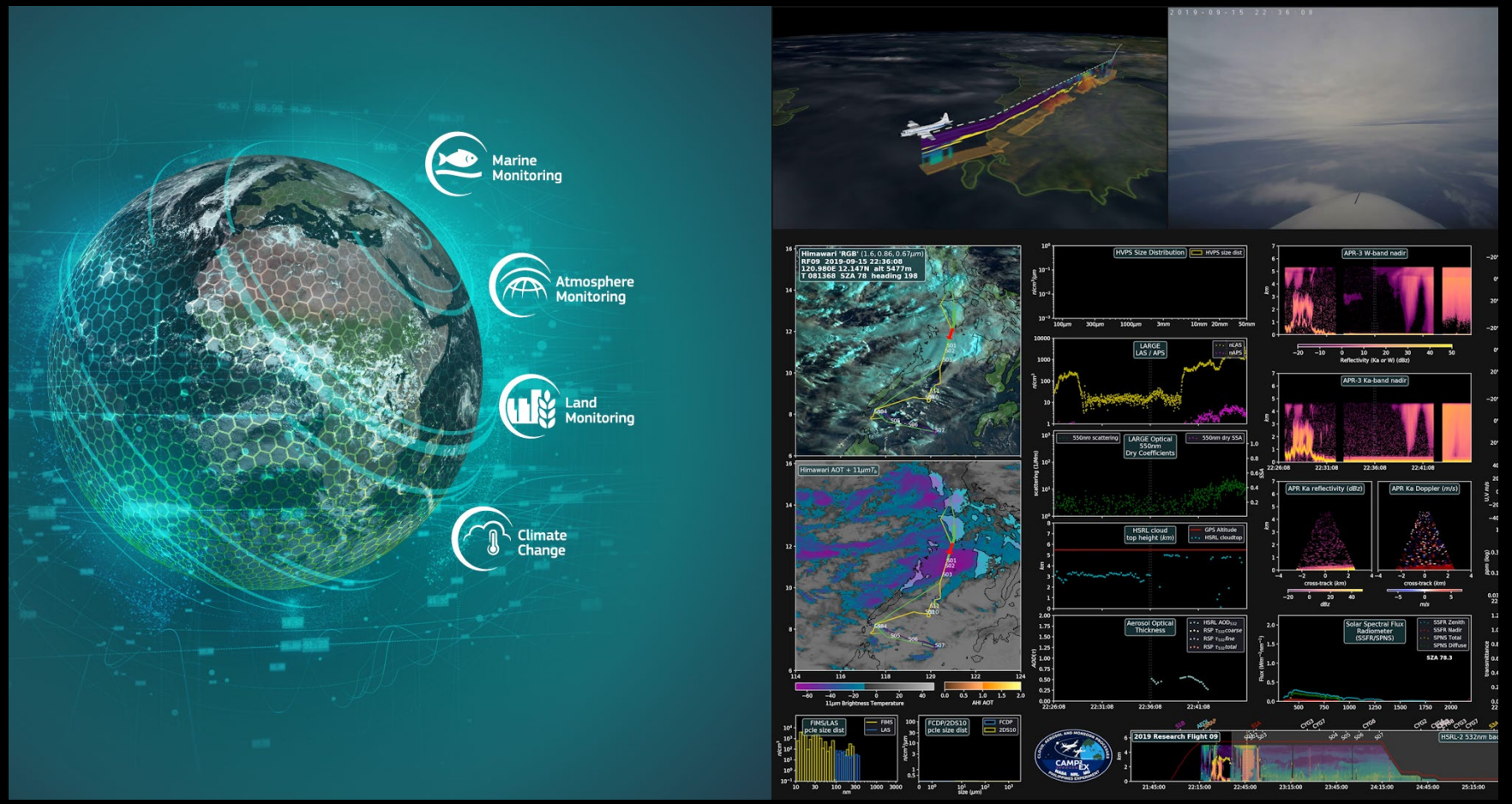
What are the “Five Hard Problems” of environmental sustainability & climate action that digital transformatoin can solve by 2030?



- Monitoring key ecological trends and high value variables
- Near real time progress indicators for environmental commitments
- Sharing solution pathways

1. Monitoring and modelling environmental systems and emissions at global level

What are the “Five Hard Problems” of environmental sustainability & climate action that digital transformatoin can solve by 2030?

- Tracking and tracing of all inputs and impacts across supply chains using digital product passports
- Accurate calculation of environmental and carbon footprints
- Digital disclosure of performance to enable comparability
- Basis for more robust ESG calculations

2. Full supply chain transparency and disclosure of environmental value

What are the “Five Hard Problems” of environmental sustainability & climate action that digital transformatoin can solve by 2030?

Use of SMART systems in key sectors:

- Energy, buildings, agriculture, mobility, manufacturing
- 20% reduction in GHG emissions

3. Automated sustainability decisions and optimization of natural resources

What are the “Five Hard Problems” of environmental sustainability & climate action that digital transformatoin can solve by 2030?

- Decentralized decision making
- Citizen science
- Collaborative governance
- Automated enforcement

4. Agile and participatory environmental governance processes, services and enforcement

What are the “Five Hard Problems” of environmental sustainability & climate action that digital transformatoin can solve by 2030?

Green recommendations, activations, and social norms:

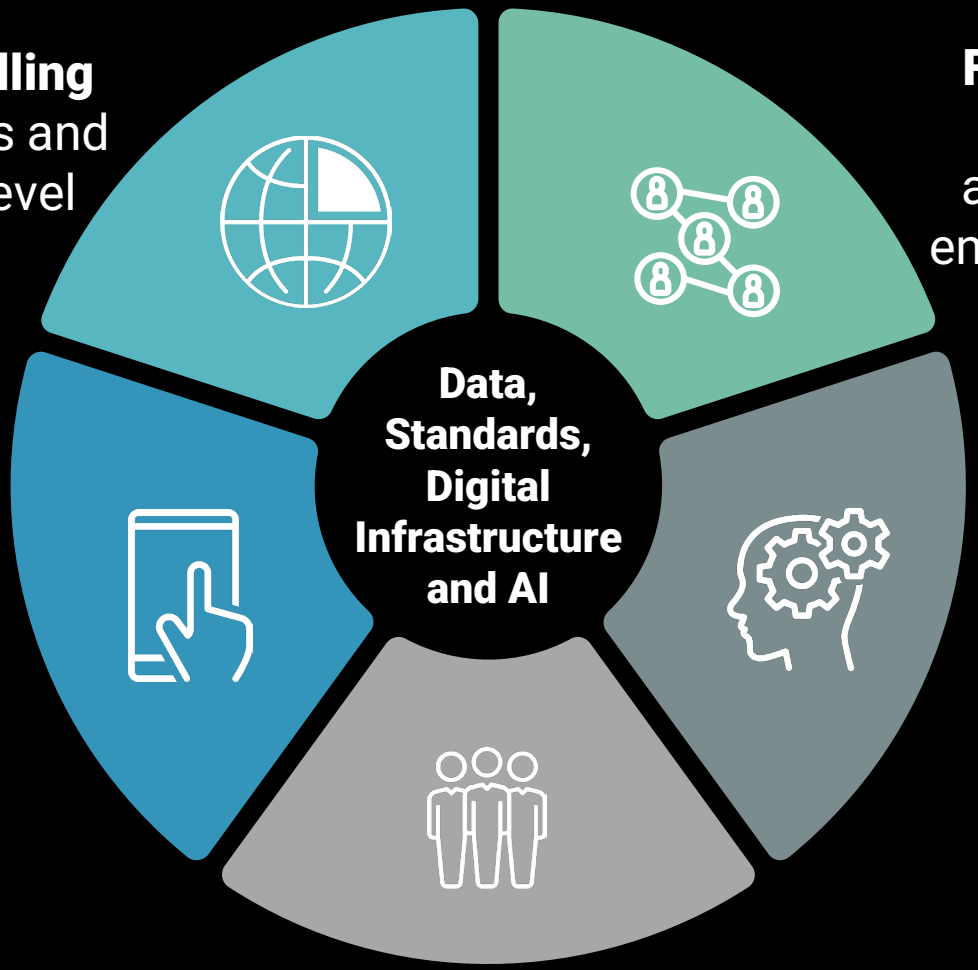
- 4 billion on social media
- 2.5 billion on gaming platforms
- 2 billion on e-commerce

5. Enabling consumers to select green products and lifestyles & receive feedback

The “Five Hard Problems” of environmental sustainability & climate action that digital transformation can solve by 2030

Monitoring and modelling environmental systems and emissions at global level

Full supply chain transparency and disclosure of environmental value



Enabling consumers to select green products and lifestyles & receive feedback

Automated sustainability decisions and optimization of natural resources

Agile and participatory environmental governance processes, services and enforcement

How can the UN help to unite digital transformation and environmental sustainability into a “twin transition” as part of the Roadmap for Digital Cooperation?

CODES

COALITION FOR DIGITAL ENVIRONMENTAL SUSTAINABILITY

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Umwelt Bundesamt

REPUBLIC OF KENYA
MINISTRY OF ENVIRONMENT AND FORESTRY

SDA SUSTAINABILITY IN THE DIGITAL AGE

futureearth
Research. Innovation. Sustainability.

International Science Council
The global voice for science

UNDP

United Nations
Office of the Secretary-General’s Envoy on Technology

Founded in March 2021

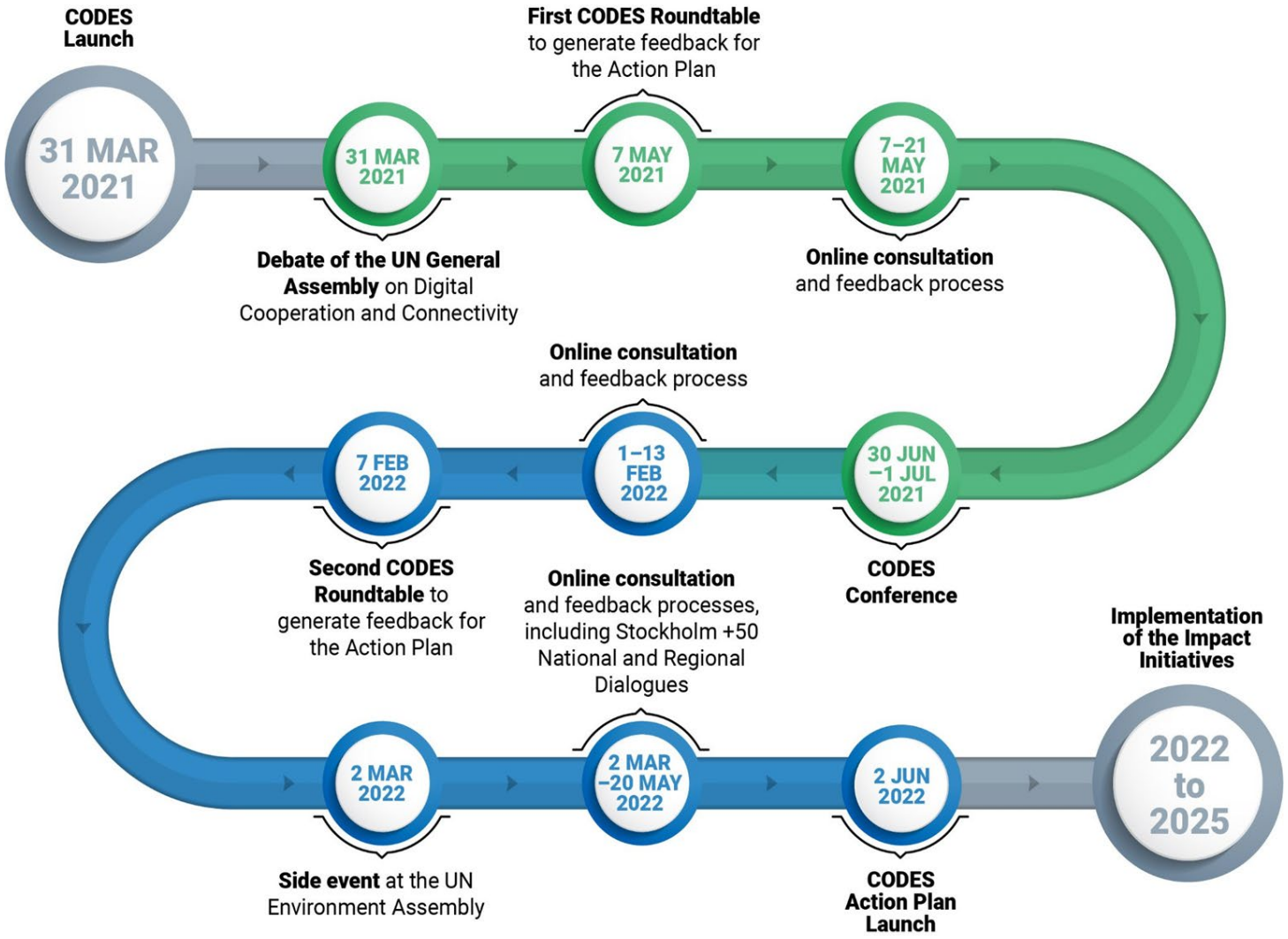
CODES Action Plan: co-design process with 1,000 CODES stakeholders from 100 countries over 12 months

3 Questions:

1. Which systemic shifts are needed to bring these transformations together ?

2. What does the current ecosystem of stakeholders look like ?

3. What are the gaps and needs for collective action for systemic impact?

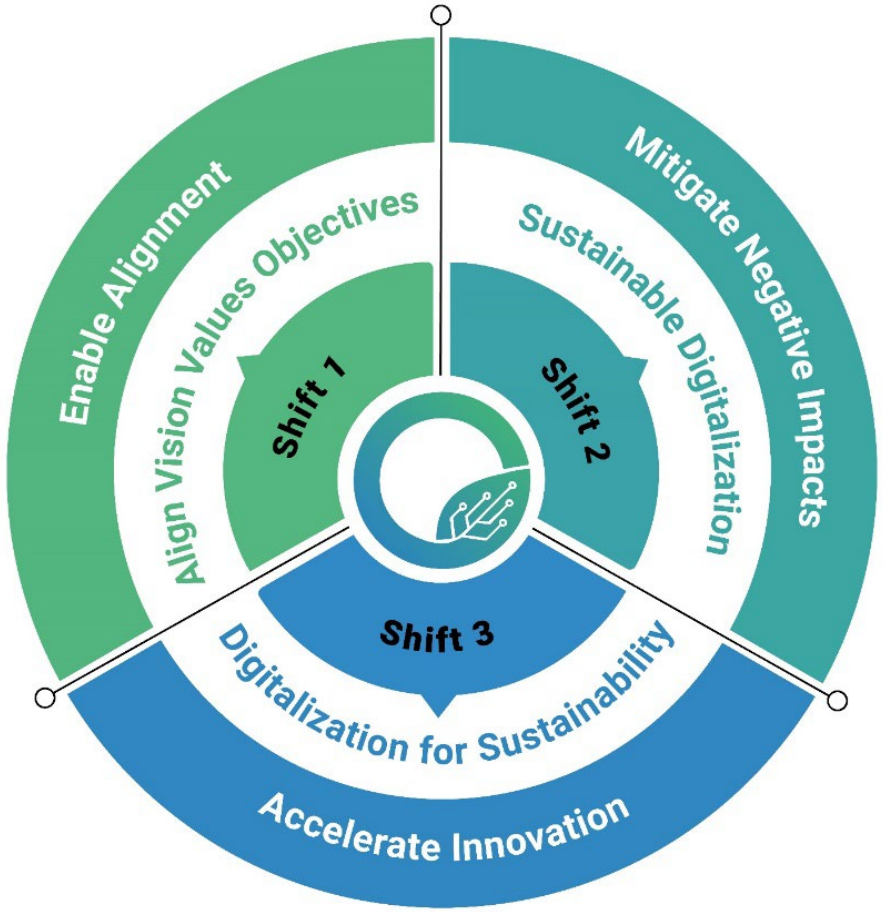


Three important systemic shifts are underway by a range of stakeholders:

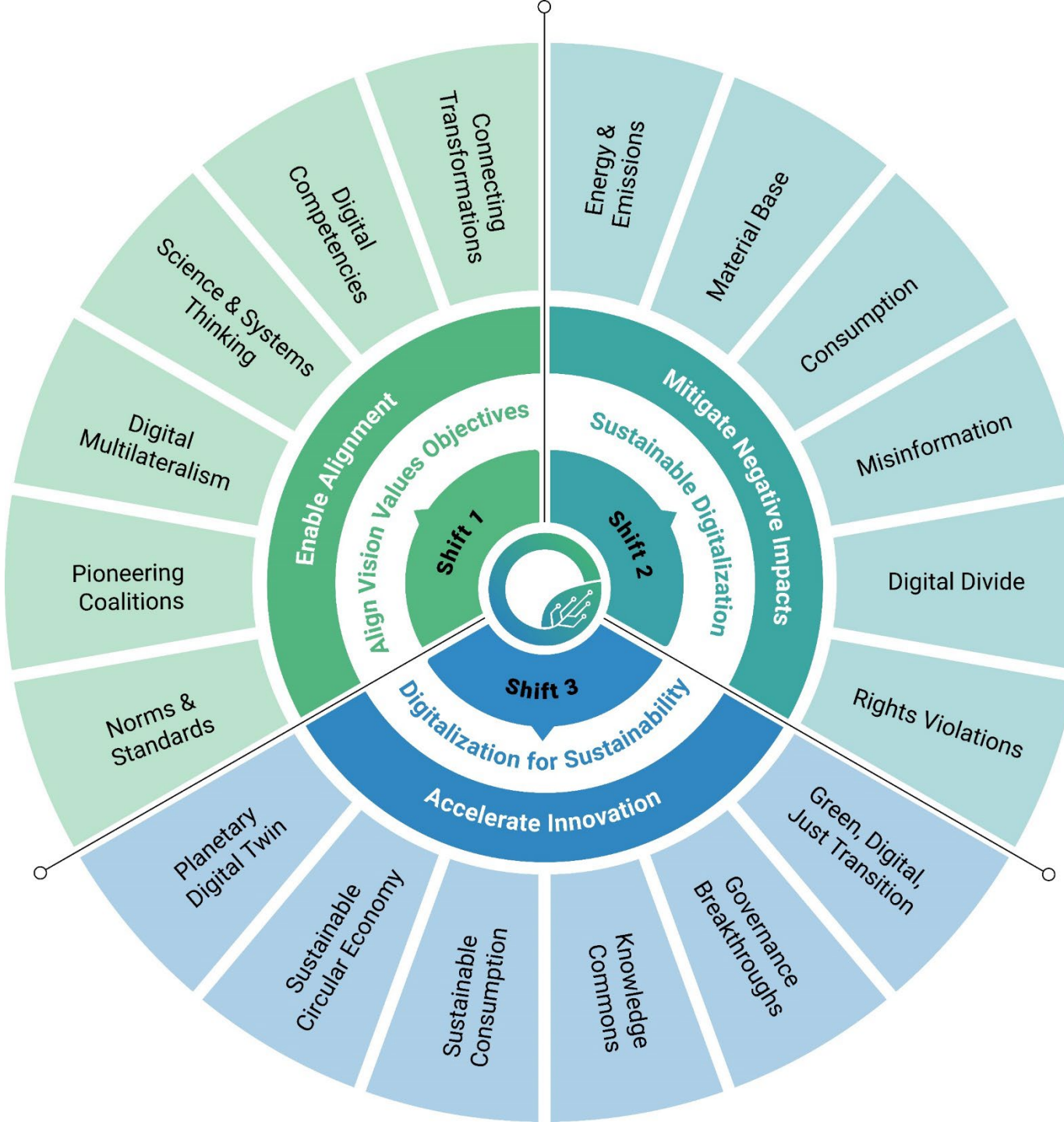
1. **Enable alignment:** vision, values and objectives of sustainable development with digitalization

2. **Mitigate negative impacts:** sustainable digitalization

3. **Accelerate innovations:** digitalization for sustainability

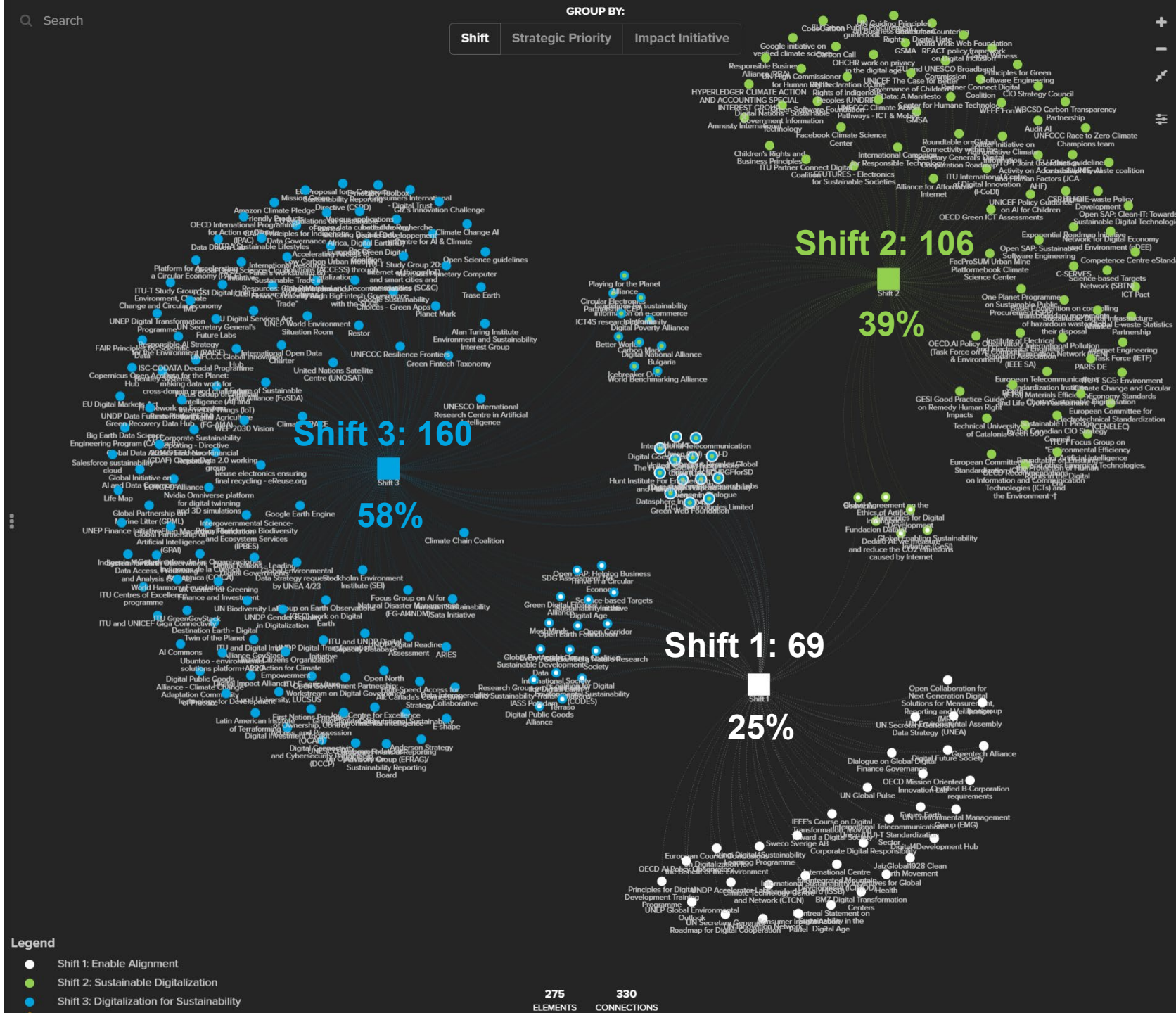


Mapping 3 shifts to different strategic priorities by stakeholders

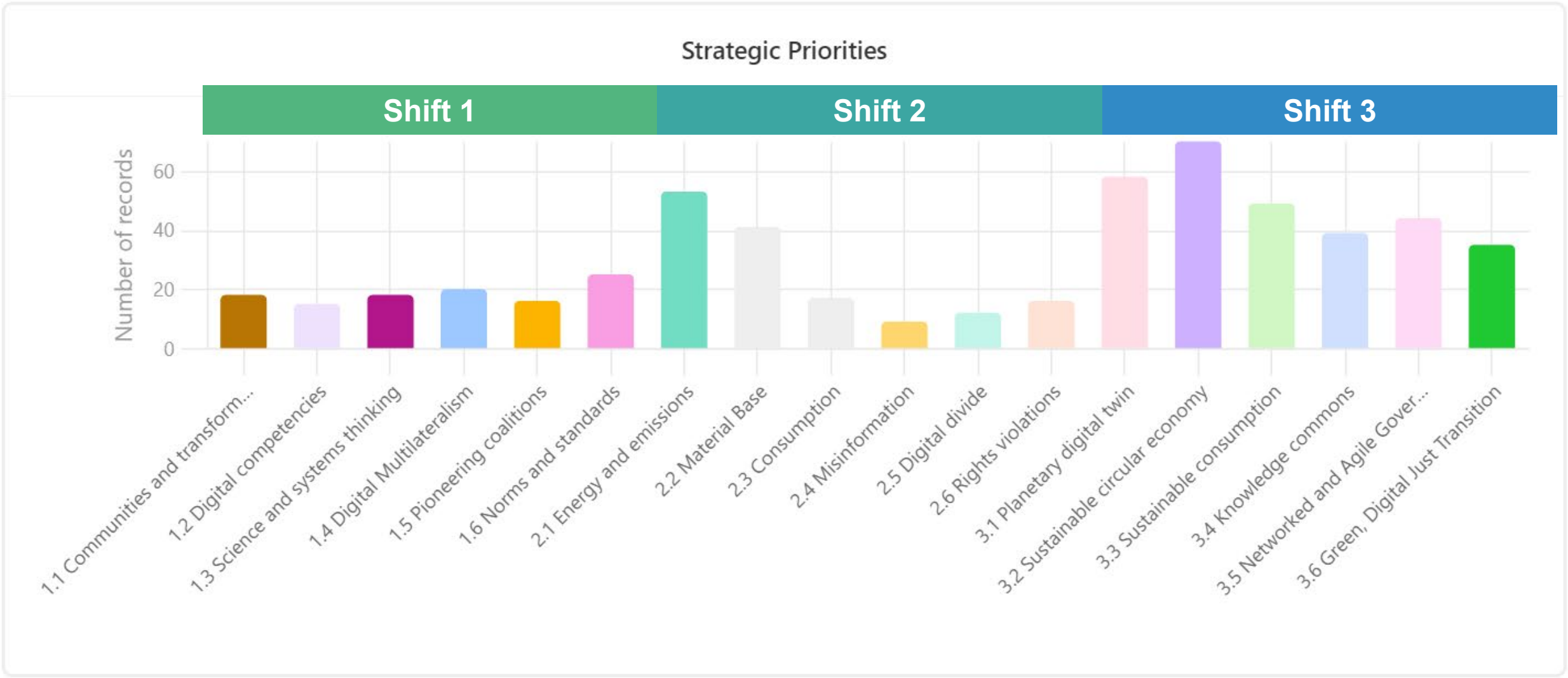


Ecosystem map:

275 stakeholders working against the 3 shifts

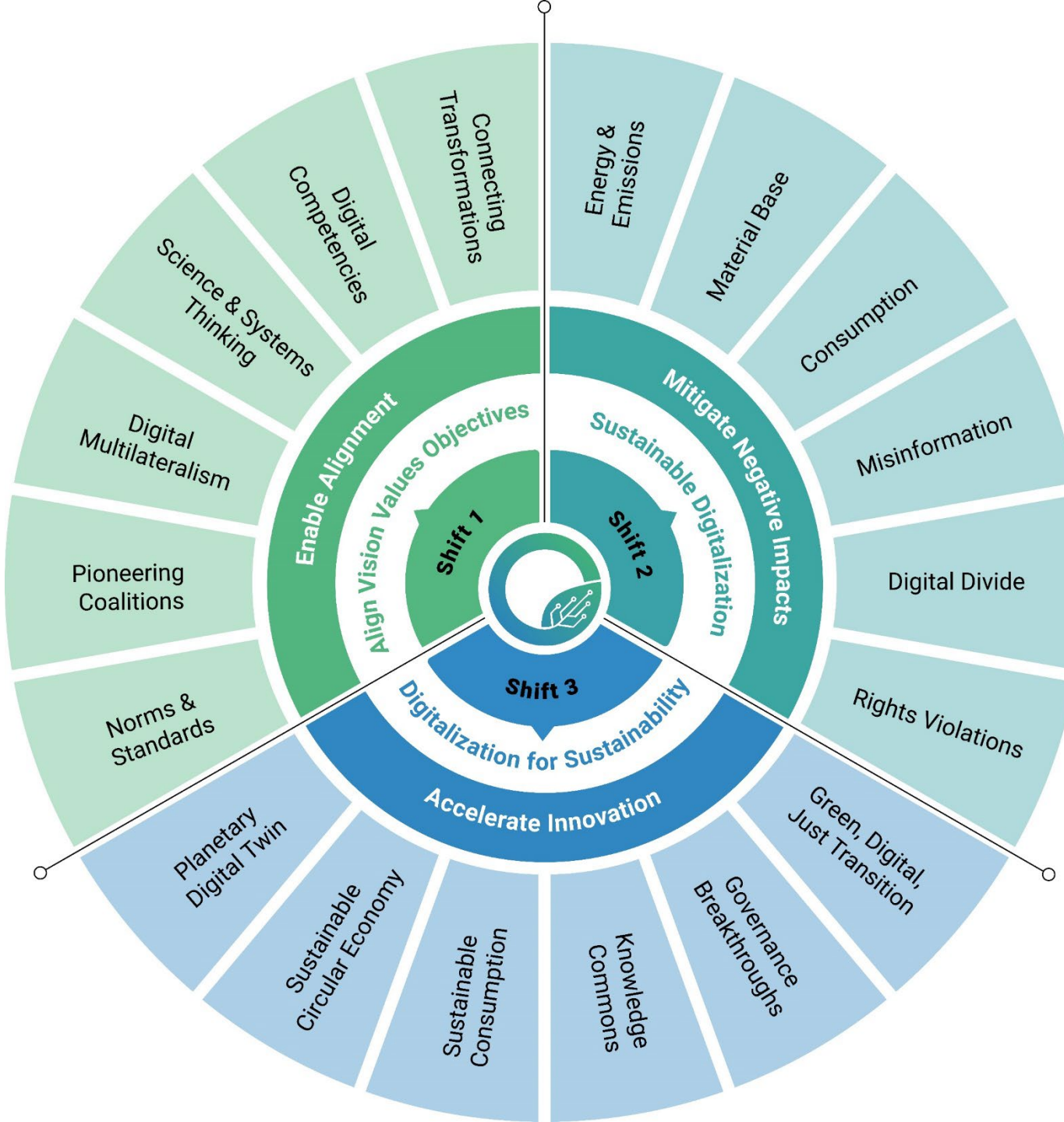


Distribution of organizations working across the 3 shifts



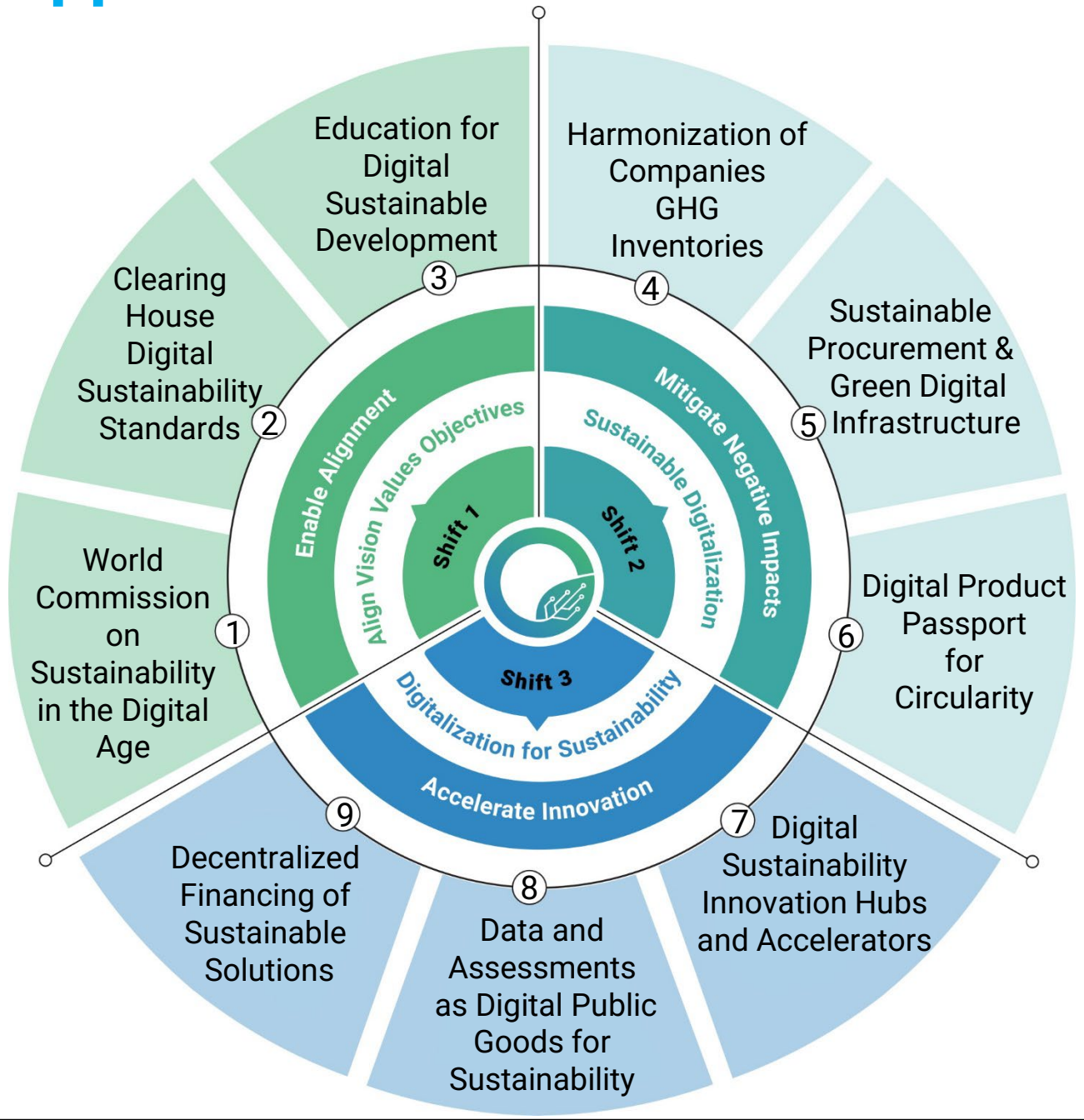
What is now needed to catalzye further systemic change through multi-stakeholder collaboration ?

9 IMPACT INITIAITVES

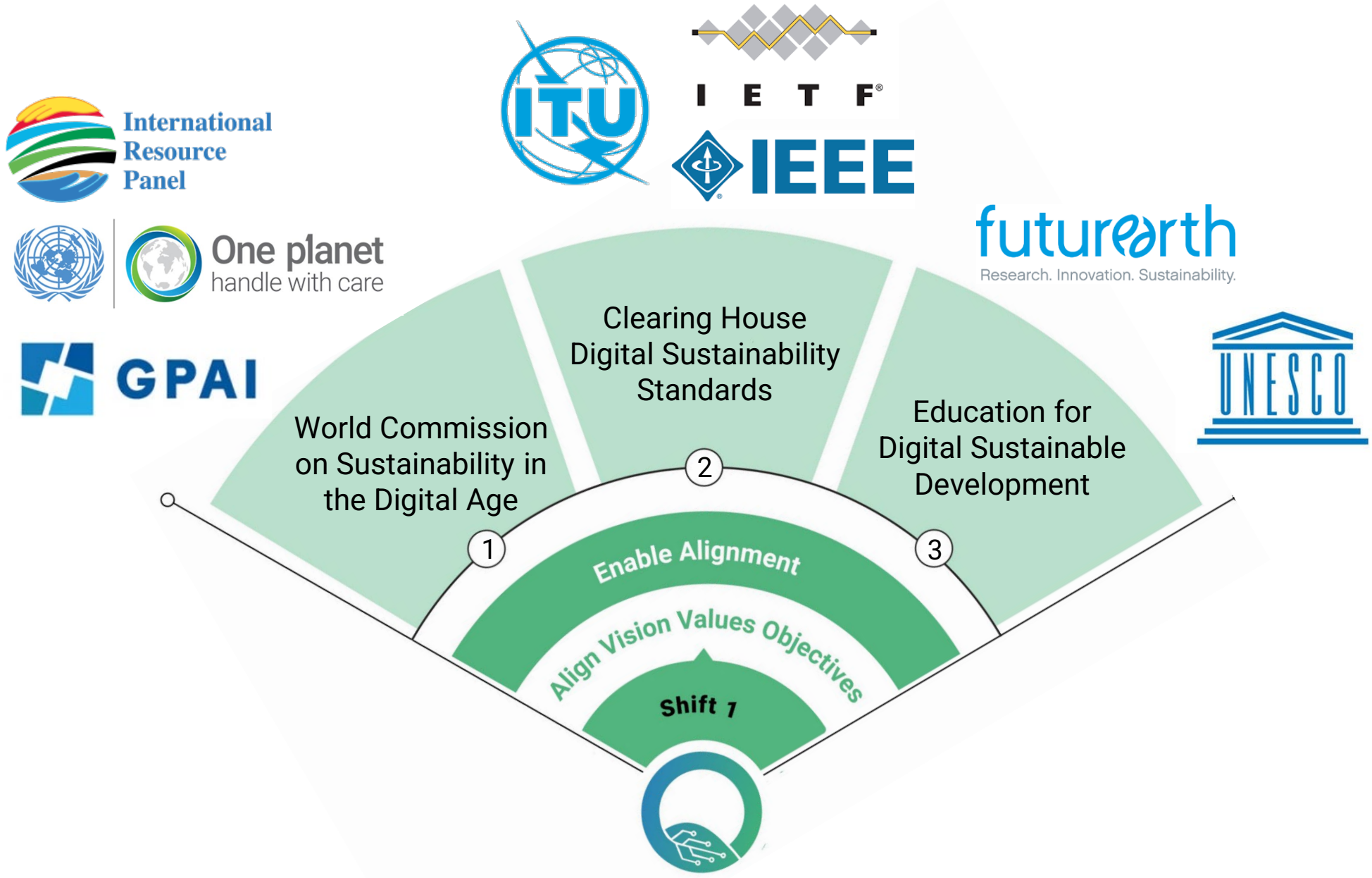


Impact Initiatives: Criteria and Approach

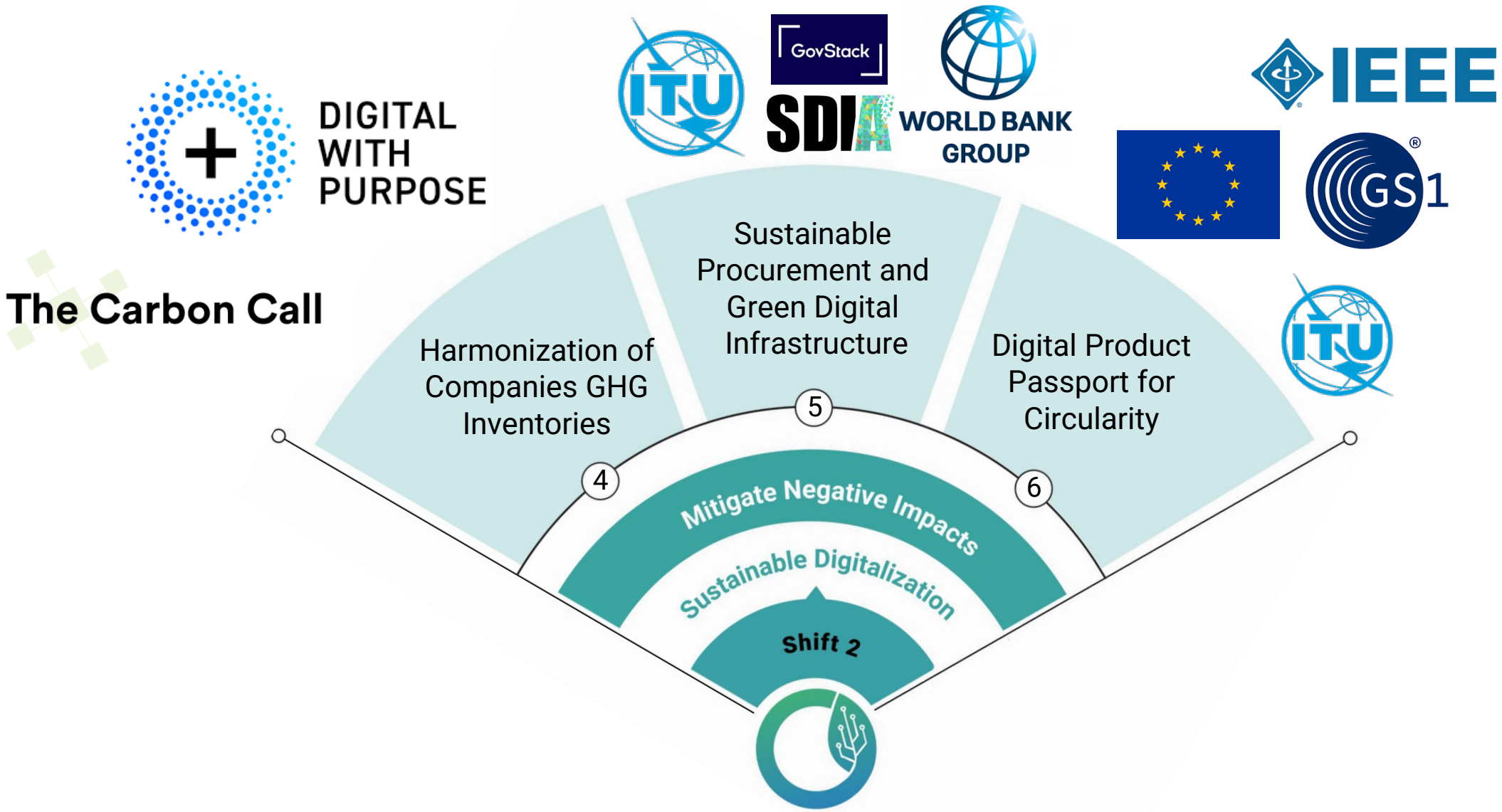
- **Catalyse systems level change**
- **Multi-stakeholder governance model per track**
- **Establish leadership entities per initiative and KPIs**
- **Improved coordination and cross-fertilization**
- **Multi-donor trust fund investment framework**



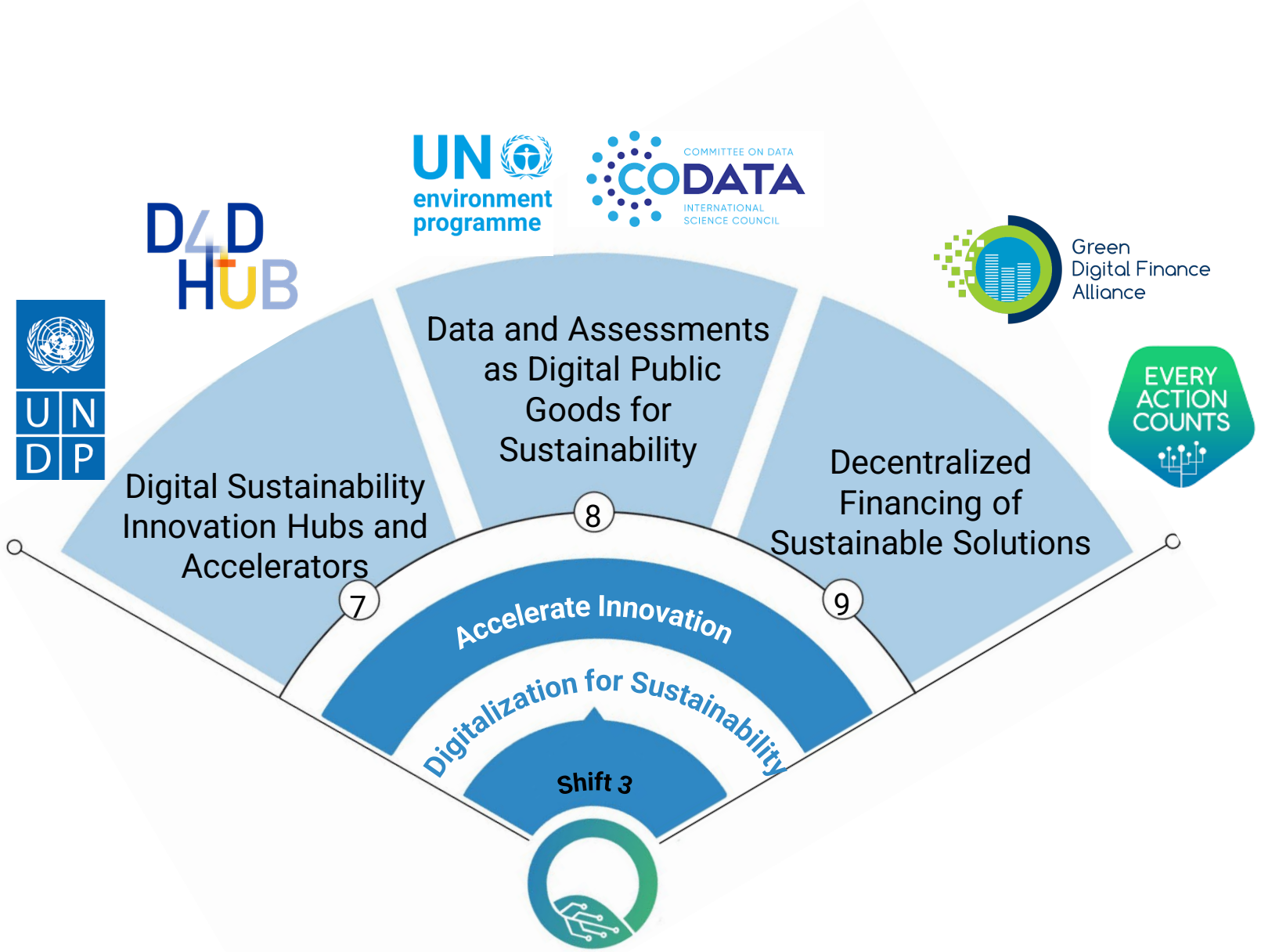
Impact Initiatives for Shift 1: Enable Alignment



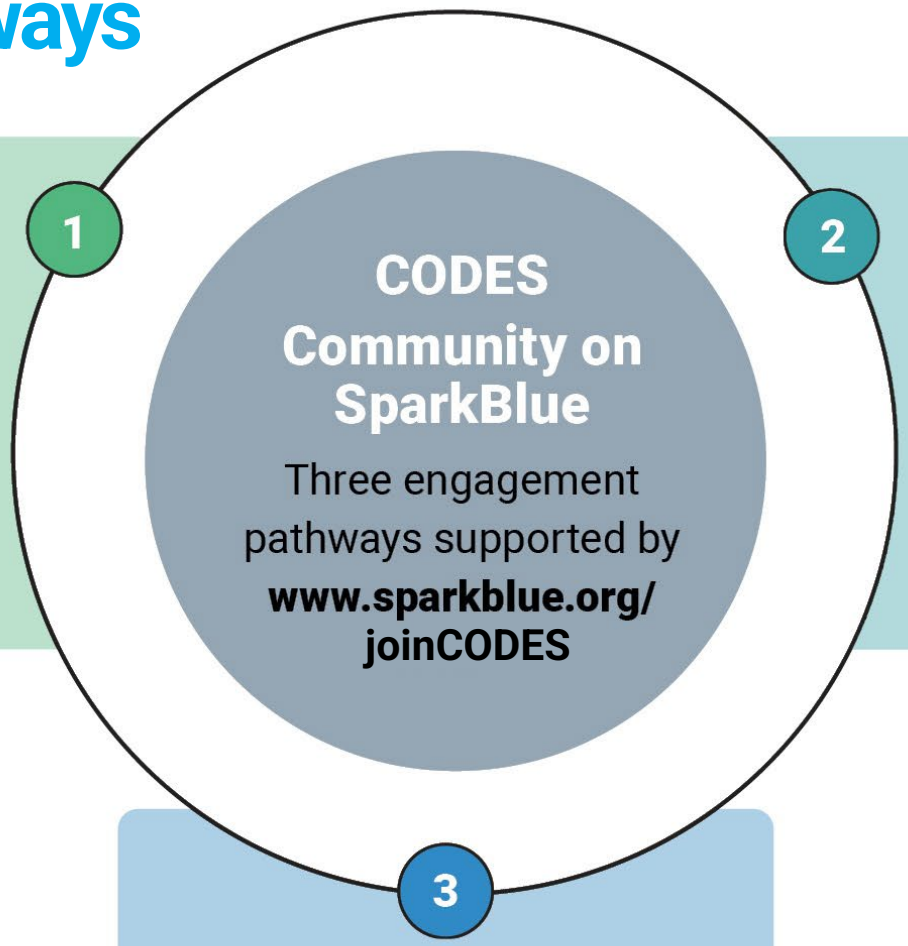
Impact Initiatives for Shift 2: Mitigate negative impacts



Impact Initiatives for Shift 3: Accelerate innovations



3 Engagement Pathways



1. Coordinate

- Contribute to the Impact Initiatives
- Report on KPIs
- Contribute to CODES governance

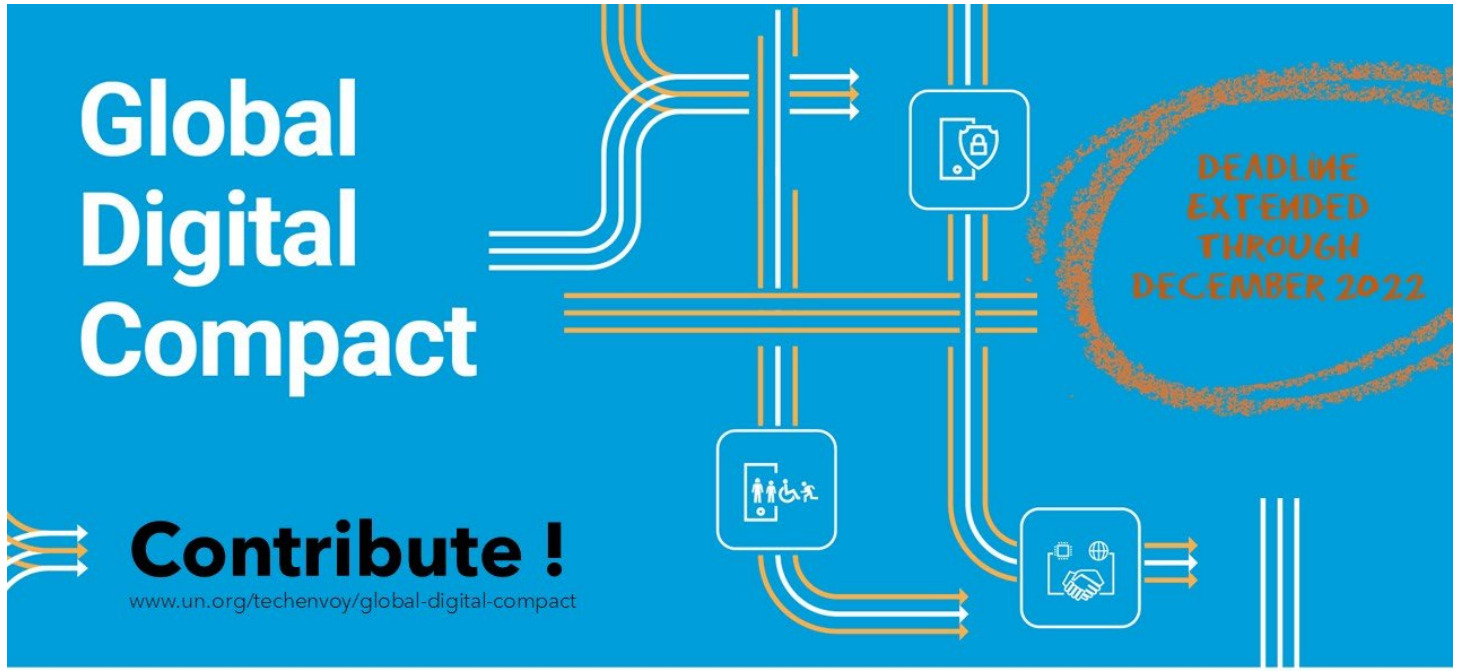
2. Align

- Align activities with 3 shifts
- Annual self-declaration
- Stakeholder map

3. Community of Practice

- Contribute expertise
- Newsletter
- Advocate

On Your Radar: Summit of the Future – Digital Compact



3 Priorities:

1. Sustainability by design for all digital technologies

2. Sustainability by default for platforms

3. Sustainable business models that generate digital public goods

We invite you to read the CODES Action Plan for more details

more information visit:

www.sparkblue.org/joinCODES