

Annex 1: Glossary

Anthropocene	The era of the <i>Anthropocene</i> is the most recent period of planetary evolution where the human footprint has become so profound that it begins to change the course of evolution so much that it calls for humankind to learn how to act as stewards of a livable future for all.
Collaboration ecosystems	<i>Collaboration ecosystems</i> are issue-based human interaction systems, comprised of (cross-institutional) actors aiming to change the status quo (usually a common good) for the better. The change should benefit all actors involved – and the community or society as a whole, and not least the planet Earth. In well-functioning <i>collaboration ecosystems</i> , the diversity of stakeholders brings in concerns, interests and expertise, and learns from one another about their respective thematic knowledge and geographic context. They identify key challenges and articulate goals together and, drawing on their complementary roles, they realize their shared vision. They can operate as networks, organizations, multi-stakeholder initiatives, collective action groups or any other forms. <i>Collaboration ecosystems</i> can exist at many levels of the global society; they can overlap, interact and collaborate with each other.

Collaboration catalysts	Based on researched success factors in multi-stakeholder collaboration the <i>collaboration catalysts</i> are a set of six dimensions that enhance the effectiveness of <i>collaboration ecosystems</i> , if attended to in a patterned composition and relational interaction. The six <i>collaboration catalysts</i> are: Co-designed strategy, cooperative delivery, adaptive innovation, dialogic communication, contextual impact and collective value. They are a translation of the <i>Patterns of Aliveness Theory</i> into ways of making multi-stakeholder collaboration more effective and generate systems aliveness. In relational interaction with the <i>dimensions</i> of the <i>Collective Leadership Compass</i> they guide the co-design of successful process architectures in complex multi-stakeholder initiatives.
Collaboration literacy	<i>Collaboration literacy</i> is the capability of cross-sector or cross-institutional actors to co-design and co-implement transformative change for sustainability collectively. <i>Collaboration literacy</i> is the prerequisite for <i>collective leadership</i> and an essential ingredient of transformation literacy.
Collective Leadership	<i>Collective leadership</i> in the context of sustainability transformations is the capacity of a group of leaders to deliver their contribution to a more sustainable future through assuming joint and flexible leadership in service of the common good. At the core of <i>collective leadership</i> is the human capacity to dialogue and transform differences into progress. It enables the transcendence of self-centered views, a prerequisite for successfully addressing the challenges of sustainability.
Collective Leadership Compass	The <i>Collective Leadership Compass</i> is a meta-level framework that guides attention to mutually supportive factors for effectiveness in complex multi-stakeholder collaboration. The compass helps

Collective stewardship

leaders, and groups of leaders, ascertain how a collaboration pattern can successfully emerge and subsequently derive process intervention strategies. The practice model is the starting point for the explorations into new approaches to stewarding sustainability transformations.

Collective stewardship is the pro-active and collaborative engagement for sustainability transformations by many complementary actors. Together, they foster transformation networks, mutually supportive strategies and multiple pathways to enhance patterns of socio-ecological *systems aliveness*. It is anchored in a sense of responsibility for safeguarding planetary and human wellbeing at all levels of the global society. *Collective stewardship* honors the world as an interconnected system. For conceptualizing *collective stewardship* of sustainability transformations it is important to note that *systems aliveness* is enacted, not created; it is accessed, not produced; it is animated, not managed.

Conceptual architecture for stewarding sustainability transformations

The conceptual architecture for stewarding sustainability transformations is a meta-level framework that provides meta-level conceptual guidance for designing large-scale change by guiding attention to mutually supportive factors for effectiveness in transformative process and systems designs. It connects the linear and action-oriented *collaboration catalysts*, with the *dimensions* of the *Collective Leadership Compass* and the *transformation enablers* in large systems change. Attention to the different layers in planning and implementing transformative change helps built effective *transformation systems* that engender *systems aliveness*. It translates the *Patterns of Aliveness Theory* with its six life-enhancing principles into the day-to-day management of planning and implementing change for

Patterns of Aliveness	<p>systems aliveness around the SDGs and capacitates actors to <i>steward sustainability transformations collectively</i>. <i>Patterns of Aliveness</i> are the relational composition or constellation of transformative and life-enhancing co-creation in natural, human or socio-ecological interaction systems that aggregate to systems aliveness at multiple scales.</p>
Process architecture	<p>The term process architecture refers to the time sequence of informal and formal communicative interactions events that serve the purpose of building a functional collaboration ecosystem and are designed to lead to a desired outcome. The process architecture, ideally the result of collective reflection and agreement, can be seen as a guiding structure, almost like a balustrade that creates reliability and transparency. The more difficulties, conflicts and differences of interest can be expected among stakeholders the more structure needs to be provided by the process architecture. It also helps the collaboration ecosystem develop its own identity and safeguard it from unhelpful interventions.</p>
Sustainability	<p><i>Sustainability</i> is here defined as the ability of humankind to live well with each other, with nature and within the planetary boundaries and their systemic logic.</p>
Sustainable Development Goals	<p><i>The Sustainable Development Goals</i> (SDGs), as part of the Agenda 2030 “Transforming Our World”, alternatively also named Global Goals, are a collection of 17 interdependent goals that convey call to action in order to end poverty, protect the life support systems of the planet and ensure that all of humanity enjoys peace and prosperity. The SDGs inspire and guide Government planning, policy development and implementation, but also encourage non-state actors, such as the private sector and NGOs to align their</p>

Systems aliveness

activities with the targets formulated. Their aspiration is to work in a spirit of partnership for a sustainable way of living that shows responsibility for current and future generations. The 17 Goals and their 169 targets have been developed in a broad consultation process with stakeholders from public, private and civil society sector.

Systems aliveness can be defined as the capability of a systems – small or large – to develop a sufficient degree of vitality and resilience as well as the ability to maintain and renew these in collaboration and interaction with other systems. Systems aliveness is always relational and interdependent. It emerges in mutual consistency with smaller and larger systems. With reference to a pattern approach, *systems aliveness* refers to a recognizable patterned process of *transformations* as well as a recognizable patterned outcome – *sustainability*.

The Patterns of Aliveness Theory

The *Patterns of Aliveness Theory* proposes six essential *life-enhancing* organizing principles that allow *systems aliveness* in socio-ecological systems to emerge and thrive. These principles engender systems aliveness in smaller and larger systems, in natural and social systems, in socio-ecological systems, and at the global level. It is derived from the multi- and transdisciplinary deep dive into Living Systems Theory. The role of this emerging theory is to advance a new mind-set that places life processes at the heart of transformative change, and acknowledges the interdependencies of the living world, from the smallest entity to the planet as a whole. It aims to foster a new way of seeing the nature of reality and is the conceptual anchor for collectively stewarding sustainability transformations.

The six life-enhancing or aliveness principles

The *six life-enhancing principles* of the *Patterns of Aliveness Theory* engender *patterns of aliveness* in smaller and larger systems at multiple scales, in natural and social systems, in socio-ecological systems, and at the global level. If attended to at scale the principles potentially engender *systems aliveness*. The six principles are: (1) intentional generativity, (2) permeable containment, (3) emerging novelty, (4) contextual interconnectedness (5) mutually enhancing wholeness and (6) proprioceptive consciousness. They are derived from the multi- and transdisciplinary deep dive into Living Systems Theory.

Transformation

Transformation refers to change that involves a deeply innovative approach towards thinking and acting, and towards power structures and relationships. It is seen as a complete change in the way humankind operates with each other and the planet in the Era of the Anthropocene. Transformations are the processes through which this new way of operating is brought into reality, durability, scale and impact. Transformations to sustainability require unleashing the human potential to collectively effect change for a better life for all species.

Transformation enablers

Transformation enablers are a set of six identified drivers for sustainability transformations that enhance collective behavior change towards aliveness in large systems, if addressed in a patterned composition and relational interaction. The six *transformation enablers* are: enlivening narratives, enabling structures and procedures, sustainability-oriented innovation, multi-issue, multi-level governance, guiding regulation and resource allocations, and empowering metrics. They are a translation of the *Patterns of Aliveness Theory* into ways of navigating large systems change. In relational interaction

Transformation Literacy	<p>with the <i>collaboration catalysts</i> and the <i>dimensions</i> of the <i>Collective Leadership Compass</i> they guide the stewardship of sustainability transformations.</p> <p><i>Transformation literacy</i> is the knowledge and capacity of a collective of decision-makers, change agents and institutional actors to steward sustainability transformations effectively together across institutions, societal sectors and nations.</p>
Transformation systems	<p>Transformation systems are assemblages of complex and vital collaboration ecosystems comprising of multiple transformation initiatives for sustainability, for example around SDG implementation. Multiple actors, levels, initiatives, and other pieces become part of a larger <i>transformation system</i> when they work collaboratively together in a desired direction. For the implementation of the 17 SDGs to become more effective, change initiatives must identify their role within a larger <i>transformation system</i>, consciously operate in a distributed networked action mode, create synergistic connections across different change initiatives, and stay aware of the movement and effectiveness of the overall large-scale system. Planned interventions towards sustainability need to move from fragmented institutional actions to multi-stakeholder initiatives and further to various initiatives becoming part of a co-designed transformation system.</p>
Transformative process designs	<p><i>Transformative process designs</i> refer to the time sequence of collaborative process architectures that support multiple actors to solve issues of common concern.</p>
Transformative systems designs	<p><i>Transformative systems designs</i> refer to the patterned arrangement of complementary change interventions by multiple institutional actors to address large-scale complex sustainability issues.</p>

Annex 2: Type of Participants and Summary of Results from Inquiry Conversations with Transformation Leaders

The deliberations on the *design of transformative change at the scale* in Chap. 7 are partly based on semi-structured research inquiry conversations.

The author conducted 50 of such inquiry conversations between 2015 and 2017 that included:

- Exploratory dialogic conversations on transformation issues during sustainability-related conferences with speakers or session leaders (10)
- Questions and answer sessions, or interactive plenary sessions with conference participants, where the author presented papers, gave session inputs, or presented a keynote speech (12)
- Exploratory, yet targeted conversations in small groups settings that aimed at advancing the systemic approach to sustainability transformation (18)
- Individual research conversations in person or using communication technologies (10)

Overall the research partners were active on global issues, however, the majority acted from a geographical area located in Europe or the United States. A lesser number of research partners were located in Africa and Latin America. The research partners were chosen based on the following criteria:

- Professional involvement in sustainability issues that included a global perspective.
- Sufficient degree of position, institutional power or leverage to influence sustainability discourses, decisions or development.
- Familiarity with the global discourse on transition or transformation to sustainability.

The conversations explored many issues following the flow and topic that was under discussion. They touched the following main topics:

- Entry points for engagement towards sustainability transformation:
 - Guiding question: *What is your specific field of expertise in sustainability?*

- Deliberations on approaches to transformations:
 - Guiding question: *What, in your view, are the most promising approaches to global sustainability transformations?*
- Perceptions of drivers or enablers of transformations:
 - Guiding question: *What drives sustainability transformations is certainly a set of actors, but if you had to choose the most important, which one would it be?*
- Aspects and prospects for scaling or accelerating transformations:
 - Guiding question: *How, in your view, could transformations to sustainability be accelerated?*

The content of the conversations was documented in different ways: during most one-on-one conversations the author took notes or taped the conversation, if this had been agreed, and later summarized the results in a table format. During the small group conversations the author took notes and summarized the content afterwards. The same process applied to the question and answer sessions as well as the explorative conversations during conferences.

Table [A2](#) summarizes the main results from the research conversations regarding the above-mentioned three topics.

Table A2 Summary of results from research inquiry conversations

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
1	United States	Author, global community organizer on large systems change	Engaged in the conceptualization and promotion of global action network, community organizer for sustainability action on international level	Forming global action networks, bringing together science and practice, understanding the difference between reform and transformation	Creating global networks that drive change cross boundaries of nation states. Building communities for change	Bringing actors together in 'change communities' around certain issues (e.g. food security, water, or transforming in general), overcoming the silos of 'bucket communities', enhancing the discourse on transformation between science and practice
2	Sweden	University professor, advocate and co-developer planetary boundaries	Engaged in conceptualization of science based planetary boundary concept,	Approaching transformation from the idea of planetary resilience, management of biophysical metrics as foundation for transformation	Wide-spread awareness of needed planetary biophysical balance, acceptance of humankind's responsibility to manage planetary boundaries	Self-driven, metrics-based management of planetary boundaries in every country as well as at global scale
3	United States	Lecturer, transformation advocacy, head of research institute	Advocacy for a global mind-set-shift in taking responsibility for future generations.	Research-based advocacy for planetary stewardship of natural assets.	Safeguarding narratives as motivation for global responsibility.	Knowledge-building and engagement for a safeguarding narrative based on new scientific insights.

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
4	Germany	Head of globally active foundation	Engaged in funding and convening international and local reflective dialogues and stakeholder collaboration for local change	Facilitation of processes that bring different stakeholders together, convening collective reflection circles, awareness raising through collective reflection	Realization of human interconnectedness, empowerment through seeing the possibilities to shape the future together	Wide-spread understanding that refocusing on the 'We' and the common interest as key to sustainability transformation
5	United States	Head of NGO, advocacy for narrative shift and new economic system	Engaged in re-conceptualizing the concept of capitalism	Furthering a new narrative of an economy in service of life, promoting human and planetary well-being as cornerstone for sustainability transformation, overcoming neoliberal thinking	New narratives that counterbalance the neo- liberal narrative	Widespread embedding of a new narrative of an economy in service of life in education, business and society.
6	United States	Author, University professor, focus on well-being approach	Reorientation of higher education and business schools towards new economic paradigm	Advancing sustainability thinking at all levels of higher education, self-reflection of business leaders, driving a new narrative of an economy in service of life	New narratives about sustainability as flourishing societies and an economy in service of life, embedding such narratives in education	Systematic anchoring of a new narrative at business schools.

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
7	Chile	Author, theorist, advocate for cognition as process of life	Long-standing well- received research on cognition as the process of life	Advancing an understanding of the role of perception/cognition and communication in reshaping human interaction and interaction between people and the environment	People changing their theories about reality and each other, evolution of consciousness, taking mutual respect as core element of changed theories	Widespread application of processes that enhance new awareness of reality
8	Germany	Head of research and policy advice institute, climate specialist	Long-standing engagement in climate research and future scenarios based on complex non-linear dynamics, physics perspective	Raising awareness of climate risks, promoting resource allocation and regulatory adjustments	Awareness of risks, political arena taking a stance for policy adjustments, international negotiations	Global agreements scaled-down to implementation in each country, financial models that allocate funds to sustainability transformation
9	Switzerland	Managing partner nonprofit consultancy, developer of social change methodology	Supporting multi- stakeholder settings to drive change around issues of common concerns together	Strengthening backbone organizations which catalyze and support collective change endeavors	Commonly agreed goals, experience of capabilities in jointly stewarding collective impact	Local and global communities of practice for collective impact

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
10	Canada	Consultant complex multi-stakeholder change initiatives	Using integral (non- linear) concepts to help actors in multi- stakeholder settings achieve results jointly	Capacitating a system of actors to bring about change collectively, translating non-linear models into the linear day-to-day planning reality of actors	People who are able to see a different future, collective experience of being able to shape future together	Making methodologies for change in multi- stakeholder settings available to a larger number of people
11	France	Senior manager European international agency, involved in G20 consultations	Using a policy and administrative approach to embed global responsibility in government institutions of member countries.	Mix between co-designed guideline development and peer-groups pressure plus transparency of progress to drive change at government levels.	Regulatory frameworks combined with voluntary guidelines, transparency in reporting.	Peer-group pressure between governments of different countries. Co-ownership of voluntary guidelines.
12	Germany	Head of corporate sustainability department, former state minister	Engaged in establishing environmental regulations in Germany, engagement processes across different government ministries	Regulatory approach combined with consultation and stakeholder engagements processes	Shift in thinking about what is possible and what people can achieve together, more wide-spread taking up of responsibility	Decisive political decision-making, policy development and regulations, but combined with stakeholder consultation
13	The Netherlands	Human resource manager global reinsurance corporation	Engaged in promoting sustainability thinking as part of HR, participation in reflective leadership dialogues at international level (through Swedish foundation)	Dialogue and reflection, anchoring sustainability thinking in leadership development, promoting young leaders programs with sustainability focus	Embedding sustainability thinking and reflective skills in companies	Promoting sustainability thinking in large companies

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
14	Germany	Head of global program on sector transformation in development cooperation agency	Long-standing engagement in developing sustainability standards for responsible supply chains, collaboration between standards, and sector transformation approaches	Commodity sector transformation through voluntary standards and multi-stakeholder collaboration for responsible supply chain	Complementary and integrated approaches to commodity sector transformation as collaboration between private, public and civil society sector, voluntary standards as catalysts	Taking a sector transformation view in designing responsible commodity value chains, collaboration between different voluntary standard organizations
15	Germany	Executive director government advisory council	Activist for sustainability and changing the economic systems	Integrating the need for individual mind-shifts into transition research and approaches, integrating niche innovation as core driver of transition processes	Mind-shifts and new narrative about an economy in service of life, translated into concrete actions in the socio-technical landscape, fostering innovation for sustainability	Global networks, advancing the discourse, doing the actual work on the ground,
16	Germany	President of global change community	Long-standing engagement for decoupling, energy efficiency, and	Science-based, using indexes and metrics, influencing politicians and governments to formulate better policies	Knowledge on human impact and transformation possibilities, policy development as main driver, regulations that ensure better balance	Spreading information about advanced sustainability practices, influence in the political arena, wide-spread adaptation of better policies,

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
17	Kenya	Head of mobile communication Company, involved with global sustainability business community.	Engaged in driving sustainability goals in private sector	Taking a selection of the 17 SDG as guidance for business strategy development and implementation	Planning instruments that are oriented towards SDG implementation	Wide-spread adoption of SDG for strategy development of business
18	South Africa	Head of Pan-African NGO, former CEO international advocacy NGO	Engaged in driving global civil society networks, bringing Africa to the table in sustainability transformation	Reshaping the contribution of civil society as drivers for sustainability. Mobilizing young people to engage with a different future.	Democratization of finance system, mitigating and reducing climate change impacts. Specifically engaging young people and bringing them to the table with a new narrative. Developing frameworks for shifts in resource allocation.	Shifting resource allocation. Ensuring the driver role of civil society. Give a voice to young people, especially from Africa.
19	United States	Transformation director, global business community for sustainability	Heavily engaged in driving strategies ensuring large and small businesses take a pro-active role in sustainability transformation	Bring businesses into a community for change	Leveraging business power for driving sustainability transformation, thought leadership advocacy, advancing a new narrative on role of economy	Accelerating systemic change across all levels of the global economy
20	Germany	Formerly secretariat of global knowledge network for sustainability	Supporting the setting up of a global knowledge network on sustainability	Knowledge networks that advance good practices, and spur the discourse on transformation to sustainability	Global knowledge exchange, advocacy through knowledge creation, collective action for sustainability on the ground	Accelerating global knowledge and action networks

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
21	Spain	Director research consultancy for the aviation industry	Engagements for taking the living systems view into the sustainability discourse.	A new approach to innovation, provoking new thinking and a new view of the nature of reality	Anchoring a mind-shift towards seeing the global society as a society of the living that needs to take care of the condition of life to thrive	Developing risk management mentality into a mentality of contribution to a living society.
22	Sweden	Senior researcher at global research institute	Research on systems entrepreneurs for sustainability-oriented innovation	Connecting innovative approaches and innovators across various disciplines.	Sustainability-oriented innovation. Focus on those innovations that are relevant for systems change. Supporting enabling environments for innovation.	Resource allocations towards sustainability- oriented innovation, understanding enabling environments, connecting and creating networks of system change entrepreneurs
23	Sweden	Manager global future-oriented science network	Managing research networks on sustainability transformations.	Driving science to interact with practice in sustainability transformation. Supporting transdisciplinary approaches in research.	Reforming research structures so that they enable true sustainability transforming research. Identifying innovative research approaches.	Advancing the dialogue between science and practice in sustainability transformation.

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
24	United States	Senior researcher international sustainability institute	Understanding collective behavior change in large systems.	Research-driven exploration of individual, societal and global conditions for sustainability-oriented behavior change.	The changing role of narratives as form of collective meaning-making in sustainability transformation.	Widespread understanding of the role of narratives, co-creation of future-oriented narratives.
25	Germany	Scientific director global research Institute	Risk assessment and risk management as guiding force for sustainability transformation.	Research on understanding risk perception as positive driver of decision-making towards sustainability.	Risk analysis and management ad safeguarding narratives. Integrating risk management strategies in dialogic approaches and societal participation.	Embedding risk management strategies in policy formulation and decision-making. Finding ways of reducing complexity in risk perception.
26	Sweden	Senior manager global action network on water	Mobilization of globally responsible, locally relevant action for water security.	Engaging country-based actors into global network on water security, driving exchange and lessons learnt between countries, embedding strategies in national governments.	Driving adoption of regulatory approaches to water management combined with accelerating water governance approaches involving multiple actors at local levels.	Meta-collaboration between different approached so water security and different global initiatives.
27	South Africa	Executive director global business association for sustainability	Integrating global responsibility into leadership development and business school curricula globally.	Combining individual mindset-shift of aspiring leaders with integrating global responsibility as a subject in curricula of business schools globally.	Combining globally responsible narratives with enabling structures in higher education. Overcoming the old school of management education.	Creating a movement of sustainability-oriented business schools.

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
28	United Kingdom	Executive director backbone organization in support of partnerships	Driving collaboration between business and NGOs in the fight against poverty.	Creating new forms of collaboration, both globally as well as on the ground between private sector, NGOs and governments. Creating platforms to support multi-stakeholder partnerships.	Using partnerships and collaboration between stakeholders to overcoming impeding structures and create enabling environments for sustainability engagement of businesses.	Anchoring the partnership approach at the UN-level and creating enabling structures for partnerships at country levels.
29	The Netherlands	Professor at university, head of research center on partnerships	Researched-based promoting of partnerships between government, NGOs and private sector	Showcase the role that partnerships can play in sustainability transformation. Using monitoring and evaluation as an entry point to improving partnership results.	Drive partnerships as a new form of overcoming silo-structures in the implementation of SDGs.	Substantiate current trend towards partnerships with research of contexts, quality issue in partnerships and needs for capacity building.
30	Germany	CEO start-up and sustainability innovator	Development of breakthrough solar energy product requiring widespread societal stakeholder engagement.	Introducing sustainability-oriented innovation for decentralized energy supply of municipalities.	Creating an enabling environment and more explicit government support for sustainability-oriented innovation.	Encouraging self- initiated in sustainability- oriented innovation and combining product innovation with societal transitions to sustainability.

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
31	Germany	University professor; author	Integrating sustainability into strategic management issues of large corporations.	Science-based conceptualization of strategic management and sustainability. Delivering data to show that corporate sustainability engagement pays off.	Of large companies. Convincing companies to invest in strategic positioning of sustainability.	Leveraging sustainability as a competitive advantage.
32	Germany	Head of sustainability center at university, global activist	Driving the sustainability agenda at the university	Engagement of students in cross-cutting sustainability topics.	Knowledge on sustainability issues, network-building and experience exchange for implementing sustainability practices.	Knowledge spreading, students and younger generation as multipliers of sustainability approaches.
33	Germany	Head of sustainability at global consulting firm	Finding ways to integrate sustainability into the management of large companies. Integration of innovation and sustainability discourse.	Using digitalization innovations to drive sustainability.	Leveraging IT and digitalization as drivers for sustainability-oriented innovation. Building and utilizing digital networks as well as digital feedback structures.	Investment in digitalization as prerequisite for accelerating and scaling sustainability transformation.
34	United States	Professor for strategic management	Integrity, ethics and dignity as prerequisite for sustainability transformation.	Revisiting the role of memes as the basis of narratives that further or prevent sustainability transformation.	Narratives (memes) as core drivers.	Anchoring a reflection on sustainability narratives in management science.

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
35	Belgium	Entrepreneur, driving product development for sustainable economy	Product innovation that spurs social innovation.	Integrated product development and societal change management for sustainability.	Sustainability-oriented innovation of products and processes.	Using product development to connect diverse stakeholders and mobilize innovation for sustainability transformation.
36	United States	Professor for management, coordinator of network for new management approach	Taking and ethical approach to management education.	Combining ethics, good governance in corporations and sustainability approaches.	Anchoring a new narrative of an economy in service of life in management education, both in higher education as well as in leadership development in corporations.	Developing global networks around a new and ethical narrative of management that takes responsibility for global sustainability.
37	United Kingdom	Complexity specialist, head of research center, former top manager global IT company	Taking insights into complexity theory into sustainability practices.	Developing mass collective-sense-making methodologies for better understanding of trends and developments.	Collective sense-making as key driver for learning processes towards sustainability practices.	Using digital technologies to scale sense-making methodologies.
38	United Kingdom	Senior lecturer, research institute for development with global reach	Supporting action research in bottom-up empowerment processes.	Nurturing emerging change initiatives and collective sense-making, leveraging collective action for sustainability in communities.	Collective-sense-making processes as prerequisite for empowerment.	Scaling action research for bottom-up empowerment processes.

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
39	United Kingdom	Professor systems theory at university	Leveraging systems theory and subsequent approaches for sustainability practices. Understanding of power structures that hold economic systems in place.	Using collective-sense-making methodologies for collective situational analysis. Developing new narratives and using powerful processes to introduce sustainability narratives at various societal and global levels.	Understanding the role of sense-making as part of governance approaches towards sustainability. New narratives for sustainability combined with overcoming power structures.	Improved science discourse on methods furthering collective sense-making. Anchoring new narratives in business and society, addressing power imbalances.
40	United Kingdom	Independent consultant, former manager World Economic Forum	Understanding of power structures that hold economic systems in place.	Developing new narratives and using powerful processes to introduce sustainability narratives at various societal and global levels.	New narratives for sustainability combined with overcoming power structures.	Anchoring new narratives in business and society, addressing power imbalances.
41	Norway	Government advisor, member global pioneering community	Helping governments in decision-making processes for laws and regulations.	Introducing government regulations and laws that function as strict guidance for changing economic outputs towards sustainability practices.	Taking a regulatory approach, government decisions, policy changes and monetary incentives for sustainable economic behavior.	Making a few governments take a lead, creating peer-group pressure between governments.
42	United Kingdom	Author, independent consultant	Understanding patterned thought processes as key condition for future-making.	Organizing collective action for sustainability on the basis of systems approaches.	Creating enabling spaces for dialogue and interaction that overcome mental barriers to collective action for sustainability.	Driving methodologies that translate non-linear pattern approaches into the realm of linear planning in societal change processes.

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
43	Germany	Journalist, author	Taking new biology insights into the development of policy approaches, advancing new ways of seeing reality based on systemic approaches.	Furthering the discourse between new scientific insights and the political arena.	Anchoring new ways of seeing reality in the public discourse	Creating learning spaces for sustainability transformation in multiple connected circles, integrating science and political discourse on sustainability.
44	South Africa	Former member of truth and reconciliation commission	Taking a first person approach to transformation.	Acknowledging the role of societal reconciliation processes and restorative justice as key element for transformation.	Invigorating humanness as a core connector between the current state of the world and transformation to sustainability.	Enhance global learning on societal reconciliation as a prerequisite for transformation.
45	Argentina	Chief Scientific Officer, multinational textile company	Product and processes innovation towards sustainability	Taking business approaches to sustainability beyond compliance and into contributions to thriving societies.	Redefining the role of the private sector in sustainability transformation, creating narratives and product and process structures that make business active contributors to sustainability transformation	Embedding a new paradigm regarding the contribution to a thriving planet at the C level of businesses.

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Table A2 (continued)

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
46	United States	Professor for management and ethics at University, author	Integrating ethics and respect for human dignity into management education	Advancing a first person approach to transformation by bring the human competencies for empathy and mutual respect to the forefront of efforts towards global change	A new narrative of an interconnected world, seeing human beings as competent of ethical behavior, advancing human rights in regulating activities of corporations.	Advancing human rights, learning from societal reconciliation and transformation processes
47	Island	Professor for sustainable development, University	Long-standing experience in advancing knowledge on regulatory approaches and sustainability modeling.	Combining the development of global and societal well-being indicators with participatory processes.	Overcoming the focus on 'old style' metrics and advancing the global discourse on sustainability metrics.	Making sustainability metrics understandable for the population, empowering people to contribute data to bottom-up measurements of progress.
48	United States	Executive Director Sustainability Business Community	Background in advocacy work for civil society, taking corporations on the route to sustainability	Mixed approaches, developing a grand transformation vision with a new narrative of corporate contributions to sustainability, also working on business-compatible metrics for sustainability.	Developing a set of metrics that the corporate world can understand and apply, but also advancing a new narrative beyond compliance.	Anchoring sustainability contribution as part of reporting mechanisms for corporations.

No.	Country	Role/position/ expertise	Entry point for the engagement for sustainability transformation	Approaches to sustainability transformation	Identified drivers of transformative change	Scaling transformation
49	United States	Executive Director Philanthropy Circle	Helping global philanthropists take a systemic approach and go beyond project financing.	Connecting innovative actors and global philanthropists.	The actual working together, making people feel they are part of a larger systems working towards sustainability.	Creating an open learning space between philanthropists that give large amounts of funds to innovative actors.
50	Australia	Former senior manager global accountability, international development NGO, former senior manager global network on water	Long standing experiences about success and failure of developmental approaches	Creating convening spaces for learning around sustainability approaches	Organizing learning on sustainability approaches and practices in multi-stakeholder settings	Scaling a global discourse on sustainability transformation in multiples dialogic spaces.

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