Evaluating the Effective Use of Guiding Principles for Transformative Online Collaboration in the Transformation Systems Mapping and Analysis Working Group

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ABSTRACT

This paper explains the effective use of guiding principles to foster transformative online collaboration (TOC). TOC describes the ability of an online network to collaborate with a vision of creating and mapping planetary well-being, ecological sustainability, and social equity, in an emergent and open-hearted way. The network research is conducted in the Transformation Systems Mapping and Analysis Working Group (TSM&A WG). The study triangulation includes focus group discussions, interviews, and a social system map analysis of the network. The evaluation is done with the GUIDE framework regarding the principle's guidance, usability, inspiration, development, and evaluation. The behavior approach for TOC roots in concepts like Theory-U and Spiral Dynamics.

The results show the critical importance of shared principles and their enactment for safe and open collaboration. They facilitate deeper online collaboration in the field of Transformation-Systems (T-Systems). Findings further include the future development of the members' value framework and ways to enact and integrate the principles in the network. Supported by literature, the principles are evaluated for change and modification. The paper offers a complete set of guiding principles for TOC, created after adopting new overarching and operational values. Further, the study proposes and discusses new implementation practices to enhance the members' principle embodiment for TOC.

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INTRODUCTION

The purpose of this study is to identify the effective use of the guiding principles to support transformational online collaboration (TOC) in the network environment of Transformation-Systems (T-Systems). TOC is determined by the ability of network members to collaborate online towards a shared vision of creating and supporting transformation systems for planetary well-being, ecological sustainability, and social equity. This requires emergent and open-hearted attitude within the network, to tune in to what is needed from a point of heightened awareness (Edward et al., 2018; Laloux, 2014; Scharmer, 2009).

With rising complexity in climate change, pollution, landscape and biological changes, economic and social injustice, and weak governance structures, deep collaboration is crucial to work with T-Systems (Olsson et al., 2017; Steffen et al., 2018). T-Systems are radically new systems for more sustainable and harmonious human-environmental interactions (Herrfahrdt-Pähle et al., 2020; Olsson et al., 2017; Walker et al., 2004). They are non-linear and often disrupt the status quo with new approaches of problem solving (Herrfahrdt-Pähle et al., 2020). E.g., economic approaches including the circular economy, circular cities, the sharing economy, as well as a rise in cross-sectional networks to share know-how from new angles.

THE TRANSFORMATION SYSTEMS MAPPING AND ANALYSIS WORKING GROUP

In 2020, the need to map and analyze T-Systems emerged in four networks: The Regenerative Communities Network, the SDG Transformations Forum, the Blue Marble Evaluation, and the International Geo-design Collaborative.[1] Glenn Page, MSc, and Per Olsson, PhD, formed the Transformation Systems Mapping and Analysis Working Group (TSM&A WG) to develop the field. The TSM&A WG maps ongoing T-System changes, including projects, stakeholders, value chains, circular economies, and facilitates interactions of individuals in the field to exchange upon best practices and skills. It supports the members' individual work and the work of their home-organizations. It brings like-minded, value-driven, cross-sector professionals together. Supporting the development of T-Systems that are aligned with the Sustainable Development Goals, keeping human civilization within the nine planetary boundaries, and guiding a collective shift in consciousness (Page et al., 2020; United Nations, n.d.).

It is a global network that collaborates online in written, spoken, video, and visual forms on diverse platforms and tools, including emails, Slack, Zoom, Miroboard, TeamRetro, GIS-mapping, 7Vortex, and Kumu SumApp. It supports collaboration by mapping and exchanging new and existing technology, research, tools, and policy solutions that support processes of sustainable transition (United Nations, 2015; Wamsler et al., 2020; Page et al., 2020). E.g., mapping the tools needed for online exchange, mapping the biosphere of an area to support local development, holding space to decolonize and incorporate indigenous science, mapping career and educational opportunities, as well as organizing "coffee meetings" to speak freely, create trust and invite humanness in collaboration – because navigating T-Systems network exchanges requires unique skills, diverse knowledge of social-economical, educational and cultural backgrounds, non-hierarchical operational spaces, and clear visions (Wamsler et al., 2020). It is crucial to understand that, despite very different backgrounds and knowledge systems, everyone is the same.

COLLABORATION WITH SHARED VALUES

In the case of the TSM&A WG, all members work voluntarily with intrinsic motivation and are often experts in their T-System field. As high task abilities and inherent motivation induce higher engagement, the network has high engagement potential (Kippenberg et al., 2004). Further, cross-cultural and cross-sectional engagement with shared values (1) enhances faster adaption and learning, (2) increases stability, and (3) creates a competitive advantages in complex environments (Dayaram et al., 2012; Khurana, 2015; Őnday, 2016; Patton, 2020; Scharmer, 2009).

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1   So far, the four networks have no other generative overlap. The Regenerative Communities Network supports learning cycles within and across communities, creates regenerative capacities and aligns capital towards these initiatives. The SDG Transformations Forum aims to mobilize and advance leading knowledge and tools of transformation knowledge to support lasting change. The Blue Marble Evaluation Network aims to evaluate various initiatives and their impact on the Earths system. The International Geo-design Collaborative uses (GIS)-based design and analytic tools to explore and re-imagine alternative future scenarios for sustainable problems.

Leveraging this engagement potential is crucial for any network's success. Yet, determining shared values as a guideline for ethical engagement is challenging with diverse cultural and professional backgrounds. This is due to the members' predominant value systems, which create differences in acting and thinking, direct and indirect communication, understanding of status and time, and adherence to authority (Rosado, 2006; Singh, 2013). Additionally, global networks are challenged by the online environment. Even though technology is an increasing game-changer for transformational development, the personal separation in terms of space and time remains abstract. Literature recommends using an online collaboration methodology and structure-oriented value framework for cross-sectional learning and (inter-) actions (Caulfield et al., 2020; McKinney, 2008; Seele et al., 2017). This helps to align the personal, collective, and systems values to lead ethical thought and behavior in collaboration (Laloux, 2014; Wamsler et al., 2020).

PRINCIPLES AS T-SYSTEMS GUIDING STRATEGY

The network created a set of eight initial principles, as such guiding methodology (Page et al., 2020; Page et al., 2021). They included important factors like empathy, continuous learning, and appreciation of different ways of communicating and relating, as well as understanding values as a concept (Köpfer, 2012; Rosado, 2006; Singh, 2013; Patton, 2018). They create an environment of safety where all contribute and integrate their unique skills and knowledge systems (Őnday, 2016; Köpfer, 2012; Wamsler et al., 2020). As the TSM&A WG works in a non-hierarchical structure with many subgroups, the principles provide a roadmap, to align the members' vision with the T-Systems vision (see *Figure 1*). All members must endorse them for starting the network collaboration.

Figure 1 The initial TSM&A WG principles.

Source: Page, et al. (2020, p. 5–6).

1. **Unity in Diversity**
Controversy with Civility. We trust that we are all at the table to serve a common purpose such as the realization of the SDGs and a just transition to a regenerative economy. In pursuit of these universal goals, we find strength in our different views and experiences. We expect and honour such differences, and share a group commitment to understand the sources of disagreement and to work cooperatively toward common solutions.

2. **Challenge ideas, not people**.
By attending with curiosity, compassion, and courage, we advance collective learning and understanding of ideas in our "ecosystem" of members, beyond the "egosystems" that easily dominate.

3. **Call out to call in.**
Remembering that we're united by a common purpose and shared commitments and that we're all works in progress and perfection is an illusion, we commit to holding each other accountable to our word and our best selves. We are willing to name behaviours or actions that do not work in service of shared commitments so that we can each better adapt and evolve together

4. **Own your intentions and your impact.**
Even with the best of intentions, our words and actions may impact others in unintended, harmful ways. We show up willing to take responsibility for all aspects of our communication and to be curious and compassionate with others. We also assume good intentions and listen for mutual understanding.

5. **Step-up/ Step back**
Be aware of the larger flow of conversation and which voices and perspectives may be dominating. Help ensure that all voices are given their space, including your own – step up, or step back, as needed.

6. **Respect Vulnerability and Confidentiality.**
High performing learning networks are those characterized by high levels of trust and reciprocal vulnerability. We are a community that is willing to share openly with one another. We acknowledge that vulnerability provides access to collective power that is generative for our communities. Yet, we also acknowledge we operate in a world structured by often oppressive power dynamics and uneven distribution of risk and privilege. As such, we are mindful of these unconscious patterns and we go forth "with trust"– being careful to honour confidentiality and practising consent.

7. **Appreciation and Attribution, not Appropriation**.
When we openly share ideas and resources in a co-creative environment, it is all too easy for us to forget where an idea originated, and to go forth as if it is our own and run with it. This is especially true for those with more institutional power. By actively practising gratitude – both by expressing our appreciation for a gift and attribution for those who gave it – we not only foster healthy relationships and build on our collective strengths, we also experience abundance and other benefits of gratitude practices.

8. **Integrity: Honor Our Word.**
When we give our word to abide by the principles above, and to new commitments that arise in the course of our work together, we pledge to hold ourselves accountable as well as one another. We are imperfect people in constant evolution. In the case that we break our word, we will take action to restore it by being in communication. In this way, we continue to learn and adapt together in service of our collective vision.

Principles are designed from values, expertise, experience, and research to guide thinking and behaving (Patton, 2018). Grounded in deep ethical values, they are a tool for consistent and coherent steering of change in group governance and evaluation. Beyond only focusing on outcomes, such as the United Nations Sustainable Development Goals or the SMART framework, they inform a pathway of collaboration to accomplish shared goals. In networks and organizations, they create a safe environment to co-design the internal culture and vision (Op 't Land and Proper, 2007; Patton, 2018).

Even though the use of principles is still an emerging concept, various organizations and social movements adopt guiding principles to envision and stir organizational actions in complex environments. Examples principle uses include the Earth Charter to guide planetary well-being, the Blue Marble Evaluation Principles as an evaluation model, the Principles for Healthy Community Building for planning and designing healthy communities, and the Digital Media Principles as marketing design principles (Earth Charter, 2020; Patton and Campbell-Patton, 2020; Reyna et al., 2018; Wolff, 2010). All to be interpreted in their context and situation for relevance and adaptivity (Patton, 2018).

EVALUATING AN EMERGENT FIELD

Yet, having launched the TSM&A WG principles to support TOC, their impact remained unclear and a formal revision was needed. Literature advises regular evaluations of the principles' enactment related to the network's purpose of exchanging and mapping for a sustainable future (Patton, 2020). Assessing the principles helps to identify if the network remains relevant and moves the T-System field forward. However, the non-linear nature of T-Systems challenges group evaluations related to a set framework (Wamsler et al., 2020). Thus, network members should learn how to evaluate progress within subgroups (Schwaber et al., 2017). Fiksel et al. (1999) identified four dimensions to measure sustainable value, e.g., used in circular economies (Feldman, 2017). They included: (1) the duality of resource and value creation, (2) the triple-bottom-line of economic, environmental, and social value, (3) the stages of "product" life cycle, and (4) process indicators and outcome indicators (Fiksel et al., 1999; Feldman, 2017).

These values reflect the most important aspects of the T-System structure, yet are too broad and fast changing due to the unknown and invisible development of the stakeholders involved, and the limitations of linear measurements (Olsson et al., 2017; Wamsler et al., 2020). Hence, a more adaptive and principle-focused framework is needed for complex environments (Patton, 2018; Patton, 2020). Thus, this study uses the GUIDE framework, to evaluate the effective use of the TSM&A WG principles to support TOC. This clarifies the extent to which the initial principles are already and can still be further integrated into the network's members actions, and how the TSM&A WG principles portray the members values and can be improved to integrate missing values. Offering a (re-)design for new principles to support TOC.

CONCEPTUAL FRAMEWORKS

For the research study, three core frameworks are used, as described below.

1 | ITERATIVE CYCLE

The iterative cycle is used to identify if the concept of principles can be merged with the idea to develop an additional value framework to the TSM&A WG (Smartsheet, 2020). *Figure 2*, shows this in Cycle 1 as the principles in their evaluative state. Cycle 2 shows the value framework development in the planning stage. This is done to identify if both developmental processes can, and are wanted by the network to, become one.

2 | SPIRAL DYNAMICS

The framework of Spiral Dynamics from Edward et al. (2018) and the organizational models of Laloux (2014) support the connection between the development of human awareness and the unfolding of high human potential and engagement in creating something greater than the systems in which one operates. Both support that higher human consciousness in thought and action increases collaboration through shared purpose, compassion, understanding, and mutual growth orientation. This is closely linked to the Theory-U, where one is fully present
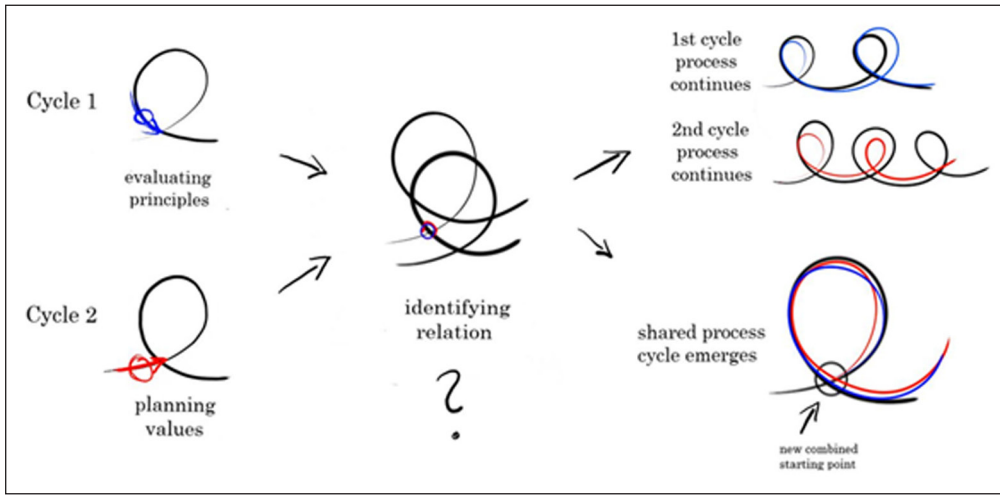
Figure 2 Possible relations of iterative development cycles.

with the team and process, to let go of remaining expectations, and open up to receive and create from a deeper level (Scharmer, 2009). The collaborative network behavior is categorized in lower-level and higher-level behaviors where higher-level behaviors are transformative collaboration actions. The principles are a tool to bridge these behavior levels to increase collaboration. Stimulating awareness, the principles guide to level-up human interactions and behavior on low and higher levels. Ultimately, supporting the upward spiral of lower-level behaviors towards higher-level transformative (online) collaboration.

3 | GUIDE FRAMEWORK

Focused on the intended principles-use, the GUIDE framework addresses non-linear, dynamic, and unpredictable TOC patterns (Patton, 2018). It is a tool to evaluate, cluster, and re-design the initial principles for improved wording, structure and direct actions required for principle work in complex environments. The framework is composed of five criteria which evaluate if the principles are (1) guiding, (2) useful, (3) inspiring, (4) developmental, and (4) evaluative. Needed changes in the principles to GUIDE TOC more effectively are identified. *Figure 3* shows the criteria that are further elaborated successively (Patton, 2018, p. 36).
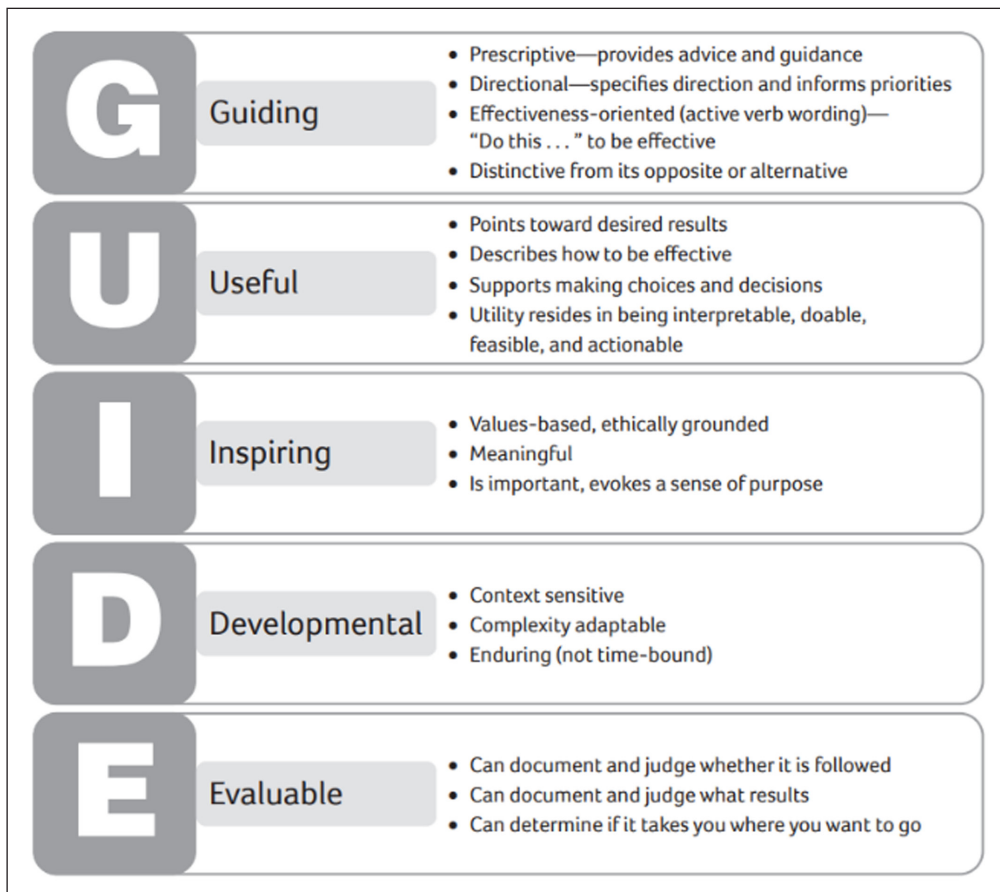

Figure 3 The GUIDE framework. Source: Patton (2018, p. 38).

DESIGN AND METHODS

The purpose of this study is to identify the effective use of the TSM&A WG's initial principles to support TOC in the network environment of T-Systems. The initial principles are evaluated upon how they are, and can still, be further integrated into the network's members' actions. This includes the extent to which the initial principles portray the values of the TSM&A WG members and which additional values are needed. Ultimately, identifying key values for TOC which are important to further develop the principle in wording and structure.

The cross-sectional exploratory and evaluative research is conducted with a qualitative approach. A data triangulation of focus group discussions, interviews, social system map, and literature ensures the research quality. This processing values.

STUDY POPULATION AND SAMPLING

The study population includes all active members of the TSM&A WG. For the focus group discussions (FGDs) and interviews, a non-probability sample of Conveners and Fellows is representative. Conveners and Fellows are regular members of the network who chose to co-facilitate topic-related subgroups, so-called workstreams. Workstream facilitators manage network dynamics, including the principle-enactment, value discussions, and administrative work. They have an academic background, mostly working in the entrepreneurial field, non-profit sector, and science. For this research, they represent their workstreams, not their organizations.

In the FGD, the Inner Dimensions workstream (WS), the Integration WS, the Anatomy of a Crisis WS, the Unifying Framework WS, the Gulf of Maine WS, the LatinAfrique-Xchange WS, the Mapping Toolkit WS, and the Defining Transformation WS were present. Participants age ranged from 19 years to 63 years. They came from the USA, Sweden, Great Britain, Zimbabwe, France, and the Netherlands. Both FGD groups consisted of mixed gender and various ethnicity. The perspective of one external participant was taken into consideration in the second focus group discussion due to an informed and constructive external perspective.

The convenience sample of the network's social system map, called SumApp, represents the population of all network members who are part of the SumApp (SumApp, 2020). It includes all members who signed up and filled out the survey before November 30th, 2020.

DATA COLLECTION

The data collection methods is based on the literature, frameworks, and network set-up. All fieldwork was done with informed consent of the participants.[2]

FOCUS GROUP DISCUSSIONS

Based upon the network's global spread and online communication structure, the two FGDs were conducted in an online conference setting (Ritchie et al., 2013). Both FGDs lasted two hours, with seven participants. A semi-open questionnaire addressed the research and sub-questions. One researcher facilitated the discussions based on a protocol and script. Participants discussed directly with each other and explored topics collaboratively, allowed for related topics and examples to emerge naturally. The special one-time setting and safe environment incited spontaneous interactions with more knowledge input.

INTERVIEWS

For the follow-up interviews, three additional Fellows were interviewed with a semi-structured interview protocol based on the FGDs. They were selected from the sample, based on missing data. Interviewee 1 was selected as his contribution to the discussion was sharp but small. Interviewee 2 was selected as an evaluation professional for principle-based evaluation methods and development. Interviewee 3 was selected based on high engagement in the TSM&A WG and an unprejudiced approach towards the eight principles, their use and the idea of common values.

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[2]   For detailed information regarding the focus group discussions and interviews (questionnaires, protocols, and script), the SumApp and the forms of consent, please contact the author.

SUMAPP

The networks *social system mapping platform*, SumApp, maps the internal member structure and makes it easier to identify roles, needs, and possible collaboration patterns. For this study it is used to understand what the wider member context, besides Fellows and Conveners, thought about the principles and if this was aligned with the FGDs data. Thus, recommendations and "*comments about the principles*" were collected for deeper insights and reliability (SumApp, 2020).

The data was selected directly from the members comments and transferred to a text document for analysis. The documents preliminary structure emerged from general thoughts and the principles. Data included how the principles could be lived and reinforced in the network and proposed changes for the principles, e.g., *Figure 4*. All SumApp data is accessible to the public (SumApp, 2020).
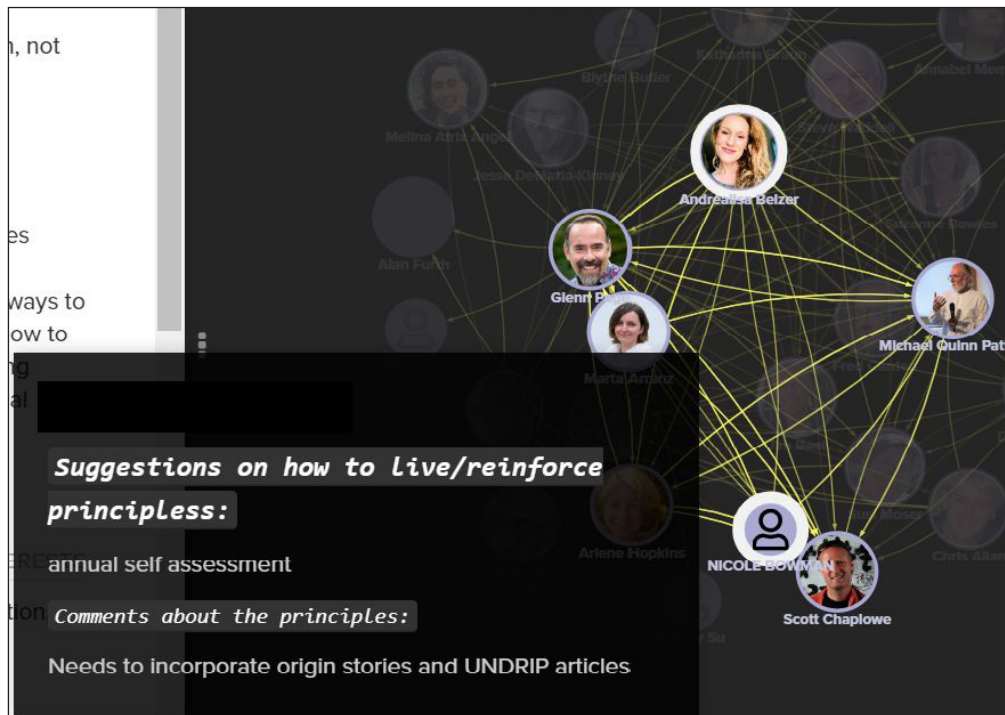

Figure 4 Simple SumApp example for comments on the 'principles'.

DATA ANALYSIS

After preliminary jotting of FGDs and interview ideas, the recordings were transcribed for text analysis. The SumApp document was restructured according to proposed changes and the frameworks. Both documents were fed into the tools MAXQDA and 7Vortex for analysis.[3]

DATA PREP AND CODING: MAXQDA

MAXQDA was useful due to its efficient functionality to synthesize the data towards the theoretical concepts. Even though the deductive coding frameworks existed, the researcher first coded inductively with split coding (Corbin et al., 2015). This enabled out-of-the-box thinking, by analyzing each transcript individually while expanding on the emerging open code structure. The codes were then related to the frameworks; all transcripts were re-analyzed, and codes resorted.

With the GUIDE framework, the codes were divided into the themes of Guidance, Usability, Inspirational, Developmental and Evaluative. Then, the codes were sorted in categories and sub-categories. The Spiral Dynamics framework became a sub-category, within the Developmental theme, to identify the principles implementation practices towards collaborating more consciously, by bridging lower level and higher level collaboration behaviors in the TSM&A WG.

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3   For detailed information regarding the focus group and interview data, transcripts, the social system map data, coding and 7Vortex mapping, please contact the author.

For the specific feedback integration towards the principle-development, the principles were further used as thematic coding framework, as seen in **Figure 5**.
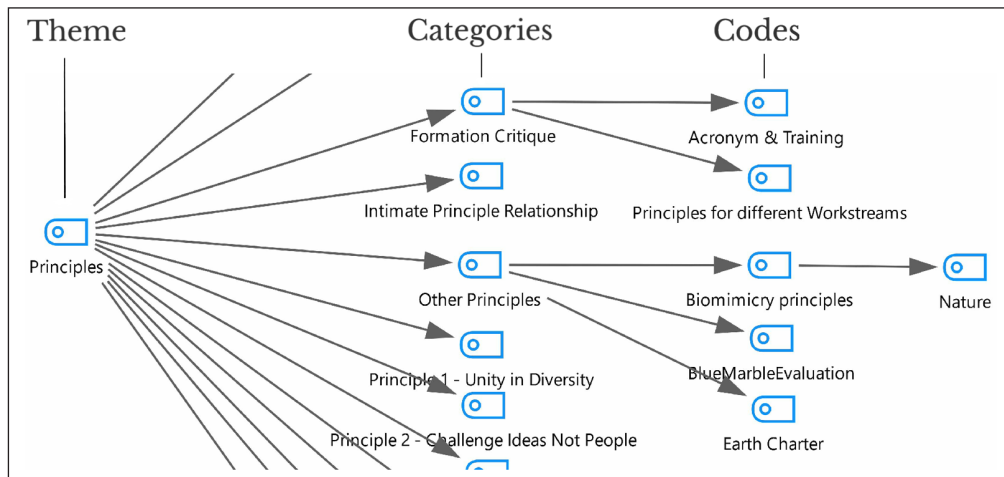
DATA ANALYSIS: 7VORTEX

The mapping tool 7Vortex was then used to relate all codes with each other in a systematic approach. This was done to identify the code relations and interconnections of the data within the conceptual frameworks. An *interactive 7Vortex* was created based on the identified codes and connection patterns (7Vortex, 2020). The code importance is displayed in the bubble size (the bigger the more important). Fixating and connecting the code-bubbles shows the relationships of codes, categories, and framework themes. **Figure 6** shows these framework connections in the 7Vortex context:
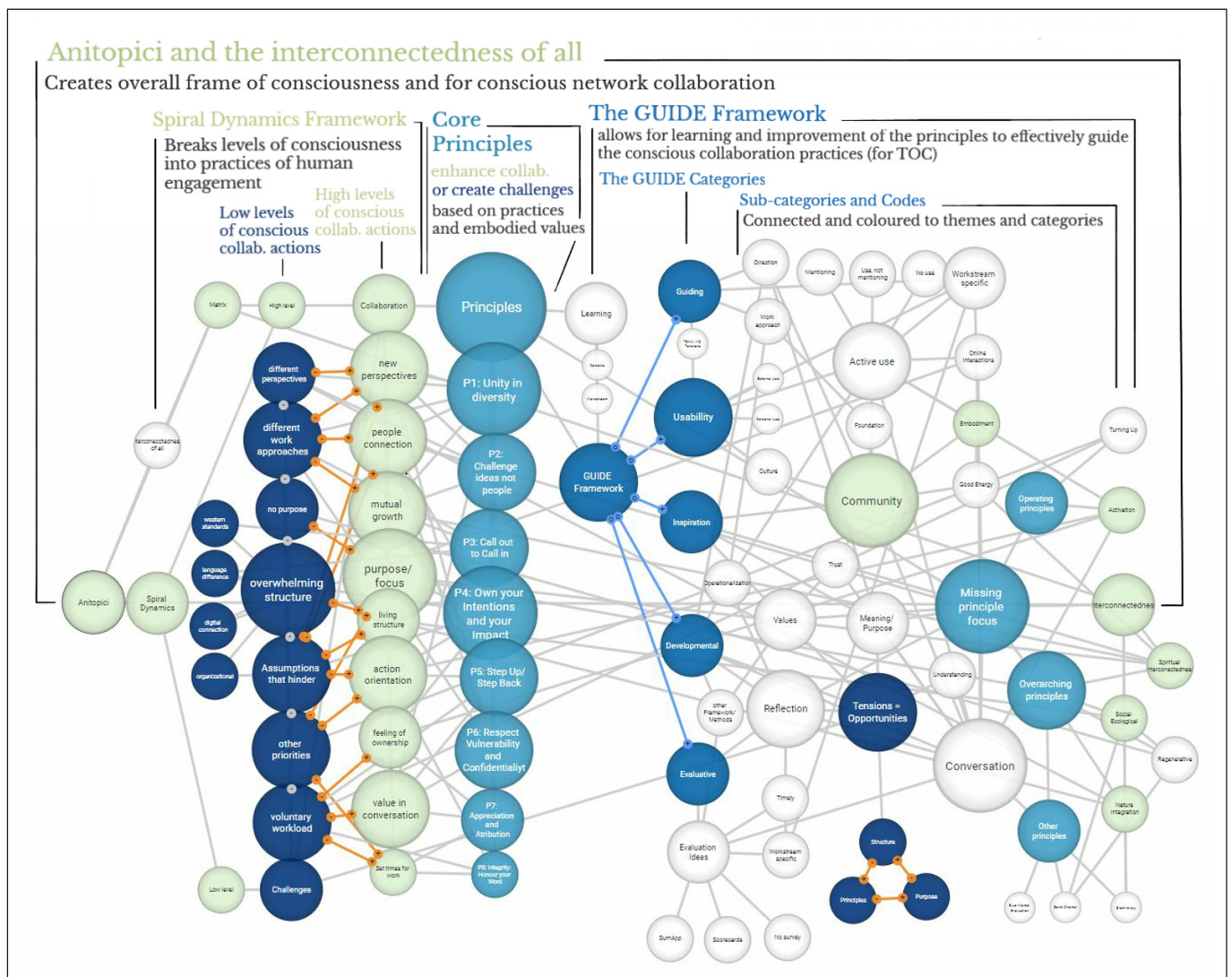
RESULTS

The results outline (1) the agreed principles' structure for the networks value framework, (2) the important values for TOC principles, and (3) the evaluation with the GUIDE. FGDs, Interviews and content analysis melts to one coherent picture. Direct quotes of the participants are only indicated with quotation marks, not with names nor page numbers.

1. AGREED PRINCIPLES STRUCTURE FOR TOC

This section describes the members agreement on the principles as the networks value framework and the proposed clustering for oversight and use.

AGREEMENT ON PRINCIPLES

All members endorsed the principles by entering the TSM&A WG. Most members' see the principles values as complete. All agree that the principle model offers a sound value framework to integrate missing values and existing network tools to "create a deeper level of connection" with strong and relevant ethical values for TOC. Meaning, the iterative cycle of evaluating and shaping the principles and the cycle of planning the members' values can merge into one shared developmental cycle. This agreement forms the baseline for analysis and justifies the future principle-development as the main value framework, see *Figure 7*.
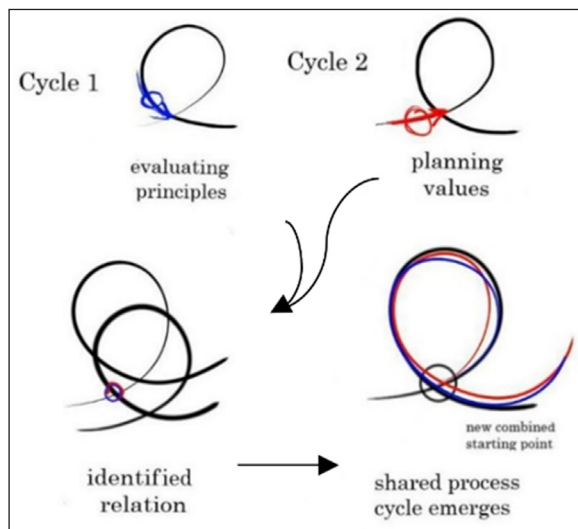
CLUSTERING PRINCIPLES FOR USE

Similar to Patton's (2018) principle-classifications, the data proposes a clear structure for the principles to indicate their different values.

1 | Overarching principles address the aspirational network values. Focus lies on the purpose of the members positive action-direction towards a visionary future contribution for sustainable "collective survival on earth" as moral and ethical guidance.

2 | Operational principles are more "procedural" principles for collaborative work approaches. They indicate how the members engage effectively. They are designed to make the most out of the members' "incredible minds, hearts and wills," to frame behaviors for collaboration, and allow to co-direct transformation processes.

2. IMPORTANT VALUES FOR TOC PRINCIPLES
Overall Values

This section illustrates important overall values to design and enact principles for TOC.

Interconnectedness of all things is the first value to be deeply embedded in the principles. The indigenous Blackfoot creation story calls this interconnection *Anitopici,* the spider web of creation. Metaphorically, interweaving purposes and deep relations within the network. The principles' potential lies within the connections and the trust that "parts of the spider web will vibrate when we need to pay attention." This supports the theory that consciousness connects all in thought and action (Barden, 2007). Together, this indicates that the higher the level of

conscious action, the higher the vibration created in the web of the world or the network, thus supporting the idea of higher-level enactment of the principles to consciously elevate collaboration (Laloux, 2014).

Overall, identifying the relationships amongst the principles is crucial to align them to one "web." This can help to increase the understanding of shared purpose, create deeper exchanges and appreciate how the members' attention and actions around one principle are interconnected to other principles. Thus, the principles values must always be acknowledged in and from various contexts.

Also, the **spiritual interconnectedness** of all life was raised to be a missing underlying value in the initial principles. This was supported by the networks Story Map stating the networks contribution towards a "new social, ecological and economic enlightenment" (Page et al., 2021). Linking the Spiral Dynamic framework to the data, this missing value could be described as the conscious personal development and transformation of one's level of understanding of being human in the ecosystem. This may enable more conscious actions and understanding around how the "laws of nature and the laws of the universe will … play out to influence what we do here on earth."

Nature connection is also a crucial value that must be integrated into the principles. It is important to create more awareness around "social and ecological systems … towards just equitable regenerative futures." This may aid utilizing the "wisdom of our whole selves and our whole ecosystems into the way that we can … map our way into our fullness of humanity and life on earth."

This nature connection was also represented in the Biomimicry and Earth Charter principles, known to several members of the network. One participant indicated the possible value of exploring the connection between these principles, promoting a more nature-based vision of the networks purpose.

➥ The interconnection of all life and spirituality, including the socio-ecologic approach must be weaved into the principles as a sub-tone. It can be described directly in the overarching principles.

Relating diverse knowledge systems (KS) refers to the meaning and understanding of values across different ways of knowing. TSM&A WG related KAs include academic, experiential, western and indigenous knowledge, world-views, and skills. Interviewees agree this to be a missing value. The acceptance and the conscious aim to value and understand all knowledge systems, appear crucial to foster collective intelligence.

This reflects the importance of trusting that what is shared is valid and includes the "humility and the self-awareness in (one's) explicit knowledge to say: I don't know this in my brain" to acknowledge non-understanding. This happens as an experience was either not lived or one shifted to a different perspective of seeing; offering the opportunity for gratefulness of ones own life experience. Thus, one should always value what is understood and what is not understood, as there will always be a difference in perception, because of everyone's personal intuition, feelings and sense experiences.

This can also be true for shared experience of one group compared to another. Experienced perceptions can vary greatly, and it is crucial to "recogniz[e] that there is an incredible amount of intelligence" coming from these experiences when shared openly. In the context of Spiral Dynamics, this perception of experiential knowledge would be influenced by the level of consciousness, and cultural and professional background of a person or grouping.

➥ Different ways that the networks members relate to the principles, use them, and understand principle-embodiment should be appreciated and worked with. The community must respect the different individual bias towards feelings, intuition, and experience, in pursue of the common support on principle embodiment.

Academic knowledge and the dominant narrative add to the challenge to understand beyond ones' own experience. It is important to understand barriers to inclusion in any dominant narrative – including academic knowledge. Individuals and the group need to honor and learn from the marginalized knowledge. This includes knowledge of Women and Black, Indigenous,

People of Color (BIPOC); too often still treated dismissively. Especially members conditioned within a dominant narrative must identify their own origin story, world-view, and its limitations, and engage and learn from people of other perceptions. An "academic proposition to open the discussion," skipping the academic discussion, can help people to explore a collaboration where personal learning and new perspective on life can be integrated.

➥ Bridging dominant narratives is overarching and can be linked to the principles (P3, P2, P8).

SPECIFIC VALUES

For all principles (as P*X)*, specific values are added or must be adjusted in wording. Below, shows the identified categories. Detailed changes can be found in the *Supplementary File 2*.[4]

P1 Increase equity in members participation.

P1 Add mapping of the system (Internal and External).

P1 Add socio-ecological approach.

P2 Account for personality.

P2 Proposed renaming.

P3 Adopt a functional approach and account for the extreme to build trust.

P3 Clear ambiguity and overlap with P5.

P3 Proposed renaming.

P4 Reflect and debriefing methods for underlying intentions.

P4 Clear language for multi-cultural impact management.

P5 Clearer tone and design elements to balance power dynamics.

P6 Address challenge of the online setting.

P7 Operationalization of network ideas and livelihood creation.

P7 Honoring the freedom to give and take to create trust.

P8 Create clearer standards of accountability.

P8 Manage tensions around workstream integrity.

P8 Acknowledgment and clarification of principles as structural dimension.

P9 *New principle* to increase participation by creating a new *Bias to action/Just do it* principle.

Not all groups share the same value-focus and direction. Specific principles could be added for identified workstream values or to prioritize the principles towards the groups' needs. The added value of such change remained unclear.

Aligned with Patton (2018), participants also proposed easier enactment through descriptions with two examples of action per principle: one in line with the principle and one contrary to it.

3. EVALUATION OF THE PRINCIPLES FOR TOC (WITH THE GUIDE)

This section discusses the principles according to the GUIDE-framework, ensuring the effective principle-development for future TOC, including a more network member oriented perspective.

1 | GUIDING

The guidance of the principles for direction and advice on how the networks members think, value and act to reach common desired results is agreed to be high.

The principles help to prepare and initiate group meetings and development of the teams. In the first meetings the principles aid to explore member's motivations and to structure the space. Members have high intentions to use the principles but are often not doing so in practice. The majority neither revisits nor uses the principles, after the first group sessions.

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4   For detailed information regarding the focus group and interview data, transcripts, the social system map data, coding and 7Vortex mapping, please contact the author.

Participants state that the principles:

- give a "**moral guidance**" and "guide behavior" to think and act towards a more inclusive "eco-centric (view which) contributes to this collective conscious evolution."

- are a **tool to dismantle** unconscious behaviors and thought processes.

- effectively **balance academic and experiential learning** approaches, as source for collective intelligence and for "co-creating something with everyone that works for everyone."

- "**inform ... a design process**" to work more effectively and guide how members show up as teams and in dialogue. Especially when reiterating and openly sharing about the principles.

- create a **value direction** for ways of working together, by being an accepted tool to navigate challenges and understand complex situations for "humanity and life on earth."

- **support the meeting facilitation** and to live the networks values in conversation.

- Are an **online guideline** for a "safe creative space" in interactions such as Zoom meetings and emails, where it is "easier to self-edit or self-silence." Also, planning and convening meetings and events with intercultural awareness of e.g., local holidays and the time-zone differences.

2 | USABILITY

The usability of the principles is high for personal value reflection and supporting a safe online environment, but low for understanding the collaborative group setting.

The **descriptiveness and wording** of the principles must be clear and compulsory to indicate what members are ought to do and what not. E.g., proposing "Dos and Don't s" and clearer "mechanisms" to address non-compliance. However, the principles should be "empowering enough ... to be able to have an open dialogue if you find that something conflicts with them" removing the need for non-compliance mechanisms. Further, debriefing methods for de-escalation in dialogue, in a group setting and with an independent mediator are beneficial.

Continuous use and practice of the principles as well as the integration of the members "lower (Spiral Dynamic) perspectives" prepare for tensions and conflicts. The use of principles becomes increasingly harder the more complex the interactions and topics. Caution must be given to members' perceiving the principles as hinderance to efficient ways of working, during workstream meetings or conferences. This can result from the principles being too abstract and not clearly operationalized for usability (Page, 2012).

Team training and workshops create a shared understanding of the principles and related topics. Training for principles usability and principle-based behavior is important, as members are "living the (principles) imperfectly" due to the divergences in perceptions around wording, meaning, and commitment to enact them. An introduction of new members to the principles must be offered. Providing such training increases awareness, yet doesn't ensure enactment.

Overall training topics include principle-use, decolonization, and poverty. Such are crucial to promote mutual receptiveness to support marginalized groups to strive, by identifying own standards for development and system decolonization. And to support marginalized white people with their fragility.

Applying the principles externally is important when interacting with partners and by re-engaging with the principles before external engagements to "understand exactly what the principles (and therewith the network) are requiring." Meanwhile, members should also understand the external parties' value framework to identify shared "synergies and differences" for better collaboration. The principles can then be used as a baseline to decide for or against a collaboration. Further, the principles can be "borrow[ed]" with attribution, to be used in a different work context. Thus, they carry a high potential for cross-sectional utilization when used consciously.

Also **embodying the principles** supports long-term conscious actions for TOC and helps overcoming a "superficial" principle-framework. Embodiment practices allow members "to co-create different ways of connecting (and) relating among ourselves, but also with Mother Earth" from their "fullest selves" and "speak ... from an environment where he(/she) gets to be one

with ecosystem, a liveliness, vitality and connection." Here, including and training the human senses is important to create the capacity to feel, reason and judge one's experiences according to the principles (O'Loughlin, 2006). Such practices to learn and reflect about the networks principles in embodied ways may include imagination, thinking through the body, verbal interaction, using sounds and odor, feeling the symbolism of spoken word, joint attention to the practical context, utilizing goal-directed movements or expressive gestures, and practicing empathy (Fuchs, 2016; O'Loughlin, 2006; Pulvermüller et al., 2010). Such activities "strengthen the ability of the group to live these principles" and use them more effectively. Yet, members coming from product-oriented and structure-oriented backgrounds behave rather reluctant towards embodiment practices. Therefore, the network must honor that "everyone embodies (the principles) well from their perspective." Group experience with embodiment include the feeling of a "heartfelt connection" or "heartfelt grounded presence" during meetings.

Surprisingly, participants often assume that other groups use, incorporate, and enact the principles in better ways than their own workstream. Especially, the Integration workstream, the Latin-Afrique Xchange workstream and the Defining Transformation workstream are highlighted. A connection to these workstreams' Conveners and Fellows pro-activity and openness towards developing own guidelines for principle-use shows. The Latin-Afrique uses the principles best to create collaboration and common purpose in the convenings. The group held the initial discussions on framing the workstream with them and continues to discuss one principle at a time, regarding the workstream's focus and the members' intentions. Hence, the principles function as a structural tool for culture creation by informing the members' behavior.

3 | INSPIRATION

The principles aspirational values support the networks vision to create a transformational community. Based on shared values and ethical premises, they are meaningful for all members. All members agree to use them as an effective tool to think and act in an ethically agreed way, on a personal and community level.

In **Community** all living relationships are interwoven, like in *Anitopici*. The members' willingness to hold community strengthening conversations and to support "the ability of the group to live these principles" is "incredibly [high]." The individual efforts to operationalize and enact the principles' "help[ed] the overall community" to "relate to each other" for deeper collaboration.

In TOC, the "use of values, discourse, and dialogue about values as a way for people to collectively shift their attitudes, perceptions, and beliefs around their role in the community and how other people perceived them in the community" is key. Transformational members prepare, navigate, and stabilize individual and community processes to "abandon (harmful) practices" and "deeper transformation … shared mythologies and beliefs leading to changes." Participants agree that the "collective makes us strong" and creates leverage for inspiration, transformation, and co-creation. The most important points for a transformational community are:

Foundation. The principles are the foundation for working together. The initial signing of the principles creates a starting condition, a shared understanding and common ground, for the network. New members can use the principles to decide if they would like to join or not. Two participants shared, they would not have joined without the agreement on the principle's value foundation. They incorporate collaboration values and share the overarching network purpose. Yet, their developmental form gives liberty for the members being and what members are going to do out of their core values. They enable groups to create their own direction and methods of work.

Trust. The principles create a safe and trustworthy environment. Members come back to the network, because the principles create a believe that people "will push back against dominant culture" and because "they care about … those principles enough that they will support them … when they see violations." Enabling members to contribute on their own terms, without diminishing the contribution of "other people's views or values or ways of thinking." Importance lies in trusting each other's perspectives and everyone's capacity to receive and reflect openly. Trust is the feeling that "(members) light my soul."

Positive energy gives inspiration, motivation and meaning in collaboration. Members feel "energy from working together," "draw a lot of energy from seeing

stuff happening," perceive the "group is energizing" and "feel stimulated" and "energy[zed] to do stuff" when connecting with the doers. Thus, in case of low participation, working with trusted and motivated people across groups is encouraged. This increases the embodied "heartfelt connection" and "vitality that we get from excellence and that sense of kinship in this community" when working with integrity. Participants "source joy consistently" from collaborating, even through the forming and storming stage.

Culture creation comes along with creating community. This "takes time" as members "memorize the structures and the strategy that you just feel," ultimately informing the network behavior and addressing the operational structure of the network, by which members make decisions (Wolff, 2010). Participants welcome transitions towards lower hierarchical structures and the sense of a leveled community culture, inspired by the principles. They inspire individual "cultural humility, knowing (ones) origin story and understanding where we are in terms of how we've been programmed and how the programs … contributed to the challenges that we need to solve differently" to do "something together that will be helpful for our personal … and professional development." Participants feel supported in eco-centric thinking and in attaining more value-driven contributions.

4 | DEVELOPMENT

Even though the principles were agreed upon as value framework, further development is needed in use, wording, and values. Specific changes can be found under *Specific Value Results* or in Appendix 2.

To create a "deeper understanding" of the principles as method and create optimal enactment value, experienced principle-user-participants agree that a high initial focus on the principles and regular reflections on actions related to the principles is crucial. This is supported by Cislaghi et al., (2016) stating that the collective deliberation on values – including ongoing group reflections on values, beliefs, aspirations, and experiences, as well as discussions on how to understand and apply such principles – is the most effective route to a shared embodiment.

Further, regular revisiting and principle-discussions are highly important for deep learning on a personal, professional, and cross-workstream level. Participants "enjoyed the dynamic nature" of such discussions which trigger personal belief systems and bring members closer together. Any barriers for such conversation should be identified and addressed. As the usability and development are closely linked, "more opportunities" for principle-development include:

1 | Groups provide time and space for members to pick one to three principles that resonate and "share why, so that there is an ongoing dialogue about where the meaning lies for people and how they want to apply it." Speaking tools may include check-ins and sociocracy rounds (Bockelbrink et al., 2020).

2 | Meetings "begin and end with invoking the principles" to say "this is who we are. Remember our purpose," remember how the network collaborates.

3 | Members explore uses and enacting the principles by "reflect[ing] on the principles" to "hear different perspectives" on "working with them, constantly editing, … helping them guide us."

4 | Reflections on how specific groups use the principles. E.g., as conversation tool for ongoing discussion about workstream purposes and to deepen collaboration. This enables better use regarding the creation of tangible products, and for "delivering on expectations [and] the delivering of experience" as they generate a "sense that you need to deliver."

5 | Sharing best principles practices in the SumApp tool, to create visible "mapping" for invisible network collaboration patterns.

- This can "help [to] understand how [the principles are] impacting us" and "how they are embodied" by specific members and groups.
- This can be used as evaluation practice and to improve principle-adherence.

5 | EVALUATION

Members agree that they were not formally confronted when disobeying by the principles. The principles lack formal regulation, enforcement, and evaluative measures; including documentation, use of tools and pro-active reflection. It is important to evaluate and reassess the principles periodically even "daily or weekly." This can help to further develop them, identify if they were used and followed, and understand what impact was created from following them. Thus, the constant iteration of "action into reflection and back into action" is key for ongoing learning and the creation of TOC.

Feedback must be given in a mindful, informed, and positive way. Intervening, while honoring the dignity of the ignorant person, who is embedded in their paradigm, offers great learning value for both parties. Hence, inclusive spaces must exist to support group healing.

For informal evaluation:

1 | Reflective conversations on a personal and workstream level inspire better principle-enactment. The network can identify how the principles can shift the members' behavior, and where members are failing to use them. Schwaber and Sutherlands (2017) iterative Scrum method for agile project management allows to take each next step upon the knowledge and experience gained in the previous cycle. Hence, optimizing predictability and controlling risk. This method creates a suitable tool for daily Stand-up practices when working in a complex environment.

2| Result-Focused Performance Management processes help all individuals to measure what they are doing and come together to share progress and identify gaps for supportive actions. This empowers individuals to improve overall organizational performance by knowing what they are doing, by making changes and by voicing their needs or advocating for those (Simonds et al., 1997; Schwaber et al., 2017). This method can also be used in a daily Scrum or Stand-up meeting (Schwaber et al., 2017).

For formal evaluation, clear documentation is needed. Some informal evaluation processes can be transformed into formal evaluations. By implementing a formal process with existing tools, the network can judge the use and impact of the principles with:

1 | Monthly newsletters to update on workstream developments.

2 | Simple online scorecards, to be filled out after meetings to rate how members saw themselves and the whole group enacting the principles.

3 | Principle-reflection in the social system map, to identify

    a. which principles the workstream enacted and adhered.

    b. people or workstreams who embodied certain principles very well.

    c. extent of differences in living the principles. Cross-examination of what is shared among all, and where gaps can be identified.

    d. questions and feedback on specific principle-wording and their use.

Evaluations with number-based data collection methods are not recommended, due to the high time investment and low reliability regarding the findings and the actual – often informal – network reality. Triangulated data collections with anecdotes, visuals and collaborative settings are more reliable. Overall, no external control structure is needed for the future evaluation of the principles.

Funds for implementation of the evaluation measures are recommended due to time intensive, high quality workloads for network members or external audits.

RESEARCH QUALITY AND IMPLICATIONS

As the field of study is emergent, the concepts of principles and T-Systems and the unique organizational structure of the networks Fellows and Conveners might change in the coming years. Therefore, this study may not be replicable in the future, although the iterative design ensures regular repetition for continuous development of the principles.

The construct validity is ensured by a strong operationalization of the research questions, using indicators, existing models, and experts in the field. Conducting two FGDs, the interviews and using the social system map provide greater reliability due to method triangulation. Semi-open structures lead to valuable in-depth data collection. The social system map data verified the interviews data's consistency with the wider network. As the sample is rather small, data shows great overlaps, yet was not fully saturated. Additional quantitative approaches could have increased reliability, but time limitations did not allow for a bigger scope. Hence, this paper presented only generalizable results.

For the quality of data, good internet connection was needed. The transcripts was done to the best and most logical understanding of words and context. A bias was the specific terminology of participants, using diverse terms for similar concepts. Yet, this did not disrupt the central discussion. It was accounted for by connecting and theming the codes in split coding and increased the data value due to the interconnected perspectives.

Despite the samples diverse cultural and professional backgrounds, the data coherence is very high. A difference was seen between the two FGD's in terms of a professional academic discussion compared to a more experiential sharing. The more personal and vulnerable discussion increased engagement and attention. Cultural decolonization issues and the importance of equity are considered as implication for data collection and analysis. Focus was placed on voices from, and experiences related to, marginalized groupings, such as non-European and non-US members, women and BIPOC. For male and female participation no major differences in contribution were observed. To consciously bridge differences, the researcher leveled underrepresented voices and integrated perspectives to form a more holistic view.

The discussion dynamics stayed open even with challenged ideas. Participants often agreed with explained points of views and unanticipated input. This hints towards group think, however, several participants mentioned gratefulness for the conversations, as they would not have made similar conclusions and learnings by themselves. They felt stimulated by being open with their thoughts and emotions, indicating the great assets of open sharing and connection to facilitate deep collaboration.

In the online environment, engaged participation and clear use of the online research platform (Zoom) was ensured by sending clear log-in, facilitation guidelines and connection advice before the meetings (Daniels et al., 2019). Zoom is the commonly used TSM&A WG networking platform. Additional explanations ensured the participants trust in the research process and researcher, and familiarity with the platform for active online participation. An open space for contribution was set by inviting participants to choose a safe environment. Both increased the level of Wi-Fi connectivity, their device stability and the recording quality for data collection and analysis. Additionally, the researcher ensured connectivity and functionality of devices and the software, upfront (Salmons, 2015).

The researcher came from a European cultural and educational background. She was aware of differences in her working approach compared to participants from other ethnicity and professional backgrounds. Due to the researcher's cultural awareness and socioeconomic status, extra attention was paid to marginalized opinions and gender. The researcher's background evolved around the SDG's, creating a preference to highlight socio-ecological and community-driven ideas. As the she did not hold a superior role relating to the sample, there was no fear of jeopardization of data due to status.

The cross-organizational character of the study is high due to the professional and cultural diversity within the networks sample, and the online setting which has gained popularity as a global space for collaboration, in recent years. With a rise in cross-sectional teams and online work-space arrangements, initiatives are increasingly using developmental frameworks such as principles to navigate members behavior. Consequently, this research is of high relevance to the field as it creates a foundation and repeatable framework to evaluate and develop new principles for effective use and development. Further, offering deep insights into values needed for TOC within communities and networks.

The research results were relevant for the networks development of a value-driven action strategy to support transformative online collaboration and to the professional field, as global interdisciplinary networks working with T-Systems are on a rise and the effective deep

collaboration of the network's members is crucial for navigating and creating transformative actions which support the SDG 17: Partnerships for the Goals. The findings further contributed to an Advisory Report, enabling the TSM&A WG to concretely reshape, understand, enact, and evaluate the embodiment of the principles individually and in the workstreams by advising on effective principle-implementation practices (Braun, 2020).

DISCUSSION // EFFECTIVE GUIDING PRINCIPLES FOR TOC

Based on the research findings, discussion, and the networks feedback, the TSM&A WG principles (see *Figure 1*) were redesigned for transformative online collaboration (TOC) and can be seen in *Figure 8*:

Effective Principles for Transformative Online Collaboration (TOC)

Overarching principles

Embodying transformation
We trust in clarifying and serving the common purpose of transformation. We embody transformations towards more equitable, regenerative, and sustainable systems and the liberty to choose our way of being. We define transformation systems as those seeking to transform systems in alignment with the Sustainable Development Goals, keeping human civilization within the 9 planetary boundaries and contributing towards a collective conscious evolution.

Unity in diversity – Controversy with Civility.
In pursuit of these goals, we recognize the diversity of bodies of knowledge and ways of knowing to enrich our capacity to act and map systemically. We find strength in our different views and experiences. We expect, honor and challenge such differences to foster a shared group commitment to understand the sources of disagreement and to work cooperatively toward common solutions. We commit to respecting and exploring cognitive diversity and recognize that transformative paradigm shifts often arise from dislodging familiar ideas that are intuitive, yet erroneous. As a community, we foster systemic reflection, envisioning and adapting towards transformative harmonious solutions.

Operational principles

Own your intentions and your impact
Even with the best of intentions, our words and actions may impact others in unintended, harmful ways. We show up willing to take responsibility for all aspects of our own communication and actions and to be honest, curious and compassionate with others. We assume good intentions and listen for mutual understanding. We aim to uncover subconscious harmful patterns by reflective behaviors and choosing to make more conscious choices based on our learnings.

Challenge ideas and behaviors - support people
By attending with curiosity, compassion, humility and courage, we advance collective learning and understanding of ideas in our "ecosystem" of members, beyond the "egosystems" which dominates easily. We acknowledge that certain ideas and behaviors are only (ir-)relevant and (un-)known to us, because of who and where we are. Thus, we acknowledge all ideas and behaviors as worthy and whole. We know that we would make the same choice if we would have lived their experience. Yet, we aim to learn from the perceived negative impact on the shared environment. As we know we are whole and complete already, we do not lose self-confidence through challenge. We rather feel supported in mutual growth, as any intervention is made in honoring the dignity of the person whose ideas and behaviors are challenged.

Call in before calling out
United by shared commitments, we are all work in progress and perfection is an illusion. In the name of mutual growth and our sincere intentions to support each other, we commit to holding another accountable to our words and our best selves. This is done by "calling in" to seek understanding and invite deeper relationships to serve the higher goal. "Calling out" is only used after alternative solutions have been exhausted. Here, we alert the group of abusive ideas and behavior that do not work in service of shared commitments and mutual evolution. We sincerely address tensions to better adapt and evolve together.

Offer space or action
Our awareness of the larger flow of conversation, voices, and dominant perspectives, helps us ensure that all voices are given their space - including our own. We step up, or step back, as needed and stay transparent and clear in the process. We aim to adhere to the wish for space or support, especially by marginalized groups, to empower and balance power dynamics by design. If proposals of situations or topics to potentially engage remain unpredictable, members aim to decrease the situations ambiguity for conscious decision making.

Respect vulnerability and confidentiality
High performing learning networks are those characterized by high levels of trust and reciprocal vulnerability. In community we are willing to share openly with one another and commit to (structural) learning for the greater good. We acknowledge that vulnerability provides access to collective power that is generative for our communities. Yet, we also acknowledge we operate in a world structured by often oppressive power dynamics and uneven distribution of risk and privilege. As such, we are mindful of these unconscious patterns. We nurture collective psychological safety, curiosity, and bravery to support a shared group commitment by practicing consent and being careful to honor personal and professional confidentiality, not only when made explicit. Together, we go forth "with trust"– as a core for building relationships and transforming systems, processes, and people's behavior.

Appreciation and attribution, not appropriation
When we openly share ideas, resources, and our own cultural identities in a co-creative environment, it is all too easy for us to forget where an idea originated, and to go forth as if it is our own and run with it. This is especially true for those with more institutional power. By actively practicing gratitude – both by expressing our appreciation for a gift and attribution for those who gave it – we foster healthy relationships and build on our collective strengths. Aiming to experience abundance and other benefits of gratitude practices. Together, we encourage the voices of those whose natural function is to notice these sequences of events to share the observed for collective trust.

Integrity: Honor our word
When we give our word to abide by the principles above, and to new commitments that arise in the course of our work together. We pledge to hold ourselves and one another accountable through regular feedback loops and evaluative measures. We are imperfect people in constant evolution. In the case that we break our word, we will take action to restore it by being in open, honest, and transparent communication. In this way, we can continue to learn and adapt together in service of our collective vision.

Go for it/ Bias to action/ Just do it! / Do tank
We acknowledge that it takes time and dedication, courage, and energy to actively create. We welcome ideas and enact them if they do not harm the entirety of our principles. Just go for your ideas - see what time you can spare, who will join the process, how they will change. Try, to make them happen and let go of the attachment to the end outcome. Use the networks intelligence around you! Do not hold back waiting - people will join once they see the value proposition.

The principles create an invitation for humanness and a space that expresses the intangible value for deeper collaborative connection within the network. They are an effective tool to support embodied connections, culture creation, decolonizing practices, and emerging

transformative actions. With a foundation of common values, and the trust in the validity and importance of deep collaboration, the principles started a transformative online community building process (Caulfield et al., 2020).

Until now, this community-building process is described as rather internal. The importance to actively use the principles at any outset of the engagement, also connecting to external parties, is stressed as they spark inspiration and conversation on personal and network levels. By creating a space for mutual appreciation and honoring the individuals' experience and knowledge wisdom, they encourage members to step into their full potential.

As the principles reflect the members' values, they can be used as value-framework. Hence, the lack of a clear common purpose in the network can be addressed by integrating identified missing values, including (1) interconnectedness, (2) linking social and ecological values for regenerative future, (3) innovating the way mapping and (4) supporting human enlightenment.

Structurally, participants agree on categorizing overarching and operational principles, adding specific wording, and clarifying the principles in terms of right and wrong enactment examples. Together with the creation of evaluative measures, this supports the conscious use of the principles.

It is concluded that the principles have a high potential to aid overcoming equity issues and structural power dynamics. Yet, the integration of the principles in the actions of the networks members is very workstream specific. Generally, the principles full potential is not enacted. Most workstreams only use them in the beginning to create a foundation for collaboration. The Integration workstream and the LatinAfrique Xchange workstream have more proactive and continuous implementation practices to fully engage present and future members in the network. To stimulate such engagement, an additional *Bias to action/Just do it* principle is proposed. A parallel between higher use of the principles and a higher sense of the workstreams members belonging is drawn.

For better collaboration, the ongoing conversation and enactment of the principles is an effective tool. Yet, the highest integration of the principles into actions may result from the members' principle-embodiment. According to O'Loughlin (2006), this means practicing the principles by including the human sense-richness to create the capacity to feel, reason and judge one's experiences along with the principles. Nevertheless, the body's role as a major tool to bridge the gap between the principles' awareness and felt enactment is still missing recognition, ultimately standing in the way of actively embodying the principles for value-driven collaboration and shaping of the organizational culture.

Further research is suggested to identify collaboration patterns and structural differences between the different cultures represented in the network. This may help to identify if and how the identified polarization, including data references such as Western views, Global North and South, and the dichotomy of dominant and marginalized, or academic and experiential knowledge, may hamper or support the embodiment of the principles and other collaborative processes. Additional research is also advised to identify clearer evaluative measures for the principles and funding possibilities for various workstreams.

CONCLUSION

Closing, a strong link between community building and transformative collaboration was identified and should still be explored further. The identified values are a detailed and powerful tool to facilitate and promote a conscious and sustainability driven collaboration in network environments. The redesigned principles can help the network to create a strong internal cultural and a safe space for navigating T-Systems and other complex challenges. Ultimately, the principles foster a deep learning and action community, enabling transformative online collaboration.

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COMPETING INTERESTS

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REFERENCES

7Vortex. (2020). *Code Relations*. Retrieved from *https://www.7vortex.com/ecosystems/725211f6-f602-4a03-99d1-07a3af4330eb/view*

Barden, G. (2007). *The divine matrix: Bridging time, space, miracles, and belief*. USA: Hayhouse, Inc.

Bockelbrink, B., David, L., & **Priest, J.** (2020). *A practical guide to sociocracy 3.0*. Retrieved from *https://patterns.sociocracy30.org/introduction.html*

Braun, K. (2020). Advisory Report: To practice the effective use of the principles for transformative network collaboration. [Unpublished manuscript]. Windesheim Honours College, Windesheim University of Applied Science.

Caulfield, J. A., Massie, L. S., Sojka, R., Iafrati, S., & **Rees, J.** (2020). Café delphi: Strategies for successful remote academic collaboration. *Institute for Community Research and Development, 1*, 1–13. Retrieved from *https://pdfs.semanticscholar.org/8853/95f57de773d3bb224657524ee9f5bf52ef16.pdf*

Cislaghi, B., Gillespie, D., & **Mackie, G.** (2016). *Values deliberation and collective action: community empowerment in rural Senegal*. Basingstoke, England: Palgrave Macmillan. DOI: *https://doi.org/10.1007/978-3-319-33756-2*

Corbin, J., & **Strauss, A.** (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. 4th Eds. United States, Thousand Oaks: SAGE Publications Inc.

Daniels, N., Gillen, P., Casson, K., & **Wilson, I.** (2019). STEER: Factors to consider when designing online focus groups using audiovisual technology in health research. *International Journal of Qualitative Methods, 18*. DOI: *https://doi.org/10.1177/1609406919885786*

Dayaram, K., & **Fung, L.** (2012). Team performance: Where learning makes the greatest impact. *Research and Practice in Human Resource Management, 20*(1), 28–39. Retrieved from *https://espace.curtin.edu.au/bitstream/handle/20.500.11937/31976/189036_70258_learningRPHRM.pdf?sequence=2&isAllowed=y*

Earth Charter. (2020). *The earth charter*. Retrieved from *https://earthcharter.org/read-the-earth-charter/*

Edward, D., Back, E., Larsen, T. H., Solonin, S., & **Viljoen, R. C.** (2018). *Spiral dynamics in action: Humanity's master code*. United Kingdom, Chichester: John Wiley & Sons Ltd.

Feldman, D. (2017). The sustainable entrepreneur: Balancing people, planet and profit. *Entrepreneur and Innovation Exchange*. DOI: *https://doi.org/10.17919/X9J66S*

Fiksel, J., McDaniel, J., & **Mendenhall, C.** (1999). Measuring progress towards sustainable principles, process and best practices. *Paper Presented at Greening of Industry Network Conference*, Ohio.

Fuchs, T. (2016). The embodied development of language. In G. Etzelmüller, and C. Tewes (Eds.), *Embodiment in evolution and culture* (pp. 107–124). Tübingen, Germany: Mohr Siebeck.

Herrfahrdt-Pähle, E., Schlüter, M., Olsson, P., Folke, C., Gelcich, S., & **Pahl-Wostl, C.** (2020). Sustainability transformations: Socio-political shocks as opportunities for governance transitions. *Global Environmental Change, 63*, 102097. DOI: *https://doi.org/10.1016/j.gloenvcha.2020.102097*

Khurana, P. (2015). Prospective and strategies: Managing cross culture diversity in workplace. *International Journal of Academic Research in Commerce & Management, 1*(1), 13–17. Faridabad, Haryana, India: DAV Centenary College. Retrieved from *https://ijarcm.sribalajipublications.com*

Kippenberg, D., De Dreu, C., & **Homan, A. C.** (2004). Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology Copyright 2004 by the American Psychological Association, 89*(6), 1008–1022. DOI: *https://doi.org/10.1037/0021-9010.89.6.1008*

Köpfer, A. (2012). *Inclusion*. Retrieved from *http://www.inklusion-lexikon.de/Inclusion_Koepfer.php*

Laloux, F. (2014). *Reinventing organizations: A guide to creating organizations inspired by the next stage in human consciousness*. Belgium, Brussels: Nelson Parker.

McKinney, E. H. (2008). Supporting pre-existing teams in crisis with IT: A preliminary organizational-team collaboration framework. *Journal of Information Technology Theory and Application*, *9–3*. Retrieved from *https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1030&context=jitta*

O'Loughlin, M. (2006). *Embodiment and education: exploring creatural existence*. Dordrecht, The Netherlands: Springer. DOI: *https://doi.org/10.1007/1-4020-4588-3*

Olsson, P., Moore, M.-L., Westley, F. R., & **McCarthy, D. D. P.** (2017). The concept of the anthropocene as a game-changer: A new context for social innovation and transformations to sustainability. *Ecology and Society*, *22*(2), 31. DOI: *https://doi.org/10.5751/ES-09310-220231*

Ōnday, Ō. (2016). Global workforce diversity management and the challenge of managing diversity: Situation on world and in turkey. *Global Journal of Human Resource Management*, *4*(1), 31–51. European Centre for Research Training and Development UK. Retrieved from *http://www.eajournals.org/wp-content/uploads/Global-Workforce-Diversity-Management-and-the-Challenge-of-Managing-Diversity-Situation-on-World-and-in-Turkey.pdf*

Op 't Land, M., & **Proper, H. A.** (2007). Impact of principles on enterprise engineering. *ECIS 2007 Proceedings*, *113*. Retrieved from *http://aisel.aisnet.org/ecis2007/113*

Page, G., & **Matey, S.** (2020). Guide for members of the transformation systems mapping and analysis working group: Visualizing a new social, ecological & economic enlightenment. Version August 3.

Page, G., Matey, S., Walsh, E., and the TSM & **A Working Group.** (2021). *Transformations Systems Mapping and Analysis Working Group: An Introduction and Guide for Members.* Retrieved from *https://storymaps.arcgis.com/stories/bc033f068da844c899cf293970f84a7d*

Page, K. (2012). The four principles: Can they be measured and do they predict ethical decision making? *BMC Med Ethics*, *13*, 10. DOI: *https://doi.org/10.1186/1472-6939-13-10*

Patton, M. Q. (2018). *Principles focused evaluation: The guide*. United States, New York: Guilford Press. DOI: *https://doi.org/10.31244/zfe.2020.02.09*

Patton, M. Q. (2020). *Blue marble evaluation: Premises and principles*. United States, New York: Guilford Press.

Patton, M. Q., & **Campbell-Patton, C.** (2020). Blue marble evaluation workshop webinar series [Zoom lecture]. Retrieved from *https://www.eventbrite.com/e/blue-marble-evaluation-onlineworkshop-webinar-series-tickets-103728169748?discount=TransSysMa*

Pulvermüller, F., & **Fadiga, L.** (2010). Active perception: Sensorimotor circuits as a cortical basis for language. *Nature Rev. Neuroscience*, *6*, 576–582. DOI: *https://doi.org/10.1038/nrn2811*

Reyna, J., Hanham, J., & **Meier, P.** (2018). The Internet explosion, digital media principles and implications to communicate effectively in the digital space. *E-Learning and Digital Media*, *15*(1), 36–52. DOI: *https://doi.org/10.1177/2042753018754361*

Ritchie, J., Lewis, J., McNaughton Nicholls, C., & **Ormston, R.** (2013). *Qualitative research practice: A guide for social science students and researchers.* London, Thousand Oaks, CA: Sage Publications Ltd. Retrieved from *http://jbposgrado.org/icuali/Qualitative%20Research%20practice.pdf*

Rosado, C. (2006). What do we mean by "Managing diversity"? *Workforce Diversity, Vol. 3: Concepts and Cases*. Hyderabad, India: ICAFAI University. Retrieved from *http://mail.edchange.org/multicultural/papers/rosado_managing_diversity.pdf*

Salmons, J. E. (2015). *Doing Qualitative Research Online*. England, London: SAGE Publications Ltd.

Scharmer, O. C. (2009). Theory u: Leading from the future as it emerges. The social technology of presencing. United States, California: Berrett-Koehler Publishers, Inc.

Schwaber, K., & **Sutherland, J.** (2017). The scrum guide™ – The definitive guide to scrum: the rules of the game. Retrieved from *http://creativecommons.org/licenses/by-sa/4.0/legalcode* and described in summary form at *http://creativecommons.org/licenses/by-sa/4.0/*

Seele, P., & **Lock, I.** (2017). The game-changing potential of digitalization for sustainability: possibilities, perils, and pathways. *Sustain Science*, *12*, 183–185. DOI: *https://doi.org/10.1007/s11625-017-0426-4*

Simonds, J. G., & **Robert, C. B.** (1997). Creating individual and team performance measurements. Retrieved from *https://doi.org/10.1002/ert.3910230405*

Singh, D. (2013). Managing cross-cultural diversity: Issues and challenges in global organizations. *IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)*, 43–50. Indra Ganesan College of Engineering. Retrieved from *https://www.researchgate.net/publication/331453077*. DOI: *https://doi.org/10.9790/1684-0515056*

Smartsheet. (2020). *The power of iterative design and process*. Retrieved from *https://www.smartsheet.com/iterative-process-guide*

Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., Summerhayes, C. P., Barnosky, A. D., Cornell, S. E., Crucifix, M., & **Donges, J. F.** (2018). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences*, *115*(33), 8252–8259. DOI: *https://doi.org/10.1073/pnas.1810141115*

SumApp. (2020). Welcome to the social system map of the transformation systems mapping and analysis working group. Retrieved November 30, from *https://embed.kumu.io/67d5418d3b2a57f3fb5cb5c3c7f8fee3#main/comments-about-the-principles*

United Nations. (2015). *Historic new sustainable development agenda unanimously adopted by 193 UN members*. Retrieved from *https://www.un.org/sustainabledevelopment/blog/2015/09/historic-new-sustainable-development-agenda-unanimously-adopted-by-193-un-members/*

United Nations. (n.d.). *Transforming our world: The 2030 agenda for sustainable development*. Retrieved from *https://sdgs.un.org/2030agenda*

Walker, B., Holling, S. C., Carpenter, S. R., & **Kinzig, A.** (2004). Resilience, adaptability and transformability in social–ecological systems. *Ecological Society, 9*, 5. Retrieved from *https://www.gbcma.vic.gov.au/downloads/wshop_resilience_reading/resilience_2.pdf*. DOI: *https://doi.org/10.5751/ES-00650-090205*

Wamsler, C., Schäpke, N., Fraude, C., Stasiak, D., Bruhn, T., Lawrence, M., Schroeder, H., & **Mundaca, L.** (2020). Enabling new mindsets and transformative skills for negotiating and activating climate action: Lessons from UNFCCC conferences of the parties. DOI: *https://doi.org/10.1016/j.envsci.2020.06.005*

Wolff, T. (2010). *The power of collaborative solutions: Six principles and effective tools for building healthy communities.* San Francisco, USA: Jossey-Bass a Wiley Imprint.