

Towards a Changing Role of Governance for a Sustainable World

Emőke Takács¹ and Toon Abcouwer²

¹ERI Hungary - European Research Institute Hungary, Budapest, Hungary

²ERI Hungary - European Research Institute Hungary, Amsterdam, The Netherlands

t.emoke@eri.net.in

abcouwer@gmail.com

Abstract: It is widely recognised that recent societal changes are notably disruptive. Living in a physically limited world forces us to consider environmental, climate, and sustainability concerns as we prepare for uncertain futures. Given current shifts in demographics, politics, and technology, along with the increasing focus on truth and misinformation, we face an urgent need to motivate individuals to contribute to a society where future generations can flourish. In our article, we explore the lighthouse metaphor, highlighting the concepts of value (the lighthouse) and motivation (the ship and the crew) within a constantly changing environment (the sea). Achieving excellence in this setting requires management and leadership to develop strategies for influencing governance. This is grounded in scientific research examining the three main forms of governance: control, cooperation, and autonomy. Focusing on environmental, climate, and sustainability issues, we observe a movement where, on one hand, rising demands are being placed on individuals (the Me) and organisations (the We) to help create a more sustainable world (the All), as outlined in the Me-We-All approach for circular resilience. Conversely, considering modern technological advances where technology is replacing tasks traditionally performed by people, we need to craft a new vision that enables employees to enter a flow state aligned with their skills and the challenges they face, thereby contributing to a more valuable future. To implement this principle, we advocate introducing an alternative vision of management and leadership. The article shows that adopting the concept of stewardship can help achieve this goal, which we differentiate from management and leadership as follows: Management focuses primarily on addressing current challenges with conventional methods, where the focus is on rationality. Leadership focuses on developing new strategies to address existing challenges, demanding creativity. Stewardship cares about the needs of 'Me-We-All' and develops skills to prepare for unexpected challenges, requiring resilience. The article aims to inspire discussion. We do not focus solely on scientific proof but seek to initiate a debate on the balance we must achieve among the management and leadership issues in contemporary society.

Keywords: Leadership, stewardship, governance, cooperation, autonomy

1. Introduction: Facing Challenges

It is widely acknowledged that recent societal developments are remarkably disruptive. Existing in a physically constrained world compels us to consider environmental, climate, and sustainability needs as we prepare for uncertain futures.

Facing these challenges has its origin in complexity. Today's challenges can be described as open, complex, dynamic, and networked (Dorst, 2015). Problems can emerge from anywhere (**open**), influenced by environmental, social, and economic factors, requiring us to prepare for uncertain futures. These challenges are rarely isolated—multiple issues often overlap (**complex**), highlighting the idea of intersectionality. Addressing one problem can lead to new disruptions, showing how challenges are constantly evolving (**dynamic**). Moreover, no stakeholder can solve these issues alone; solutions rely on collaboration across all relevant partners (**networked**). It is this approach to societal challenges that we use as starting point for this paper.

Considering these sustainability-oriented challenges, it is crucial to possess adequate problem-solving capabilities to identify and implement the appropriate interventions.

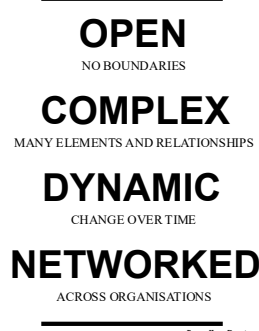


Figure 1: The character of societal challenges (Dorst, 2015)

The challenges can be associated with several views that need consideration. In the following paragraph, we will further examine the challenges in relation to the open, complex, dynamic, and networked viewpoints. But first we dive deeper into the relation between context, values and motivation.

2. The Lighthouse Metaphor

To better understand the complex reality, this article employs metaphors, as they play a crucial role in the conceptualisation of abstract ideas, highlighting certain characteristics while concealing others. In line with this, Lakoff and Johnson (2020, p. 476) stated that the concepts governing our thoughts are not merely matters of intellect. They also guide our everyday functioning, down to the most mundane details. Our concepts shape what we perceive, how we navigate the world, and how we relate to others. This necessitates and facilitates a change in mindsets.

However, before proceeding, we echo Andriessen's (2008) warning that metaphors can mislead us when taken literally.

To bring about a fundamental shift in mindsets, we utilise the **Lighthouse Metaphor** (Takács & Abcouwer, 2025) as a conceptual framework. In this model, the **Lighthouse** symbolises a **repository of values and foundational knowledge**, offering ethical orientation and stability amidst societal and organisational turbulence (Ezzat et al., 2016; França et al., 2024). The **Light Beam** represents the **flow of motivation and knowledge**, propelling individuals and organisations forward—without intrinsic motivation, even deeply held values and extensive knowledge remain inert (Deci & Ryan, 2012). The **Ship** stands for the individual or organisational entity navigating through complexity, where effective direction (value-driven strategy) and propulsion (motivation) are crucial (Csikszentmihalyi, 1997; McLeod, 2007). Supporting this navigation is the **Crew**, comprising the **knowledge network** (Brouwers et al., 2022; Martins et al., 2019), including mentors, collaborative teams, and structured knowledge management systems (Boisot, 2006), which collectively enable informed decision-making and resilient performance. Surrounding all of this is the **Ocean**—the external environment—characterised by continuous change (Chandler, 2014; World Economic Forum, 2024), uncertainty, and interconnectivity, demanding ongoing adaptation and learning (Rawat, 2018; Snowden & Boone, 2007; Taleb, 2010). In this context, knowledge management acts as a navigational aid, akin to a lighthouse guiding a ship through volatile waters. While prior sections have addressed the complexity of the external environment—described as open, complex, dynamic, and networked—this framework emphasises the essential role of **values and motivation** in ensuring meaningful, adaptive, and sustained organisational transformation.

3. Understanding the Challenge

When dealing with challenges (in line with Drost (2015)), like sailing on the ocean, we face complex circumstances; therefore, we must explore the nature of the challenge more deeply so we can navigate smoothly.

3.1 Complexity - The Ocean

3.1.1 The open characteristic

The contemporary sustainability-related challenges we face are shaped by significant shifts in demographics, politics, and technology (UN Department of Economic and Social Affairs, 2015; World Economic Forum, 2024). These shifts demonstrate that the onset of the challenges we encounter can arise from almost any source imaginable, resulting in a problem space characterised as open (Dorst, 2015). Thus, it is essential to utilise our skills in the most effective manner possible.

The efforts to tackle these challenges ultimately benefit a wide range of individuals, beginning with the self (Me), extending to our communities (We), and encompassing society as a whole (All) (Abcouwer et al., 2022).

3.1.2 The Complexity characteristic

It is visible that we are increasingly confronted with significant challenges (Beck, 1996; Folke et al., 2010). and that problems are seldom caused by a single issue. Instead, they arise from multiple, interconnected sources, referred to as intersectionality in literature (Runyan, 2018). Intersectionality offers a framework for analysing how various factors combine to influence complex problems, just as Adam Kahane (2004) emphasises the need to consider diverse perspectives and deeper systemic causes when 'Solving Tough Problems'.

However, the complexity of contemporary challenges raises critical questions about who is engaged in addressing these challenges—especially when the true nature of the problem remains unclear, as highlighted by the intersectionality approach (Kremer et al., 2019; Randel & Jaussi, 2019).

3.1.3 The dynamic characteristic

The open and complex nature of the challenges we face today is further intensified by the highly dynamic character of the contemporary world (Chandler, 2014; Dyer & Ericksen, 2008). Finding a clear solution is not straightforward due to the multiple layers of complexity involved (Kurtz & Snowden, 2003; Snowden & Boone, 2007). Truly open and complex issues demand the ability to develop solutions even in the absence of a full understanding of the problem itself. In such circumstances, our capacity for problem-solving and creativity becomes essential in charting a path toward ‘unknown futures’ (intentionally using a plural form to emphasise the diversity of possible outcomes).

An emphasis on sustainability has become an essential requirement. Alongside this shift in viewpoint, we are also beginning to acknowledge our collective responsibility in tackling global concerns. This sense of duty extends from the individual (Me), to our communities (We), and ultimately to all of humanity (All) (Abcouwer et al., 2022; Takács et al., 2024).

3.1.4 The networked characteristic

When acknowledging the importance of involving all relevant partners in the problem-solving process, a crucial question emerges how to organise this complex and critical collaboration effectively. In network-based settings, a central concern is determining the most suitable governance structure. Governance hinges on understanding who holds what responsibilities. Should responsibility lie predominantly at the top (control), be shared among network partners (cooperation), or be individually interpreted and fulfilled by each actor according to their own capacities (autonomy)? How to ensure that workers can actively contribute to solving problems while operating in a state of optimal engagement or “flow”. Interestingly, this question arises twice, possibly indicating its significance in the broader context of work and problem-solving dynamics. Ultimately, the answer encompasses various levels of impact: individual (Me), community or group (We), and society at large (All).

3.2 Values – The Lighthouse

The Millennium Declaration highlights our shared duty to uphold human dignity, equality, and fairness for a more peaceful and just world (United Nations, 2000). It promotes respect for social structures, individual rights, and global cooperation in tackling major issues. Key values include freedom from fear and injustice, equal rights and opportunities, fairness and social justice, respect for diversity and tolerance, care for nature, sustainable development, and shared responsibility for global peace and development. These values show the way on our trip and must be balanced to protect people (We) and the environment (All). A focus solely on economics misses the growing need for collective responsibility in shaping a better future.

3.3 Motivation - The Light Beam

According to Csikszentmihalyi (1997), organisational (We) success depends on individuals (Me). Leaders can't force success. They must create an environment that encourages it. Clear goals, good communication, feedback, and increasing challenges drive growth and teamwork (McLeod, 2007; Raineri, 2011). Leaders are responsible for aligning employee talents with suitable challenges, building trust at the organisation's core. Vision, he argues, reflects a company's deeper purpose and future direction, requiring investment to turn it into reality. Success extends beyond profit to encompass excellence that benefits everyone. This shift signifies a desire to create lasting value for humanity and the environment, rather than serving only personal or organisational interests. Genuine motivation arises from beaming goals and teamwork. When personal and collective goals align, people are more likely to experience "flow." Key traits that support this include optimism, integrity, ambition paired with perseverance, curiosity, and empathy (Csikszentmihalyi, 2003).

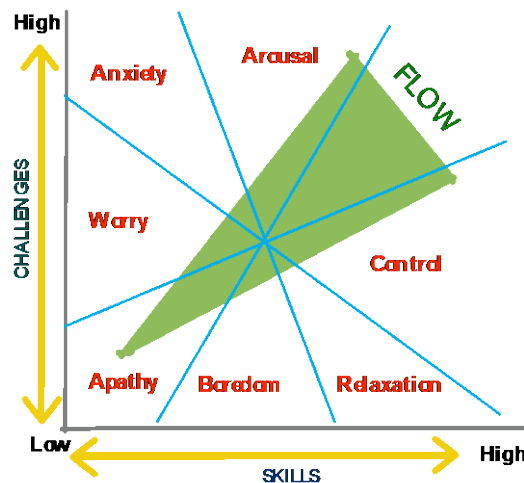


Figure 2: 'The map of everyday experience' by Csikszentmihalyi (2003)

Finally, looking at an oriental philosophy, the Ikigai (Sone et al., 2008) links individual (Me), organisational (We) and societal (All) motivations. Its purpose is to discover what we are good at, what brings us joy and what adds something to our larger community. When we balance passion, profession, vocation and mission, we can find the flow to reach our individual, organisational and societal goals in our complex world.

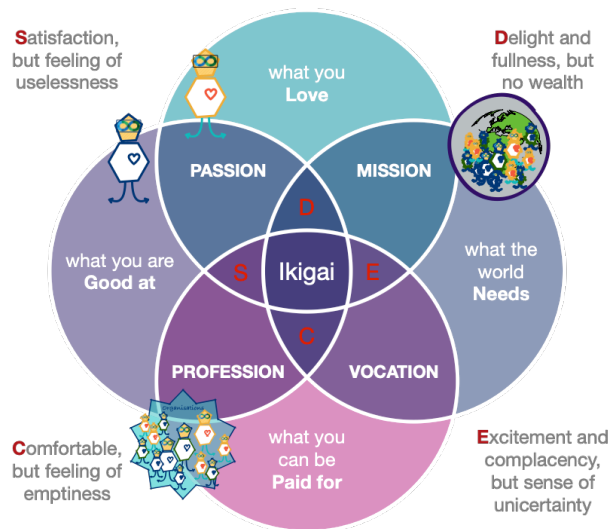


Figure 3: IKIGAI (based on Sone et al., 2008)

4. Dealing with Change – Navigating the Ship

4.1 The AcoR Model

When reasoning through the Adaptive Cycle of Resilience (ACoR) (Takács & Abcouwer, 2020), we can adopt multiple perspectives to understand the challenges an organisation faces. This includes analysing the objectives pursued within each quadrant of the model, understanding the process of moving between quadrants, and considering the role of human dynamics.

The ACoR framework outlines four organisational objectives. In the Equilibrium stage, the goal is to ensure stability and prepare for future challenges by focusing on efficiency and preventing problems. During the Challenge phase, when disruptions occur, creativity is key to developing new responses. In the New Combinations stage, the organisation selects the best solution for development, requiring strong leadership and management awareness. Finally, in the Operationalising phase, the focus shifts to effective implementation through collaboration and executing leadership decisions.

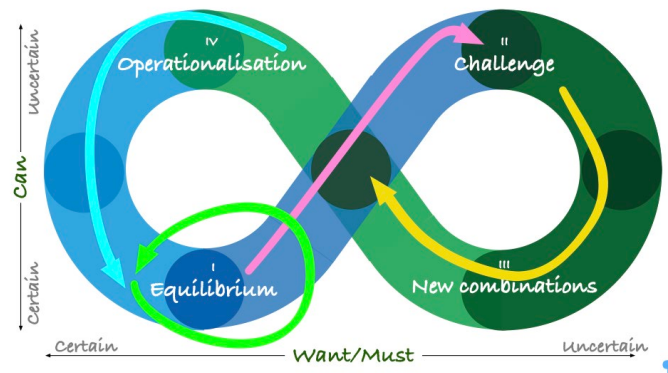


Figure 4: The ACoR model (based on Takács & Abcouwer, 2020)

4.1.1 Dynamics in the ACoR model

The power of the model lies in its dynamic nature. Organisations are not static but continuously move through the quadrants in response to internal and external developments. The transitions are marked by shifting attention and changing priorities, as described by a.o. Gunderson and Holling (2002), Takács and Abcouwer (2020) Holling (2001).

Movements within the ACoR:

From equilibrium to challenge – Release At a certain point, the complexity of the situation becomes unmanageable, often triggered by unexpected external events. The existing structure can no longer cope, leading to a so-called Gestalt switch—an abrupt shift in perception from confidence to insecurity. This phase is referred to as *Release*.

From challenge to new combinations – Reorganisation When management acknowledges uncertainty but fosters creativity, a sense of possibility and hope emerges. This outlook encourages a significant restructuring process, to envision a new path forward. This transformative period is known as *Reorganisation*.

From new combinations to operationalisation – Exploitation Choosing a definitive course of action signals a psychological shift—from hope to confidence in the chosen direction. This decision is influenced not only by rational evaluation but also by intuition and emotion. In literature, this transition is termed *Exploitation*.

From operationalisation to equilibrium – Conservation After implementing the chosen solutions, attention turns to refining processes, enhancing efficiency, and reintroducing structure. Bureaucratic routines are reinstated to stabilise the organisation in a new “business-as-usual” state. Importantly, this new equilibrium differs from the previous one. This phase is referred to as *Conservation*.

These cyclical transitions highlight that resilience is not about maintaining the status quo, but about the organisation’s ability to adapt, renew, and reinvent itself in the face of continuous change.

4.2 Solution Finding

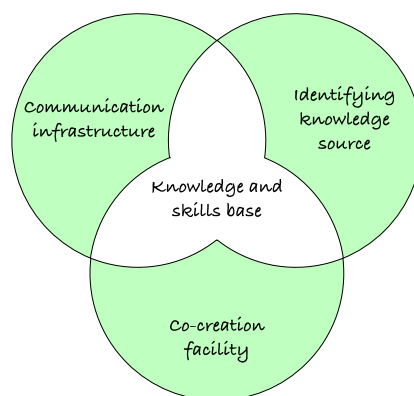


Figure 5: The I-solution model

To ensure access to the knowledge we require, we can rely on the I-solution approach (Takács & Abcouwer, 2020) , which is founded on four fundamental components. First, the necessary knowledge (IK: identifying knowledge sources). Second, the need for communication (CI: communication infrastructure). Third, we collaborate with these partners to co-create interventions (CC: co-creation facility). Fourth, this process relies on a robust base of knowledge and skills (KBS: knowledge and skills base) that serves as a structured repository of competencies.

The interaction of these components depends on the nature of the challenge. Building on Gigerenzer's insights (Gigerenzer, 2015), we differentiate between three types of problem contexts: **certainty**, where we know in which direction to search for a solution; **risk**, where several plausible interventions are known, but it remains unclear which will be most effective; and **uncertainty**, where we lack any clear direction for finding a solution. This categorisation, alongside the distinction between well-defined and ill-defined problems, shapes our approach to navigating the solution space.

However, navigating the space between problems and solutions is not merely a technical issue of connecting knowledge; it also requires motivating partners to realise their full potential.

To categorise the problem-solving approaches, we split them up in three different ways of working that can be related to the (un)certainty of the challenge. The difference comes into practice in the sequence the three aspects of knowledge management.

4.2.1 Certainty

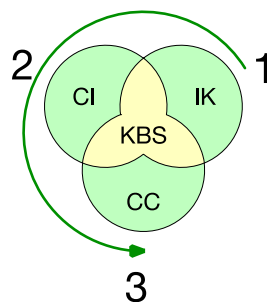


Figure 6: The I-solution model in certainty

When objectives are clear, we operate within a context of certainty to locate relevant knowledge and ensure its quality and integration into existing systems. Second, effective communication among specialists is necessary to share and validate this knowledge. Third, collaboration and co-creation are encouraged to generate solutions.

We recommend first assessing the nature of the problem, then categorising its characteristics, and finally implementing the appropriate countermeasures. In such cases, there is a clear demand for highly educated individuals who are fully equipped to tackle current challenges. The ultimate aim is mainly to restore the equilibrium state as efficiently as possible.

4.2.2 Risk

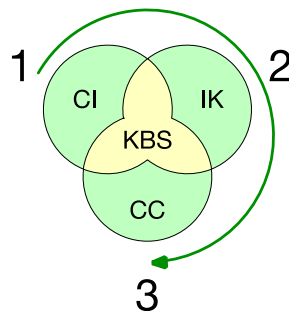


Figure 7: The I-solution model under risk

When we are unaware of the outcomes of various interventions, it is necessary to analyse the actual situation from a different perspective to select the most appropriate one. Communication plays a central role in this process, as it fosters consensus on the type of knowledge required and sets the stage for collaborative problem-solving. The aim is to facilitate the co-creation of solutions that address future challenges and ensure alignment between individual capabilities and organisational needs.

By identifying analogies with past situations, we can leverage successful previous solutions to inspire new ones. This approach emphasises entrepreneurial thinking and supports a process whereby problem analysis leads to jointly developed, innovative solutions.

4.2.3 Uncertainty

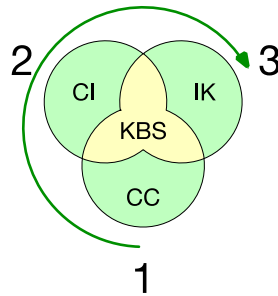


Figure 8: The I-solution model in uncertainty

When the very nature of the problem is unknown, we enter a state where traditional methods of problem-solving are no longer effective. In such circumstances, finding new countermeasures becomes essential. This involves conducting scenario analyses to identify opportunities that enable a flexible, contingency-based approach. A different way of working is required—one that draws on diverse competencies and prioritises adaptability.

In this context, the knowledge required to address the problem is not yet available, and experimentation may be the only feasible strategy. Continuous monitoring and communication are essential for adapting to emerging conditions and identifying the additional knowledge needed to formulate effective solutions.

These three approaches correspond to different types of uncertainty in the solution space. Pure types rarely exist in practice but a mix of all three. Linking challenges to solutions assumes that we share values, have insight into (un)certainty, and we are all motivated to contribute to the world.

5. Governance – The Captain and the Crew

In a world where the challenges primarily arise from external sources (increasingly related to environmental, climate, and sustainability issues), traditional methods of problem-solving are no longer adequate. Assigning the responsibility for addressing these challenges requires a different approach to governance. In the literature, a thorough analysis occurred to explore various principles of good governance (Chandler, 2014; Cumming et al., 2019). For this research, we adopted the approach suggested by de Geus (1989) and Keidel (1995) who developed a typology of governance based on three principles: control, cooperation, and autonomy.

5.1 Control, Cooperation and Autonomy: Finding a Balance

The control-, cooperation-, and autonomy-based view on governance differs fundamentally in how organisations perceive power, roles, individual agency, and organisational goals.

In control-based organisations, hierarchy and centralised authority are essential. The structure is rigid, with a distinction between leaders and followers. Power is concentrated at the top, and the emphasis lies on discipline, obedience, and efficiency. Decision-makers possess superior knowledge, freedom and equality are incompatible with effective organisation. The primary concern is stability and rationality, often at the expense of participation and diversity. The focus originates from the dominant coalition within the system.

In contrast, cooperation-based organisations emphasise shared responsibility and mutual respect with evenly distributed power, essential relationships across roles, and decentralised decision-making, involving all

stakeholders. Here, freedom and equality are not obstacles but enable effective coordination. Rather than imposing unity, cooperation-based models value variety and consultation. Leadership is fluid and situational, not fixed, and decision quality is enriched by drawing on the collective knowledge of all members. The organisation aims to balance individual needs with collective efficiency and rationality.

Lastly, autonomy-based organisations take decentralisation to its fullest extent, rooted in the belief that individuals possess the innate intelligence and responsibility to self-govern. There is no need for imposed hierarchy or top-down management; instead, self-organisation and intrinsic motivation guide behaviour. The organisation exists to support freedom, diversity, autonomy, and equality, rejecting traditional ideas of order based on discipline. Governance becomes an enabling process rather than directing, and the organisation's success is measured by the degree of personal and collective freedom it facilitates. Rationality and efficiency are not goals alone, but outcomes of a system built on individual liberty.

The descriptions of the perspectives on governance illustrate the differences in approaches to cooperative systems. For optimal performance, those closest to the actual reality can take some responsibility.

In a collaborative environment, co-creation relies on mutual incentives to achieve a positive way ahead together. In an autonomy setting, an individual aims to contribute to the common good by functioning at their best as an individual. This starting point relies on the belief that it is necessary to utilise people's qualities. Mutual trust exists, affirming that there is no fundamental difference between individual and societal interests.

The core premise of the sustainability focus in contemporary challenges is that we must contribute to a better and more sustainable future for both the current and future generations. When optimising interventions for an improved future, we not only define our objectives (which form the basis of a control-biased governance structure) but also enhance cooperation among all involved partners, emphasising the need for a cooperation bias. All partners are encouraged to contribute to the best of their abilities, seeking an optimal balance between their individual satisfaction and their contribution to the common good. The 'captain' values their abilities without judgment based on an absolute measure. Society at large appreciates individual contributions only when recognising differences based on specific abilities and competencies. Achieving a balance among the various biases identified also underpins the current focus on valuing Diversity, Equity, and Inclusion.

6. The role of Management, Leadership and Stewardship

When we consider the challenges faced by modern organisations and their networks from a timeline perspective, we can link them to the adaptive cycle of resilience discussed earlier. According to the complexity theory proposed by Snowden (2003; 2007), short-term challenges are often seen as simple or, at most, complicated problems. Objectives tend to be clear or predictable. In the lighthouse metaphor, the lighthouse offers a solid foundation for the future outlook we aim to achieve. The skills required from our crew to face these challenges are clear, and the sea, even when confronted with a familiar western storm, remains predictable and behaves in a well-known way. Forecasting and analogical reasoning are the main approaches to tackling the challenges ahead. **Management** mainly concentrates on resolving current challenges through traditional methods, with rationality as the central focus. Within the lighthouse metaphor, the ship and crew are strong and equipped to handle the new challenges we face. The problems, in terms of Snowden, are complicated or even complex, and we must rely on the creativity of all those involved in our partner network. The light beam guides the motivated partners in contributing to the solution-finding process for these issues, but we base our approach on the trust that we can manage it. It is **leadership** that we need to concentrate on when developing new strategies to tackle existing challenges. The primary focus in such a setting should be on stimulating creativity.

However, modern society presents us with challenges that we have never encountered before and for which we have no clear way to deal. We face complexity and even chaos in our daily practice. We are confronted with a situation where we must find solutions to challenges, we do not yet fully understand. In terms of the lighthouse metaphor, we are navigating a sea so wild that we cannot clearly see north, south, east, or west. The crew's needs are unclear, and we can only rely on their cooperation, trusting that their collaboration and creativity will help them find solutions for the entirely uncertain issues we face. As we lack clear objectives and the problems are highly ambiguous, leading the organisation through management or leadership does not necessarily aid in finding solutions. The only option is to focus on organising our problem-solving capabilities. Therefore, neither management nor leadership alone are sufficient. What we need is the ability of **stewardship**, which considers the need to balance 'Me', the individual, 'We', the cooperation, and 'All', the societal and future-oriented aspects of problem solving, built on developing a network of skills and competencies to prepare for unforeseen

challenges. Here, the main emphasis is on building resilience. Think of the challenges described in the adaptive cycle of resilience.

7. Concluding Remarks

This article aims to illuminate problem-solving approaches in modern times. Much of the literature on challenges and related problem-solving strategies assumes that either the problem space is clear or that the knowledge, skills, and abilities needed for effective interventions are obvious. From a sustainability perspective, this article highlights the ambiguity of traditional problem-solving methods. We seek to clarify the nature of the problem spaces we inhabit, the solution spaces available for exploration, and the processes we must navigate. Additionally, the governance required arises from the complex interactions between the problem, the solution, and the processes necessary to integrate these elements in a managed way. Using the lighthouse metaphor has helped us identify key elements such as direction, capabilities within the network of partners, and the complex disturbances we face. As our goal is to spark a discussion to help society better prepare for uncertain futures, we look forward to future debates in this area.

Ethics declaration: for this paper is no ethics clearance required

AI declaration: AI tools are used for improving the language.

References

- Abcouwer, A. W., Takács, E., Schilstra, T., & Banga, O. P. (2022). *The Me, We, All Approach - Circular Resilience*. A.A.A. & O. Beck, U. (1996). World risk society as cosmopolitan society. *Theory, Culture & Society*, 13(4), 1–32.
- Boisot, M. (2006). Moving to the edge of chaos: bureaucracy, IT and the challenge of complexity. *Journal of Information Technology*, 21(4), 239.
- Brouwers, K., van Lelyveld, W., Takács, E., & Abcouwer, T. (2022). Lifelong learning through knowledge-sharing & digital collaboration. 23rd European Conference on Knowledge Management Vol 1,
- Chandler, D. (2014). *Resilience : the governance of complexity*. Routledge.
- Csikszentmihalyi, M. (1997). *Finding flow : the psychology of engagement with everyday life* (1st ed.). BasicBooks.
- Csikszentmihalyi, M. (2003). *Good business : leadership, flow, and the making of meaning*. Viking.
- Cumming, D., Werth, J. C., & Zhang, Y. (2019). Governance in entrepreneurial ecosystems: venture capitalists vs. technology parks. *Small Business Economics*, 52(2), 455–484.
- de Geus, M. (1989). *Organisatietheorie in de politieke filosofie*. Eburon.
- Deci, E. L., & Ryan, R. M. (2012). Self-determination theory.
- Dorst, K. (2015). *Frame innovation: Create new thinking by design*. MIT press.
- Dyer, L., & Ericksen, J. (2008). *Complexity-Based Agile Enterprises: Putting Self-Organizing Emergence to Work* (CAHRS Working Paper Series, Issue.
- Ezzat, H., Agogue, M., Cassotti, M., Le Masson, P., & Weil, B. (2016, 2016–06–01). *Leadership-driven Ideation: The Cognitive Effects of Directive Feedbacks on Creativity* European Academy of Management - EURAM, Paris, France. <https://halshs.archives-ouvertes.fr/halshs-01298791>
- Folke, C., Carpenter, S. R., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience thinking: integrating resilience, adaptability and transformability. *Ecology and Society*, 15(4), 20.
- França, G. E. d., Silva, H. d. F. N., & Mendonça, A. T. B. B. (2024). Sustainability in the age of information and knowledge: a systematic review. *RDBCI: Revista Digital de Biblioteconomia e Ciência da Informação*, 22, e024005.
- Gigerenzer, G. (2015). *Risk savvy: How to make good decisions*. Penguin.
- Gunderson, L. H., & Holling, C. S. (2002). *Panarchy : understanding transformations in human and natural systems*. Island Press.
- Holling, C. S. (2001). Understanding the Complexity of Economic, Ecological, and Social Systems. *Ecosystems*, 4(5), 390–405.
- Kahane, A. (2004). *Solving tough problems: An open way of talking, listening, and creating new realities*. Berrett-Koehler Publishers.
- Keidel, R. W. (1995). *Seeing organizational patterns : a new theory and language of organizational design*. Berrett-Koehler.
- Kremer, H., Villamor, I., & Aguinis, H. (2019). Innovation leadership: Best-practice recommendations for promoting employee creativity, voice, and knowledge sharing. *Business Horizons*, 62(1), 65–74.
- Kurtz, C. F., & Snowden, D. J. (2003). The new dynamics of strategy: Sense-making in a complex and complicated world. *IBM Systems Journal*, 42(3), 462–483.
- Lakoff, G., & Johnson, M. (2020). Conceptual metaphor in everyday language. In *Shaping entrepreneurship research* (pp. 475–504). Routledge.
- Martins, V. W. B., Rampasso, I. S., Anholon, R., Quelhas, O. L. G., & Leal Filho, W. (2019). Knowledge management in the context of sustainability: Literature review and opportunities for future research. *Journal of cleaner production*, 229, 489–500.
- McLeod, S. (2007). Maslow's hierarchy of needs. *Simply psychology*, 1.

- Raineri, A. B. (2011). Change management practices: impact on perceived change results [Management]. *Journal of Business Research*, 64(3), 266–272.
- Randel, A. E., & Jaussi, K. S. (2019). Giving Rise to Creative Leadership: Contextual Enablers and Redundancies. *Group & Organization Management*, 1059601119834089.
- Rawat, S. (2018). *Decision-Making under Certainty, Risk and Uncertainty*.
<http://www.businessmanagementideas.com/decision-making/decision-making-under-certainty-risk-and-uncertainty/3371>
- Runyan, A. S. (2018). What is intersectionality and why is it important? *Academe*, 104(6), 10–14.
- Snowden, & Boone. (2007). A leader's framework for decision making. A leader's framework for decision making [Management]. *Harv Bus Rev*, 85(11), 68–76, 149.
- Sone, T., Nakaya, N., Ohmori, K., Shimazu, T., Higashiguchi, M., Kakizaki, M., Kikuchi, N., Kuriyama, S., & Tsuji, I. (2008). Sense of life worth living (ikigai) and mortality in Japan: Ohsaki Study. *Psychosomatic Medicine*, 70(6), 709–715.
- Takács, E., & Abcouwer, A. W. (2020, 4–7 februari 2020). *Framework for Adaptive Change: Towards Sustainable Innovation* [Scientific paper]. International Conference on Innovation and Management, Sapporo.
- Takács, E., & Abcouwer, A. W. (2025). *Navigating with Knowledge: The Lighthouse Metaphor for understanding Context, Value, and Motivation* European Conference on Knowledge Management 2025, Lahti, Finland.
- Takács, E., Keményffy, O., & Abcouwer, T. (2024). *How Information in Education of Sustainability and Circularity can be a Driving Force in Society* European Conference on Information Systems Education Research, Paphos.
- Taleb, N. N. (2010). *The black swan : the impact of the highly improbable* (2. ed.). Random House Trade Paperbacks.
- UN Department of Economic and Social Affairs. (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*. United Nations,. <https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981>
- United Nations. (2000). *United Nations Millennium Declaration*. <https://www.ohchr.org/en/instruments-mechanisms/instruments/united-nations-millennium-declaration>
- World Economic Forum. (2024). *The Global Risks Report 2024 19th edition*. <https://www.weforum.org/publications/global-risks-report-2024/>