ENABLING FORESIGHTFULNESS

A FRAMEWORK FOR BUILDING A FUTURES-ORIENTED ORGANIZATION

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Abstract

The practice of organizational foresight is known to have significant benefits when utilized as an input into strategic decision-making and strategic planning. There are, however, recognized limitations with organizations' abilities to integrate and enact insights derived from foresight. This report aims to understand those limitations by seeking to uncover the barriers and enabling conditions associated with integrating foresight within organizations. The research for this report is grounded in human-centred design and follows a problem finding, problem framing, and solutioning process, and is supported by a social constructivist point of view, which emphasizes knowledge building and knowledge transfer through collaboration and active engagement. In addition to background research, industry interviews with expert foresight practitioners, and a survey of organizational strategists were used to determine the barriers and enabling conditions associated with organizational foresight. Key findings include three principles for successful integration of foresight within organizations. Those three principles are: first, the prioritization of the collective over the individual and the recognition that having individual capacity does not translate into having collective capacity; second, foresight is viewed as an organizational activity, meaning that futures-thinking and foresight practicing brings strategic foresight to life in an organization and makes integration achievable; and third, that the organization sees itself as a system, and in that system all the elements and their interrelationships are used to sustain the thinking and the practice of foresight. Stemming from the three principles, this report concludes by making recommendations for both foresight practitioners and organizations that engage with foresight. The report identifies opportunities for further research related to the recommendations.

We wish to acknowledge that the completion of this Major Research Project is the result of many forces that, when multiplied together, have made its completion both possible and immeasurably rewarding:

Two years of Thursdays spent in the company of twenty-four curious, thoughtful, funny, and supportive classmates who, in the end, were the real transformative powers of SFI.

Suzanne Stein, who not only taught us our first course in foresight, but insisted that if we love what we learn, our learning will flourish.
She was right.

Helen Kerr, whose steadfast advising challenged us to always consider what's needed, not what's wished for, and to follow the breadcrumbs.

Our husbands and children. We look forward to spending weekends with you once again.

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Glossary of terms

Agency: The capacity of individuals to act independently and to feel control over their actions.

Causal Layered Analysis: A method used to explore the underlying causes of an issue, and seek to effectively transform the future.

Emergence: When an entity is observed to have properties its parts do not have on their own, that is, properties or behaviors which emerge only when the parts interact in a wider whole.

Enactment: Through a process of sensemaking and reality construction, people in an organization give meaning to the events and actions of the organization (Lissack, 1999).

Integration: Effectively combining two or more organizational processes or practices.

Foresightfulness: The ability to cope with the future. In an organization, it is the institutionalized capacity to respond to an organization's circumstances (Tsoukas, 2004).

Futures-thinking: The practice of thinking about the future in a deliberate way.

Organizational Foresight: The application of futures and foresight practices by an organization to advance itself, to fulfill its purpose and achieve success on whatever terms it defines such success (Gordon et al., 2020).

Practice: A set of skills and an understanding of when to use them (Cox, 2012).

Process: A series of actions or steps taken in order to achieve a particular end.

Strategic Foresight: Also referred to as Futures Studies. It is a discipline involving gathering and processing information, and using the insight to plan for the future.

System: An interconnected set of elements that is coherently organized in a way that achieves something (Meadows, 2008).

Systems-thinking: A discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static "snapshots" (Senge, 1999).

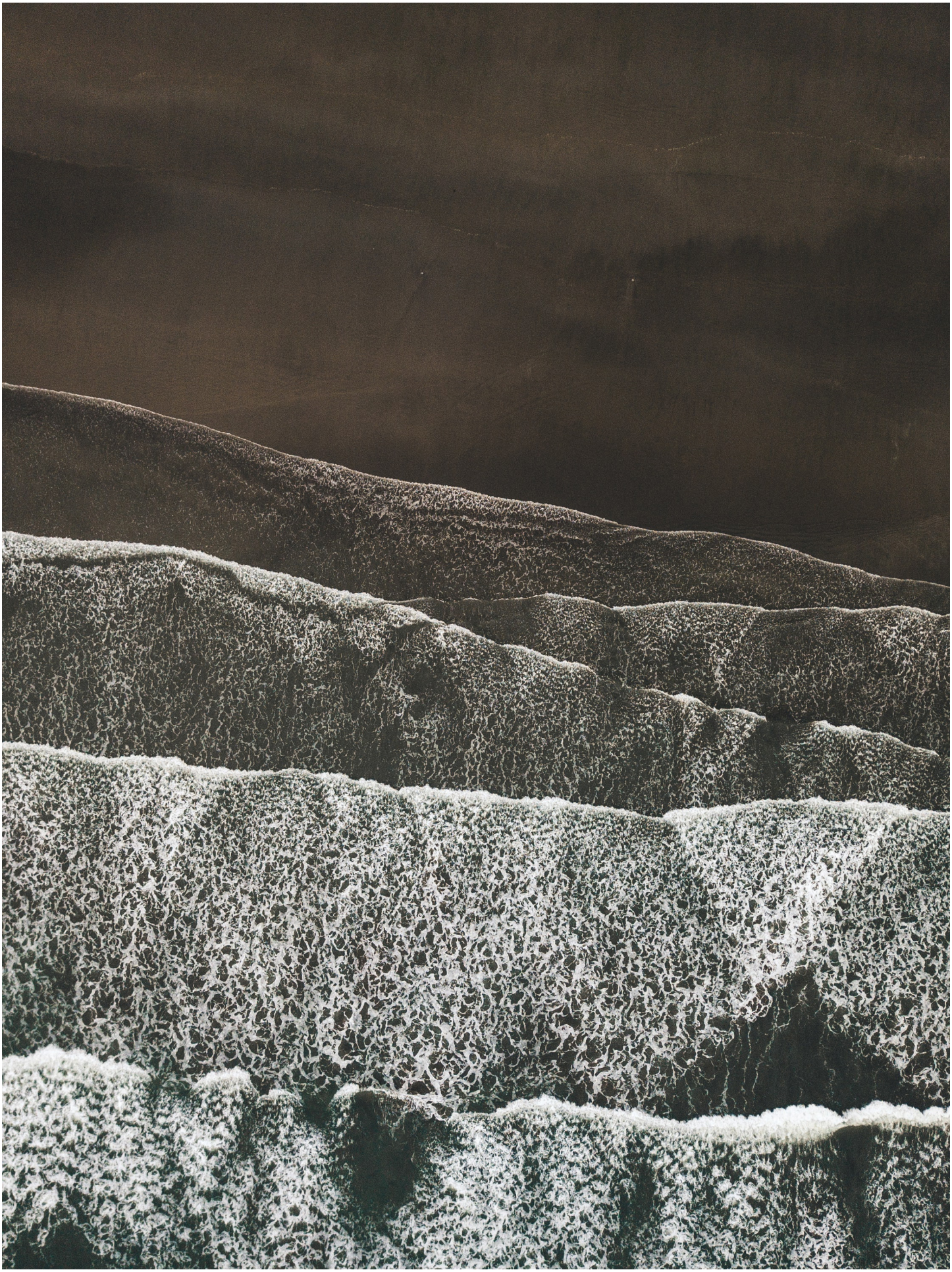
Viable Systems Model: A conceptual framework concerned with the viability of organizations, pioneered by Stafford Beer in the 1950s.

Introduction

This Major Research Project explores the practice of foresight, in particular as it relates to organizational foresight, and seeks to develop a perspective on how strategic foresight can be holistically integrated within organizations. The study examines enacting and integrating the output of strategic thinking by connecting thinking, planning, and management of strategy, and seeks to develop insights into how foresight and futures-thinking can become integrated into organizational practice.

We propose, based on the literature as well as interviews with foresight experts and a survey of strategists, that strategic foresight as often practiced fails to achieve integration, and therefore organizations are unable to realize the promise or benefits of strategic foresight. By integration, we refer to both the application or execution of the output of foresight and futures-thinking, and the integration of foresightful practices within the activities and practices of an organization. We propose that any failure of integration arises not from incorrect or underdeveloped foresight methods or processes, but from a lack of appropriate conditions within the organization that support the flourishing of foresight among organizational actors and the organizational system. While the expertise contributed by external foresight specialists can be a critical factor in developing a strategic perspective and achieving strategic goals, this report will explain that the sensemaking and constructed reality, or enactment (Lissack, 1999, p. 111) of foresight strategy and/or the integration of foresight into the organization requires specific organizational conditions. We conclude that by meeting those conditions, an organization can develop organizational foresightfulness that allows for both integration of practices and strategic action that supports transformation. In particular, our research findings recognize three conditions that support integration of strategic foresight into an organization. First, that the organization prioritizes the collective over the individual and recognizes that having individual capacity does not translate into having collective capacity; second, that foresight is viewed as a verb, not a noun, meaning that futures-thinking and foresight practicing bring strategic foresight to life in an organization and make integration achievable; and third, that the organization sees itself as a system, and in that system all the elements and their interrelationships are used to sustain futures-thinking and practice.

The research tells us that foresight practices have largely developed as episodic in nature, and frequently reside in the domain of external consultants with limited event-based participation from organizational actors. This report further aims to identify the intervention points within the organizational system in which the three conditions above can emerge and develop, leading to the enactment of foresight strategy.



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Research methodology & process

Methodology

In order to better understand how foresight can be holistically integrated within organizations, the research plan described below is rooted in social constructivist approaches and systems thinking. The research blog INtgrty describes social constructivism as a paradigm in which "human interests are important for research purposes and knowledge is constructed through social interaction" (INtrgrty, 2016). The author expands on social constructivism by writing, "Social constructivism emphasises the importance of culture and context in the process of knowledge construction and accumulation," and goes on to suggest that "Learners add to and reshape their mental models of reality through social collaboration, building new understandings as they actively engage in learning experiences'' (INtgrty, 2016). As will be described below, much of the success related to the integration of foresight strategy into organizational strategic thinking and planning is rooted in the development of a futures-oriented practice. Thus the social constructivist paradigm, which emphasizes knowledge building and knowledge transfer through collaboration and active engagement is a useful construct in which to situate this report.

Further to the paradigm of social constructivism, much of the research for this report revealed the importance of taking a systems-oriented perspective of the organization, viewing the organization as a social system in which individuals operate as part of a dynamic and interrelated whole. Individuals in these organizational systems are ideally viewed as, and view themselves as, learners who are actively engaged in transforming the system itself. Individual mental models are reshaped, and in so doing, the system is transformed. We see social constructivism and systems-thinking as complementary perspectives that, when taken together, support learning and transformation -- two of the key elements required for successful integration of foresight strategy as uncovered in our research.

Research Process

This project is also situated within the human-centred design paradigm, and can be mapped onto the Double Diamond Strategy framework (Design Council UK, 2015). The Research phase of the Double Diamond Strategy maps to our Problem Finding process and can be characterized as a divergent part of the research. Synthesis is consistent with our Problem Framing phase in which we will narrow down the research to present our view of the problem. Ideation is represented in our Solutioning process, during which we explore barriers and enabling conditions and the manner in which they can be addressed. Lastly, we narrow down the possibilities to be able to present a framework for developing a foresightful organizational practice, make recommendations based on insights, and identify potential areas for further research aimed at integrating organizational foresight and developing a futures-thinking organizational practice.

As referenced above, this project utilizes a design research process to explore existing issues in organizational foresight. The research process consists of:

- **Problem finding** - during which we identify issues related to the integration of foresight strategy into the organizational context
- **Problem framing** - interpreting the found problem so as to arrive at a problem statement
- **Solutioning** - recommendations on how to holistically integrate foresight within organizations

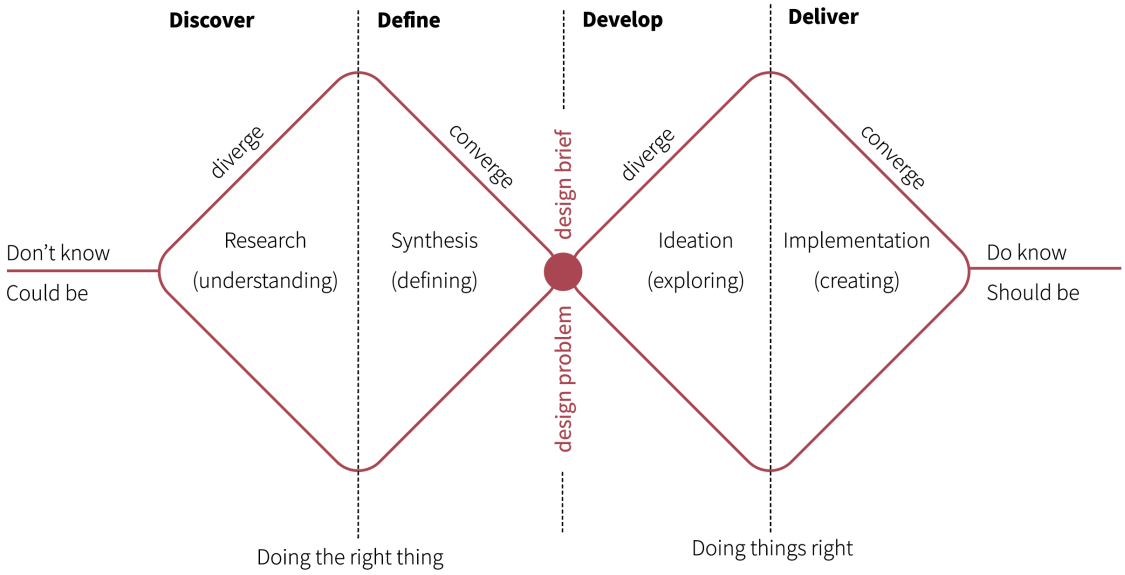


Fig. 1: Double Diamond Strategy Framework (Design Council UK, 2015)

Research Method

Methods used to support this process were literature review, industry interviews with thought leaders, a survey of professional strategists, inductive coding of primary research data, analysis and sensemaking of background and primary research, Causal Layered Analysis (CLA), system mapping, an analysis of the Viable System Model (VSM), and development of a framework for integration based on the three principles identified through this process. Our final research output is a set of recommendations based on our insights and suggested areas for further research.

To meet these objectives, our research plan consisted of the following:

Element of the Research Process	Objective of the Research Process	Research Method
Discovery: Problem finding	Understand barriers and enablers to integration.	Literature review Industry interviews Strategist survey
Defining: Problem framing	Consider the barriers and enablers within the context of the consultant - organization relationship and within the organization itself. Develop the research question as a means of intervention and/or solutioning. Develop insights arising from sorted and coded data, through which themes and patterns emerge and can be identified.	Literature review Inductive coding of interviews with thought leaders Causal Layered Analysis (CLA)
Developing: Solutioning	Utilize those insights to define the conditions that enable or frustrate the integration of organizational foresight and draft the development of a framework through which integration and a future-oriented practice can address the barriers and enablers.	Sensemaking Mapping CLA
Delivering	Develop a framework for integration that can support a flourishing organizational practice. Formulate recommendations.	Sensemaking

Fig. 2: Research process

The literature review investigated the work of futurists, foresight scholars, business strategy scholars, organizational effectiveness scholars, and systems-thinkers. The aim of the literature review was to develop an understanding of foresight as a practice and how practices are established and supported or frustrated within organizations. The ideas identified in the literature review are included in sections 2 and 3.

To complement the literature review, we interviewed six strategic foresight experts. The individuals interviewed, comprising three women and four men, live in North America, the UK, and Australia, and have practiced throughout the English-speaking world for medium- to large-size organizations representing public, private, and non-profit organizations. They range from mid-career to highly experienced practitioners. All interviewees practice exploratory futures and most also practice normative futures. A number of interviewees expressed the view that while exploratory futures have dominated the field, a normative futures approach is growing in popularity and demand among clients. The majority of interviewees consider themselves foresight practitioners, while the rest call themselves futurists. The majority practice foresight as their primary occupation, while the minority split their time between professional practice and university environments in which they are teaching and conducting research.

Interviews were semi-structured and focused on understanding the relationships between the consultants and their client organizations; perspectives on what makes for successful engagements; conditions within organizations that enable or frustrate the enactment of foresight; and organizational capacity-building with regard to foresight and the development of foresightfulness and/or a futures-oriented organizational perspective. Interviews were scheduled for approximately forty-five minutes each, although without exception, all participants encouraged us to speak with them longer and the conversations generally lasted about one hour.

We used the snowball technique to recruit interviewees. Interview participants were so generous in offering the names of their colleagues and brokering introductions that we were not able to interview everyone who was recommended due to time constraints in meeting this report's deadline. Because of this generosity on the part of interview participants, we were able to talk with highly respected futurists and foresight practitioners with high-profile international careers. Across the board, we were struck by our interviewees' support for our research and their keen commitment to the work of emerging foresight practitioners as well as to the development of the field. Without fail, the experts we interviewed displayed a very high degree of openness and willingness to share information, which we feel is a testament to the values inherent to the field.

All interviews were conducted remotely by video call due to the restrictions imposed by the COVID-19 pandemic. Interview data was sorted and coded using a digital collaboration studio/whiteboard platform. Inductive coding was completed based on data taken verbatim from interviews. Patterns emerged during coding and were grouped by theme for interpretive analysis. To be classified as a pattern, a minimum of four of the six interviewees needed to have reported a shared experience or similar point of view. If only one or

two interviewees expressed a similar idea, they may be represented in this report as “outliers.” We will report on outliers among interviewees if their perspectives are also raised in the background research in a significant manner.

In addition to expert interviews, we conducted a survey of fourteen professional strategists in order to understand if the success of strategy implementation was different if it was outsourced or internally-derived. Respondents were recruited through social media networks, strategy groups and listservs. We sought individuals with titles such as VP Strategy, Director of Strategy, Chief Strategy Officer, and Strategist.

Survey respondents work in medium- to large-sized organizations, and include private sector and not-for-profit organizations. All individuals live in Canada, but at least 50% work for international organizations. As with the interviews, survey data was sorted and coded using a digital whiteboard platform on which respondents’ feedback was grouped thematically and used to identify patterns in the data.

Analysis of the work above resulted in the creation of a framework for integrating foresight within an organization, recommendations based on insights, as well as suggested areas for further research.

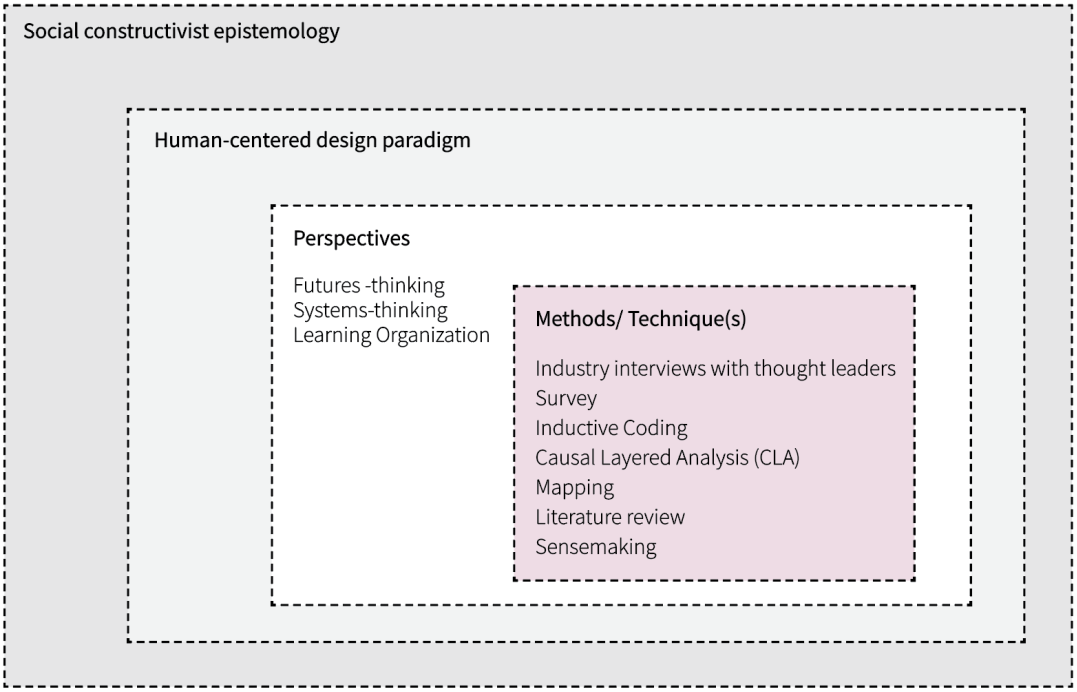


Fig. 3: Research Methodology

The research plan was submitted to the OCADU Research Ethics Board and approved prior to conducting the survey and interviews. Participants received a description of the measures we put in place to ensure ethical use of data. Interviewees and survey respondents who indicated their interest received a copy of the full report.

A graphic depiction of our overall methodology can be seen in Fig. 3.

Objectives of the Research

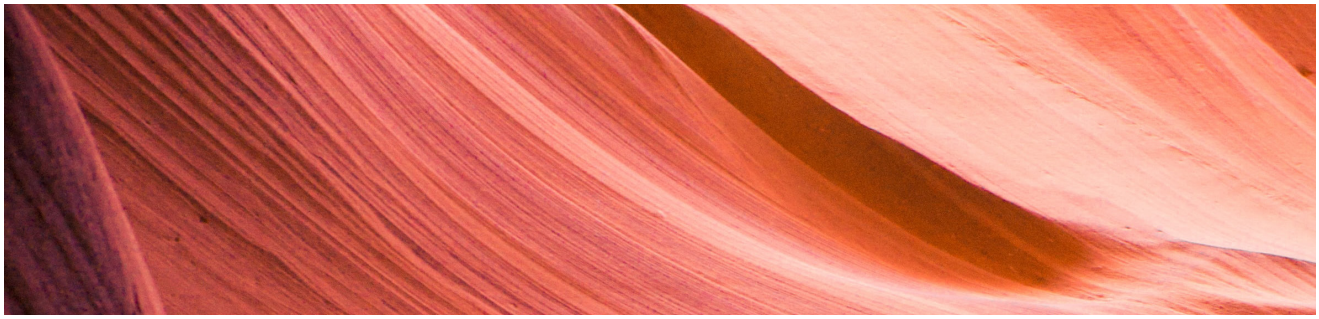
The objectives of the research described above include:

- Development of an understanding of the extent to which strategic foresight is successfully integrated into organizational strategic thinking and strategic planning.
- Identification of barriers and enabling conditions among organizations that more successfully integrate and enact foresight.
- Identification of barriers and enabling conditions among organizations that are less successful at integration and enactment of foresight.
- Analysis of the barriers and enabling conditions that either support or frustrate organizational foresight.
- Consideration of possible intervention points in order to develop a framework that can support an emergent and flourishing foresightful organizational practice.

We recognize that the research as described above has several limitations. In particular, while we were able to interview thought leaders, the interviews were limited in number. A larger number of interviews may have surfaced additional information and/or alternative points of view. Furthermore, we interviewed only foresight practitioners who work as consultants, and did not include individuals whose practices are internal to organizations. Our survey too, was limited to a small sample size of fourteen strategists. A larger sample size may have provided clearer and more statistically relevant data. Both the interviews and survey were limited due to the relatively short time frame allotted for the completion of this report. Finally, among the limitations of our research, we include the experience of completing a collaborative project during the period of restrictions imposed by the COVID-19 pandemic. While the use of digital tools, such as online whiteboard platforms, was helpful, collaborative practices such as mapping and coding data are, in our experience, more effectively conducted in-person.

2

Project context



In much of the literature about the efficacy of strategic foresight, as well as information conveyed through our expert interviews, there is a consistent perspective that foresight as currently practiced suffers from a lack of integration and failure of execution (Waehrens and Riis, 2010; Sarpong, Maclean and Alexander, 2013). Yet, there remains, even among these scholars and practitioners, a belief in the benefits of strategic foresight. It is not the outputs of foresight processes that are in question. Rather, it is the nature of the foresight practice and its relationship to the organization as a whole where problems seem to exist, and where, therefore, we propose improvements in integration can take place, leading to successful enactment of foresight strategy.

In order to further explore this proposal, this report sets out to achieve the following:

- For the purpose of this project, establish both a definition of organizational strategic foresight as well as the rationale for an organization to engage with strategic foresight.
- Develop an understanding of the differences between process and practice.
- Discuss the barriers and enabling conditions related to integration as represented in the literature and in our primary research.
- Consider the principles that may support integration and discuss them in relation to the barriers and enabling conditions.
- Investigate a framework for understanding how organizational practice and the principles can interact to positively support the integration of foresight within an organization.
- Investigate opportunities for interventions that could result in organizational foresight capacity-building and a futures-thinking culture - which we will also refer to as “foresightfulness” (Tsoukas & Sheppard, 2004).
- Suggest recommendations based on insights from the work described above and identify areas for further research.

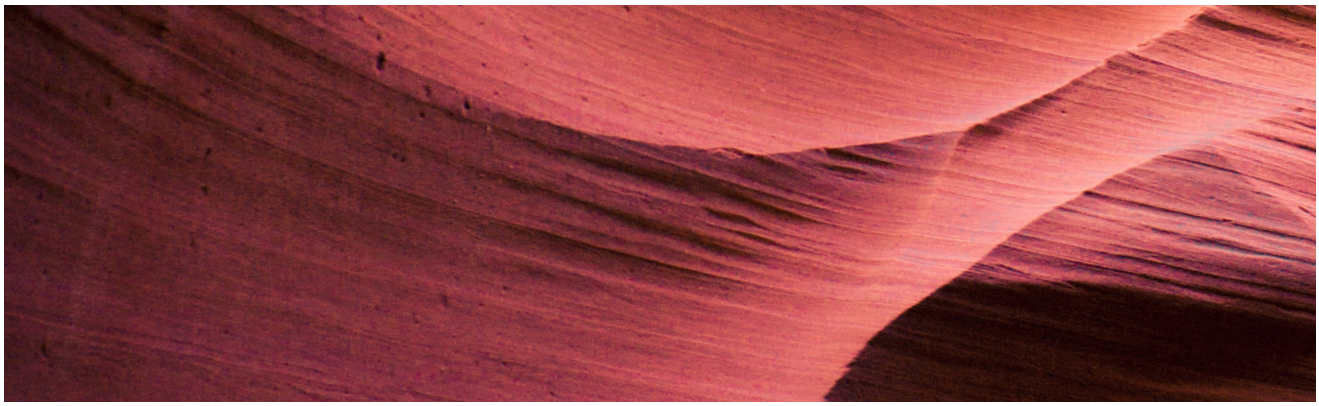
Since much of this report hinges on how foresight is practiced and the nature of practice in organizations, we put forward a brief exploration of practice. Researcher Andrew M. Cox published an overview of the development of practice theory, which recognizes practice as a "family of theories" (Cox, 2012, P.177), as represented by researchers such as Wittgenstein, Heidegger, Bourdieu and Giddens. Cox points out that among these first-generation theorists there is a "broad church of writers with some common ways of thinking, rather than one systematically propounded viewpoint" (Cox, 2012, p. 177). He also recognizes that an array of theories (activity theory, social network theory as examples) are often included as practice theories (Cox, 2012, p. 177). Theodore Schatzki, perhaps the most prominent scholar from the second generation of practice theorists, and upon whose work much scholarship on practice stems, explores the nature of social existence and change in his 2002 book *Site of the Social*. In Cox's interpretation of Schatzki's writings, Cox writes, "Schatzki considers that the social order consists of people, artefacts, organisms and things. These different entities are linked by a number of types of relationships, including spatial, causal, intentional and prefiguring relations. The meaning of the entities (including the meaning of people, their identities) arises from their position within this changing, complex and indeterminate set of relations. Practices are central for Schatzki, because these relations are shaped by a vast, complex, changing nexus of social practices" (Cox, 2012, p.177). Cox further articulates that Schatzki "shows how the practice approach moves away from individualist accounts of action – ones based on things going on in people's minds ('cognitivism') or rational decision making and linear, purposeful behaviour – and equally away from explaining things through abstract social structures, such as class or gender" (Cox, 2012, p.177). For Schatzki, at its core, "a practice is a temporally evolving, open-ended set of doings and sayings linked by practical understandings, rules, teleo-affective structure and general understandings" (Schatzki, 2002, p.87), or as Cox interprets, a set of skills and an understanding of when to use them (Cox, 2012, 178). Important to our argument later in this report, Schatzki stresses that a practice can include unusual and infrequent activities and also new doings and sayings (Schatzki, 2002). Similarly, practice theorists Elizabeth Shove and Mika Pantzar also stress the dynamic way that new recruits to a practice reinvent it (Shove and Pantzar, 2007). A deeper discussion of practice theory is beyond the scope of this report, thus when we refer to practice, we mean a set of skills and an understanding of when to use them.

Another key contextual element of this report lies in systems-thinking, in particular in the view that the organization is a system that can be viewed holistically, and that its interrelated and interdependent parts are best understood when considered in relation to one another. In particular, we take a Viable System approach, which considers the system, in our case an organization, as an autonomous entity that can be structured in such a way as to promote its viability in a changing and increasingly complex environment.

Taken together, the inherently adaptable and evolving nature of practice and the structure of an organization with systemic considerations for viability, may support the conditions required for organizational resilience.

3

Organizational foresight defined



For the purpose of this report, we accept the definition of organizational foresight - also referred to commonly as corporate foresight - offered earlier this year in an article by Adam Vigdon Gordon, Mirza Ramic, René Rohrbeck, and Matthew J.Spaniol, in which they write, “We define corporate and organizational foresight as the application of futures and foresight practices by an organization to advance itself; that is, to fulfill its purpose and achieve success on whatever terms it defines such success” (Gordon et al., 2020, p. 1). The same article elaborates that organizational foresight includes “those organizational ‘bodies’ that apply foresight in-house” and makes clear that the term ‘bodies’ comprises for-profit, non-profit, and wider-purpose institutions (Gordon et al., 2020, p. 1). For the purpose of our project, we would like to draw attention to the use of the term ‘apply’ in Gordon et al.’s definition, and make clear that we interpret this definition to include organizations that both draw on external expertise in the formulation of strategic foresight, and those organizations that conduct foresight internally. In both circumstances, the output of strategy formulation is conducted - or applied - in-house insofar as organizational foresight is concerned. Later in this report we will expand on the distinction between internal and external capacity, and therefore the definition will become particularly important, as it is the act of application, or making sense of and constructing reality - or as we refer to it in this report, “enactment” - that will be further interrogated in our research.

The definition of organizational foresight includes a rationale for why an organization may seek to include foresight among the strategic tools and practices used to develop strategy: to “advance itself” and “to fulfill its purpose and achieve success” (Gordon et al., 2020,

p. 1). Foresight strategists as well as management scholars have expanded on how organizations benefit from engaging with foresight. In 2002 renowned futurist Richard Slaughter articulated the importance of foresight in a much cited conference paper when he wrote, "Strategic Foresight is needed within organizations to challenge taken-for-granted worldviews, grasp big picture implications for the future, make better decisions for the short and medium term and potentially create a 'future competitive space'" (Slaughter, 2002, p. 2, referring to a 1994 *Harvard Business Review* article by Gary Hamel and C. K. Prahalad). Slaughter expands on the rationale for organizational foresight when he writes, "Organisations that participate effectively in this process will find a range of valuable outcomes. They will seldom be overtaken by change. They will not succumb to crisis management. They will find it easy to avoid problems and seize opportunities. They will develop long-term vision and a kind of forward-looking prescience" (Slaughter, 2002, p.11).

Maree Conway, a disciple of Slaughter, writes in her 2016 book *Foresight Infused Strategy* of the direct benefits as related not only to strategy development, but also to the outcomes of strategic thinking insofar as developing new opportunities. She writes "Using foresight is about thinking in new ways about existing and potential markets, competitors, social needs, political shifts, emerging technologies and new business models. It is about looking beyond current ways of working and thinking the unthinkable to see what might be needed in the future (Conway, 2016, p. 38).

Scholar and foresight strategists Rene Rohrbeck and Menes Etingue Kum further describe the direct positive impacts of foresight on organizations in a 2018 article when they write, "Corporate foresight is applied with the expectation that it will help firms to break away from path dependency, help decision makers to define superior courses of action, and ultimately enable superior firm performance (Rohrbeck and Kum, 2018, p. 105).

Business management scholars have also highlighted the positive impacts and rationale for organizational foresight. Haridemos Tsoukas suggests, "Despite the limits of predicting economic changes in a system as dynamic as a market economy is, anticipating important developments in a firm's environment is possible and of profound importance for economic actors" (Tsoukas, 2004, p. 137-8). Brian Vejrum Waehrens and Jens Ove Riis write, "Foresight is crucial to organizational success in rapidly changing environments, especially in the context of greater complexity and uncertainty - where interventions can't be prescribed in advance" (Waehrens and Riis, 2007, p. 329). In their 2013 article, David Sarpong, Mairi MacLean, and Elizabeth Alexander write, "strategic foresight has been acknowledged to play a significant role in organizational success and renewal" (Sarpong et al., 2013, p. 34). They specify organizational benefits as being able "to understand the potential implications of new business models and emerging technological trajectories, and overcome the limits on their ability to prepare for the unknown future," and go on to suggest that "empirical evidence suggests strategic foresight could lead to desirable organizational outcomes such as adaptive learning, ambidexterity, innovation, and strategic agility" (Sarpong et al., 2013, p. 34).

Foresight	Strategic Foresight	Strategy
Poses key questions that might have gone unasked Considers a range of plausible developments that can be considered Reveals and challenges potentially fatal assumptions Can pursue exploratory visions of the future or preferred visions of the future	Is required when there is a high degree of uncertainty in the relevant future context Must be coupled to action in order to support change within an organization (The Foresight Guide, n.d.) Can be thought of as either (1) defensive thinking (preventable), or (2) advantage thinking (preferable) (The Foresight Guide, n.d.) Assists strategic decision- makers with understanding the futurity of their decisions	A series of executable decisions that add value and create competitive advantage Determines the direction and scope of an organization (Johnson and Scholes, 1998) Determines how organizational resources, skills, and competencies should be combined to achieve competitive advantage (Porter) Can integrate strategic foresight as an input into decision-making

Fig. 4: Comparative table: foresight, strategic foresight, strategy

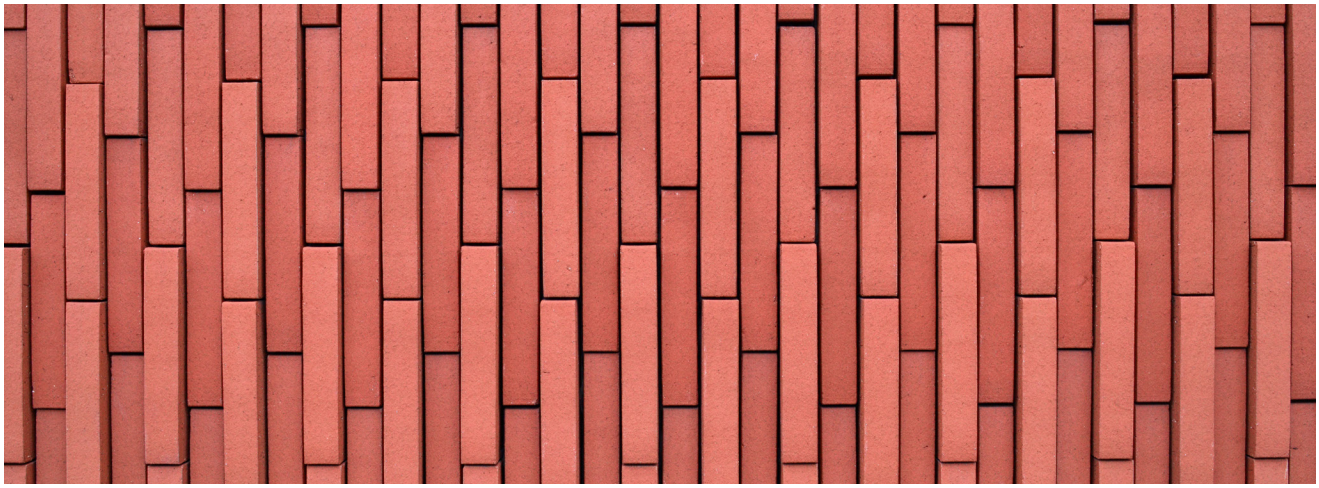
As evidenced above, there seems to be considerable enthusiasm for the practice of strategic foresight, as well as a vision that foresight can lead to valuable organizational outcomes. Yet troublingly, there also remains a relatively consistent view, among both futurists and foresight strategists as well as those in the business management domain, that strategic foresight too often fails to deliver on its potential. An investigation as to why that may be will follow.

Before we launch into that investigation, however, we would like to acknowledge that the difference between foresight and strategic foresight is underrepresented in the literature, and our implicit understanding is that the two terms are frequently used interchangeably. We would like to propose that there are distinctions between the two activities, and also that there is a natural flow in thinking processes from foresight to strategy, with strategic foresight situated between the two. The table above (Fig. 4) delineates our proposal for what makes each activity distinct.

Based on the distinctions made in the table above (Fig. 4), essentially, foresight creates visions of potential futures, strategic foresight couples those visions to actions that can be taken in the current or near-term future, while strategy uses those proposed actions as an input into decision making. While broad and generalized, given the lack of literature in this area, we will move forward using the distinctions above to guide our thinking.

4

Foresight & the viability of organizations



Empirical evidence shows that most organizations have a limited lifespan. A 2006 study by Stubbart & Knight revealed that the median survival rates of large companies are 5 years or less, and even lower for smaller firms. “Sustainable competitive advantage, although an admirable ideal, does not take place in the real-life experiences of a vast majority of firms” (Stubbart & Knight, 2006). A 2016 study by McKinsey found that the average life-span of companies listed in Standard & Poor’s 500 was 61 years in 1958. In 2016, it was less than 18 years. McKinsey believes that, in 2027, 75% of the companies currently quoted on the S&P 500 will have disappeared (Garelli, 2016).

With an increasing speed of change, the threats and opportunities faced by most organizations are becoming increasingly dynamic and complex. It is no surprise that the viability of organizations is under increasing threat.

The Viable System Model (VSM), developed by theorist Stafford Beer in the 1950s, is a holistic model that identifies the various functions of a management system and is used to diagnose and design a viable system for organizations. Grounded in systems theory and conceptual in nature, the VSM is inspired by the relationship between the human brain, the major organs and the nervous system which controls them. The VSM

identifies 5 interacting systems which together make up a viable system (see Fig. 5).

System 5 represents the “Brain” of the organization, responsible for the identity of the system and formulating policy decisions. System 4 is the Intelligence function, and is responsible for future planning and connecting to the outside world. System 3 is the control system, responsible for regulation and optimization. Together, Systems 3-4-5 make up the Meta-system. Although the VSM is an abstract concept, in many organizations the Meta-system jobs are carried out by higher management. The operational system is made up of Systems 1 and 2. System 2 is the coordination system and is responsible for stability and conflict resolution. Finally, System 1 is the operational system, responsible for carrying out the primary activities of the organization - essentially the muscles and organs of the system.

A graphic model of the VSM follows (Fig. 5), showing the meta system in relation to the operating system, and both elements of the VSM in relation to the environment. The model implies that the interrelationships between the levels of the VSM are active within the organization and depicts how things like knowledge and practices might connect and move through an organization, as well as showing the parts of the system that are most concerned with the external environment.

An important element of this model is the fact that every organization exists in the context of a constantly changing environment. To be viable, the organization must be in balance with both the external environment and the internal environment. If unbalanced, the system can be overwhelmed by trying to deal with all of the complexity, leading to the demise of the organization.

To explain this, the model is based on the Ashby’s Law of Requisite Variety, a law of Cybernetics in which the term Variety is used to describe complexity. The American Society of Cybernetics offers multiple definitions of the transdisciplinary field, but states that “Cybernetics takes as its domain the design or discovery and application of principles of regulation and communication” (Umpleby, 2000). The Law of Requisite Variety states that for a system to be stable and respond to a complex and changing environment, the system which regulates has to match or be greater than the complexity of the system it is regulating (Ashby, 1957).

Through his studies of natural systems, Beer observed that some systems succeeded in maintaining viability despite the Law of Requisite variety, and that these systems shared the following key properties:

- Maintenance of identity
- Were able to self-repair
- Were self-aware
- Were self-organizing
- Were self-balancing
- Were open systems
- Embodied recursivity (existed within other viable systems)

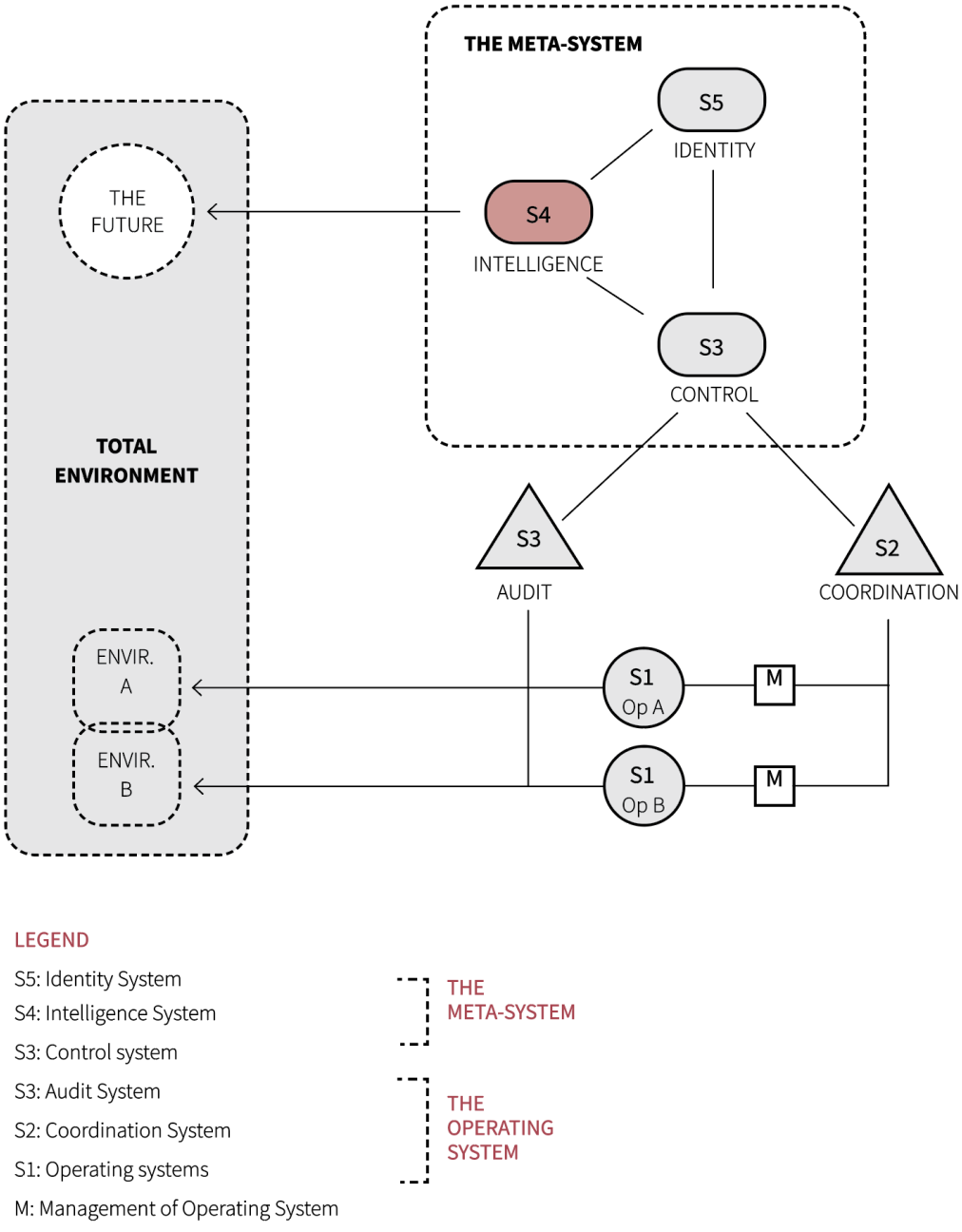


Fig. 5: The Viable System Model (VSM), adapted from Stafford Beer (1984)

Stafford Beer dedicated his career to helping various companies and entities identify organizational problems and design organizational interventions. Yet he himself remarked that the System 4 function was the weakest point in most organizations he studied, in part because of senior managers' unwillingness to surrender their power base and a tendency to view System 4 as a possible threat (Hayward, 2004).

This is relevant for foresight because, as suggested by futurist Peter Hayward's analysis of the VSM in relation to the practice of foresight, foresight is part of System 4, responsible for the "outside-then" function of the Meta-system. Outside-then could also be interpreted as the external future environment. In contrast, Beer sees the Operating system as the inside-now part of the organization. Without a functioning Meta-system, the Operating system (the "inside-now function") directs itself to self-management and optimization or short-term objectives, underscoring the importance of both the relationships between the levels and Law of Requisite Variety which keeps a viable system in balance.

Hayward argues that an effective foresight function, through its interrelationships with various other functions of the system, effectively achieves many of the necessary properties of a viable system and contributes to greater organizational sustainability. He argues that System 4 "is in the best position to diagnose the entire system-in-focus in order to see if it is meeting the conditions for viability" (Hayward, 2004, p.12). The foresight function may, therefore, provide important variety to the strategy and decision-making apparatus of System 5, and therefore the organization overall.

Furthermore, the value of System 4 is in its interrelationships with other systems, specifically with System 5 and System 3. Thinking back to the inspiration for the VSM, the interrelationships between the Systems are like arteries that move life-blood throughout the body. In the organization, they move such things as knowledge and information between the various Systems. The System 4-5 relationship has the potential for transforming the self-identity of the system. Hayward states that "in reality transformation of the self-identity of the system-in-focus is probably the most difficult, but ultimately, most important role of facilitating foresight" (Hayward, 2004, p.15) as it has the potential to open up new paradigms. The System 3-4 relationship creates the strategic decision-making environment, by bringing together the "inside-now" and "outside-then" perspectives and effectively transforming results by informing the futurity of decisions made by system 3. By taking the "intended" strategy of System 5 with the "emergent" strategy of System 4, it is able to create a "realized" strategy through System 3, as seen in Fig. 6.

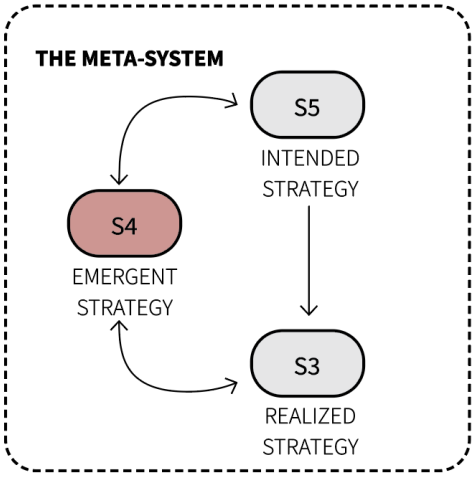


Fig. 6: The VSM Meta-system and interrelationships between Systems 3, 4 and 5.

It is through these important interrelationships that System 4 achieves many of the requisite properties of a viable system listed above. Hayward found that “An effectively facilitated foresight process in an organization would be fundamental to the establishment of many of those properties, especially identity, self-awareness and openness. The task of Foresight is to enable entities to take purposeful action in regard to the future and, as such, it operates to manage the complexity inherent in any consideration of the future. Purposeful action is necessary if any system is to remain viable in a complex environment” (Hayward, 2004, p.4).

The VSM will be considered throughout much of the remainder of this report, in particular the foresight function as residing in System 4, its relationships to Systems 3 and 5, and the importance of the interrelationships between the Systems within an organization will remain important considerations.

5

Barriers & enabling conditions

Barriers

Although the benefits of foresight are well-articulated in both management and foresight circles, as mentioned above, the literature about the efficacy of strategic foresight, as well as information conveyed through our expert interviews, conveys a consistent perspective that foresight as currently practiced frequently suffers from a lack of integration and failure of execution (Sarpong, Maclean and Alexander, 2013; Waehrens and Riis, 2010). The rest of this report will be dedicated to exploring this notion, including the potential reasons why and possible solutions.

First, though, we do not believe that the failure of foresight to realize organizational impacts is the result of problems or issues with the techniques and methods of foresight. We refer to these techniques and methods as the "foresight process," using the Oxford languages definition of process: a series of actions or steps taken in order to achieve a particular end (lexico.com, n.d., accessed December, 2020). It is suggested that the logic of a process is embedded directly in the process itself, rather than in the person or team performing it (Kidd, 2020). With respect to foresight, for example, the particular techniques or methods the practitioner chooses to employ for a given foresight project become parts of the practitioner's process.

Based on our series of expert interviews, we also cannot attribute any failures of foresight to achieve impacts as due to a misalignment of process with the nature of the organization, such as large, small, private, public or non-profit. As a result of our interviews, we found that most foresight strategists work in multiple types of organizations and across fields. Although approximately 30% of interviewees have a preferred type of client, this tends to be a preference for where within an organization they are engaged. For example, one of our interviewees prefers to work within the Research and Development function of an organization, where foresight is used at the front end of the innovation pipeline. Another practitioner prefers to be engaged with senior management, where the work tends to focus on issues of high level strategy and organizational preparedness. In general, however, interview participants agreed that they adapt their process not based on the type of organization, such as non-profit as compared to private sector, or small versus large organization. Rather that the organization's strategic intent provides the foundation for determining processes to be used. Interviews highlighted the foresight strategist's need to develop methodologies that

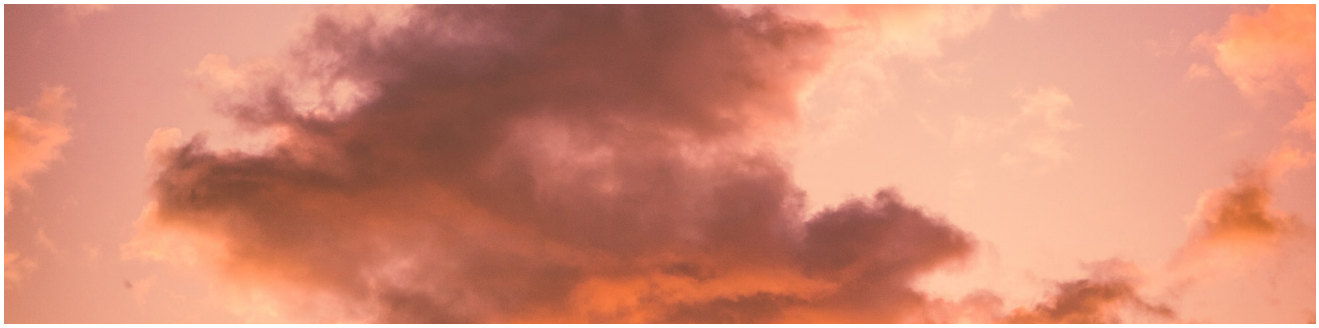
are aligned to and consistent with each client's needs, highlighting that much of the work of the strategist is to uncover what these needs are.

According to our interviews, this notion of client specificity - meaning developing an understanding of the client's strategic intent and selecting the tools and methods that align to their needs - is specific to process, and leads us into a discussion of practice, which may lie at the heart of an organization's ability, or inability, to achieve the desired positive outcomes of strategic foresight.

In contrast to our definition of process above, we define practice as the customary, habitual, or expected procedure or way of doing something (Oxford Languages), which can also be stated as a set of skills and an understanding of when to use them, drawing again on Schatzki (Schatzki, 2002, p.87). Elaborating further on the definition of practice, "the intelligence tends to sit with a person or a team, who has some level of expertise in the practice. That person can use any number of processes in their expert toolkit to ensure the practice is doing what it is meant to do. Just the same, that person [or team] can decide which processes no longer support the overarching practice" (Kidd, 2020). Based on the literature and validated by our interviews, we propose that failures of foresight to achieve the sought-after organizational benefits typically arise more from issues of practice than process. According to Schatzki, practice is a set of skills and the understanding of when to use them, and also that they are temporally evolving and open-ended (Schatzki, 2002, p. 87). Thus, practices are up to the practitioner(s) and therefore can be seen as potential sites for change. In this sense, strategic change as a result of foresight strategy can be tied to organizational practices.

PROCESS	**PRACTICE**
A series of actions or steps taken in order to achieve a particular end	A set of skills and an understanding of when to use them
Has a beginning and an end	Often comprises many processes
The logic of the process is embedded in the process itself	The intelligence of the practice resides with a person or team who has some level of expertise in the practice

Fig. 7: Table showing the differences between processes and practices



A number of business and foresight scholars alike support the notion that foresight practices are at the root of issues with integration of foresight strategy. Waehrens and Riis write that problems with organizational foresight are "not related to 'seeing';" Rather, they suggest it is "a problem of enactment" (Waehrens and Riis, 2007, p. 329), or a failure of constructing reality and being able to give meaning to the events and actions of the organization. They further suggest, "organizational foresight does not emerge from formal plans alone, but takes its outset in capacities to make sense of and enact future possibilities" (Waehrens and Riis, 2007, p. 329). They go on to suggest, "For an organization to sharpen its collective capacity to make sense of the future is more difficult than for individuals, due to it being constituted through multiple interrelated organizational levels" (Waehrens and Riis, 2007, p. 329).

Sarpong et al. take a stronger stance. They write "Scholars have privileged (or promoted) strategic foresight as an episodic intervention for organizations facing strategic difficulties'' (Sarpong et al., 2013, p. 34). They elaborate, "The consequent outcome of such a legacy is a failure of organizational learning and enactment coupled with a diminution of the importance of strategic foresight" (Sarpong et al., p. 34). As a method for both achieving integration of organizational strategic foresight, and as a result building the case for the importance of foresight to be included in the strategist's toolkit, Sarpong et al. propose moving beyond the episodic intervention paradigm to present strategic foresight in the form of strategizing as a generative and iterative organizing practice whose coming to presence is internally emergent and negotiated rather than brokered by an external consultant (Sarpong et al., 2013, p, 34).

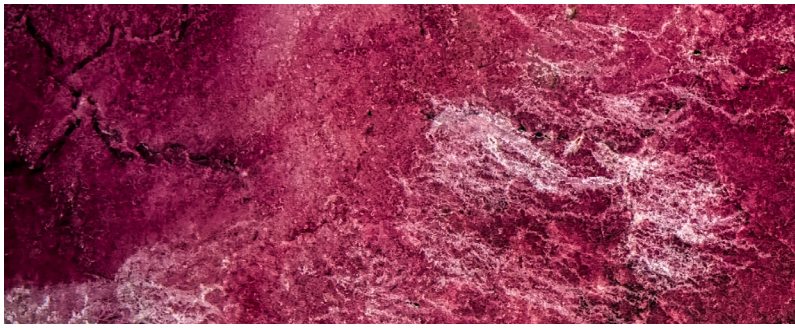
While Maree Conway's argument in her book *Foresight Infused Strategy* is more preoccupied with defining the boundaries of strategic thinking (including foresight) and more conventional strategic planning, she does touch on the notion of collective capacity when, referencing strategy scholar Jeanne Liedtka, she acknowledges that throughout an organization "strategy must be 'felt' for it to be effective" (Conway, 2016, p. 62). Both Liedtka and Conway suggest the notion that within an organization, strategy unfolds through the experience of organizational actors. Liedtka contrasts 'strategy as thought' with 'strategy as experienced,' suggesting that the latter "finds sustainability in the energy produced by the process itself (Liedtka, 2001, p. 31). Conway iterates on Liedtka, suggesting that organizational actors must be able to see themselves in the foresight world(s) they want to help

bring to fruition, achieved through not only a focus on goals, but also on desires, “since it is desire that is the motivator for people to change what they do and how they do it” (Conway, 2016, p. 63). As established earlier, the set of skills that people in an organization have and the knowledge of when to use them, is organizational practice.

Finally, Slaughter argues that the “single most common error is to assume that the path to successful foresight implementation is simply a matter of applying the right methodologies... this is a persistent assumption” (Slaughter, 2002, p. 5). For Slaughter, successful foresight implementation requires internal capabilities including an understanding of the organization (its structure, culture and capabilities), and sustained internal focus (Slaughter, 2002, p. 2-3). Again, we consider this organizational practice, as the intelligence of the practice resides within the actors themselves.

Our primary research supports the literature described above, in particular the notion that successful organizational strategy is achieved when it emerges from within the organization as a product of its systems and practices. Our survey of strategists working in a broad range of sectors and organizations showed that 92% of strategists report that internally formulated strategy is successfully implemented within their organizations. Conversely, only 42% report that outsourced, consultant-led strategy is successfully implemented within their organizations. Among this group of strategists, 57% report including foresight in some form as part of their strategy formulation. It is important to note that this number, we feel, may be inflated based on an incomplete understanding of foresight among strategists and the limited number of strategists surveyed. The survey asked respondents to rate their familiarity with foresight, and 50% of strategists rated their expertise and training in foresight as high, yet only 21% provided a definition or description of foresight that showed significant evidence of that knowledge. 21% is more consistent with a rigorous 2019 investigation done by Laura Schlehuber in collaboration with Andy Hines, which shows that 25% of Fortune 500 companies are conducting foresight (Schlehuber, 2019), indicating that knowledge of foresight may be more limited than the strategists surveyed realize.

In addition to identifying the extent to which foresight may be misunderstood, the survey also produced evidence of the disconnectedness between internal strategists and external consultants. If, in fact, internal strategists believe they understand foresight and all that it has to offer, but in actuality do not understand, it



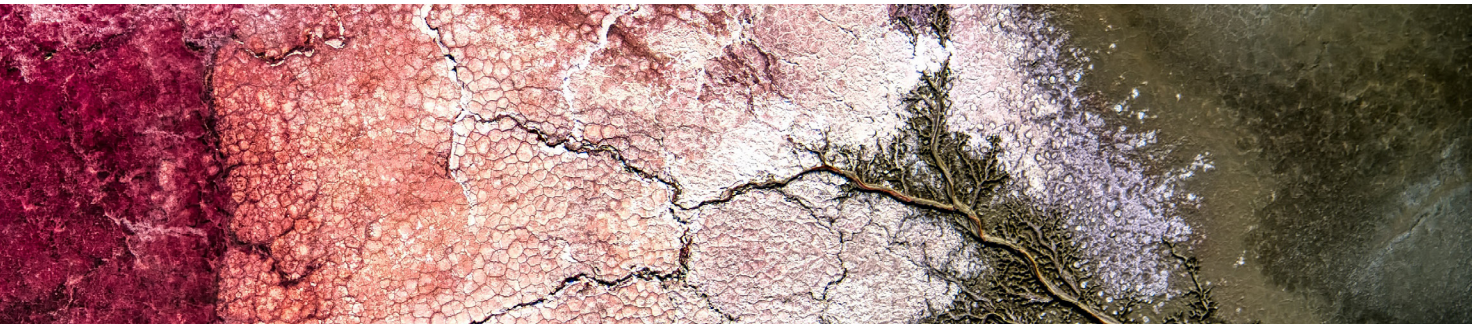
seems possible that they will also fail to understand the requisite steps for enacting or integrating foresight into the organization. Without a realistic view of the internal organizational capacity, strategic foresight practices may be likely to remain underdeveloped and enactment or integration is likely to remain elusive.

In addition to the survey of strategists, our interviews with foresight specialists, all of whom work as external consultants, elicited similar concerns as expressed in the literature, specifically, that effective integration of the insights produced by strategic foresight is relatively rare. All interviewees reported that the enactment of strategic foresight is more often unsuccessful than it is successful. As a result, our interviews delved into why this may be the case from the perspectives of experienced experts who have worked with broad ranges of client organizations.

We found that three themes emerged as barriers to the integration of foresight strategy:

1. **Lack of organizational capacity**
2. **The inability to sustain energy and commitment around the foresight work**
3. **A lack of organizational willingness to think expansively and in ways that may challenge power structures and accepted measures of success**

We will expand on these three barriers below.



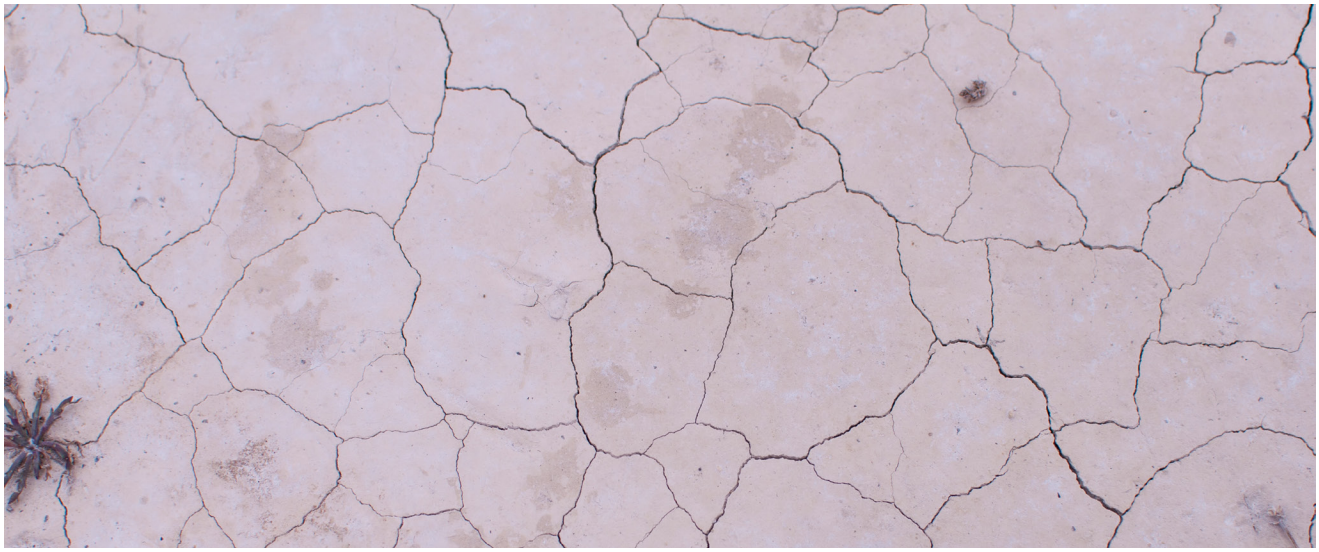
Barrier 1

Lack of organizational capacity

Consistent and prominent across all interviews were issues with organizational capacity, often leading or contributing to an inability to enact strategies arising from foresight. It was acknowledged that this has implications for the success of foresight processes, for example that individuals with traditional business backgrounds often have challenges with expansive thinking processes and creativity-driven exercises. Interviewees reported seeing this as a failure not of individual mindsets, but of the organization as a whole. Promoting the need for collective innovation was seen as vital to the organization's success. However, high levels of comfort with certainty, measurability, and immediacy, as well as a tradition of siloed structures inhibit expansive, lateral thinking that spans an organization. Interviewees reported observing consistent discomfort with optionality and potential among their clients, linked to their tendency to value certainty and measurability.

Returning for a moment to the notion of silos mentioned above, interviewees commonly referenced a lack of trust within the organizations themselves, largely between teams within an organization. Virtually all experts drew a link between trust and success, or a lack thereof. This lack of trust may extend beyond the organization to impact a foresight engagement directly, such as by causing a lack of believability in scenarios, a key element of foresight practice. The speculative nature of foresight challenges what one interviewee refers to as "quant-comfort," or the reliance on certainty and measurability afforded through quantitative data and analysis. While this relates directly to capacity, it also challenges notions of trust. Trusting in the practice of foresight requires a level of disciplined imagination, which, in an organization that is highly quant-oriented, may feel like going out on a limb in the collective sense. Such disciplined imagination likely requires high levels of collective trust in the processes, and in one another for believing in the potential that might arise from the processes. For decision-makers to champion foresight practices and attempt integration, it may feel as though they are sticking their neck out for something that is not provable and introduces potentially high levels of personal and organizational risk.

The final element that relates to issues with organizational capacity is knowledge and understanding. In the most extreme cases, interviewees reported that clients frequently misunderstand foresight and lack the ability, therefore, to enact it. This may arise from a sense among prospective clients that foresight is "trendy" or the new bandwagon upon which to jump without



careful consideration of how it fits with the organization's strategic intent. Layering on some of the circumstances listed above, such as a common limited ability to think expansively or consider potentialities, it seems reasonable to conclude that, as interviewees suggested, there is an inability to understand what the output of a foresight engagement -- typically in the form of a report -- can do for the organization. Therefore clients are unable to integrate foresight within the organization or enact foresight strategy. This notion of inability and lack of capacity is supported by the evidence that emerged through our survey. Specifically, there seems to be not only a lack of basic understanding of what foresight is, but also a lack of organizational and individual self-awareness that foresight is not understood. Unless an organization is open to learning and seeing things differently, organizational capacity building may continue to be challenged.

Barrier 2

The inability to sustain energy and commitment around the foresight work

The most prominently discussed barrier to the integration of strategic foresight into organizations was an organizational failure at sustaining energy and commitment both during and after a foresight engagement with a consultant. Discussions in this area revolved around three primary topics. The first is simply the attention that individuals and teams must pay to other aspects of their work, leaving little time or energy for the foresight work. An ongoing commitment to maintaining the energy and developing the practice is required if foresight is to be effective, and within most organizations there is little capital for that kind of consistent, long-term work. As a result, once the consultant is gone, so is the energy for the work. Organizations rarely plan for this and, consequently, integration does not happen.

The second, related topic is that organizations rarely plan for integration in advance of the foresight work taking place. This relates to the lack of organizational capacity as noted above, but is more about planning than ability. It seems to result from a misunderstanding of foresight, but even more so is reported as a failure of planning how foresight will be integrated and applied. There is a lack of understanding between the act of strategic thinking (emergent in nature) and strategic planning (enacted in practice), and little effort or understanding about how thinking and planning should relate to one another and that the management of strategy overall is iterative. When done well, it is a form of capacity building unto itself.

The third topic that came up consistently among interviewees when discussing the commitment and energy required to sustain foresight was regarding communications and organizational storytelling. This was reported as a frequent failure of integration. Communicating the work broadly and delivering the message in an engaging way was reported as happening rarely, yet also viewed as critical to building on success and gaining momentum. We will argue that communications is ideally embedded in strategy management and is, like planning for integration, itself a regenerative form of capacity building.

Bringing together the points above about both organizational capacity building and the need to find ways to sustain energy and commitment to the work, we propose that a systemic view of strategic capacity building be given some attention. Strategic capacity development at the organizational level seems to reside in three interconnected layers, visualized in the chart below (Fig. 8). Building on elements of the delineation

of strategic thinking as compared to strategic planning suggested by Maree Conway, we add a third layer called strategic management, meaning the overseeing of the building of capacity within the organization.

In essence, based on both background and primary research in the area of strategic capacity building, specifically as related to foresight, we see the three interrelated layers below (Fig. 8) as residing under the umbrella of capacity building. While there is a linear or temporal flow to the layers, they are regenerative so as to build on one another to the point that we see them as layers rather than phases. While we agree with Conway that strategic thinking makes possible strategic planning (Conway, 2016, p. 68), we see the strategic capacity building phenomenon as systemic in nature. Strategic thinking flows into strategic planning; planning flows into strategic management of the plan; management feeds thinking by communicating within the organization and adapting the plan as needed, as well as by returning evaluative measures of organizational success in relation to the plan; this process in turn increases the organization's thinking abilities and promotes reflection. When all three layers are linked and practiced holistically, integration of foresight strategy can take place.

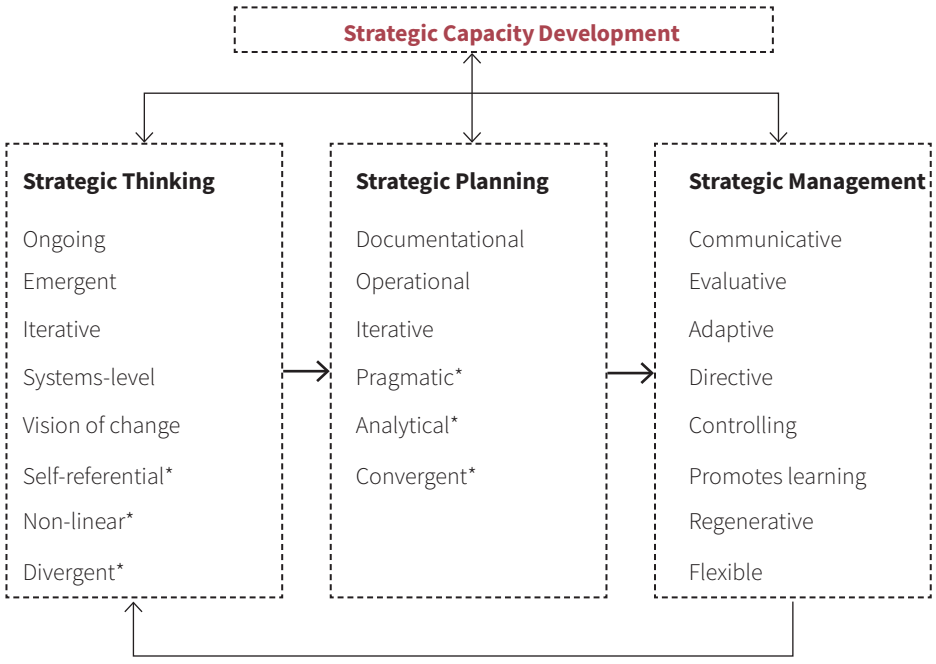


Fig. 8: Layers of strategic capacity building. *(Conway, 2016, p. 67).

Barrier 3

A lack of organizational willingness to think expansively and in ways that may challenge power structures and accepted measures of success

The third barrier to integration of foresight challenges the fundamental beliefs and structures of many organizations. Foresight, as seen through the eyes of expert practitioners, has a poor relationship with power. As a transformational process, foresight can potentially challenge the values, norms, and structures that maintain hierarchies and other systems that protect established ways of doing things throughout an organization. Foresight promotes deep thinking about issues that are not normally considered by organizations, and which often ask questions and challenge assumptions about values, identity, and culture. Many organizations are not willing to undertake these deep, reflexive conversations, and ultimately are reluctant to uncover insights that will be too disruptive to the organization itself. When this occurs the validity and/or believability of the work can be questioned, often related to the uncovering of problems in possible futures that the organization feels it cannot solve or overcome, and therefore chooses not to believe. It is possible that this may occur on both a conscious or unconscious level. When we consider, for example, ideas about values, identity and culture, which are likely to be impacted by the unconscious biases of those who shape them, it is possible to imagine resistance to the deep conversations that could challenge those deeply held beliefs, especially by those in positions of power. A more conscious challenge to the validity of foresight can be seen in common reward structures in organizations. We'll come back to this below.

While it is possible -- and we believe correct -- to explain an invalidation of foresight as the result of a lack of capacity as described in the barriers above, our primary research, coupled with an exploration of the VSM, also points to something deeper. It is for this reason that we have chosen to use the word "willingness" in relation to the description of this barrier as it relates to the expansive thinking required to formulate foresight strategy.

Returning for a moment to the VSM (see Fig. 5), we accept Hayward's proposal that foresight resides in System 4. We also propose that the interrelationship between System 4 and System 5 may be the place where foresight strategy can challenge power structures and meet with unwillingness to accept the speculative output of foresight, leading to an invalidation of the contribution of foresight to the strategy process. System 5 may find it unreasonable to balance the demands of the other systems when System 4 cannot provide outcomes based on verifiable information, as is the case with strategic foresight. This alone could be reason

enough for System 4 to be so often underdeveloped, as Beer suggested and was described above. Probing deeper, however, and recalling Hayward, if it is within the purview of System 4 to diagnose the entire system-in-focus and see if it is meeting the conditions for viability (Hayward, 2004), and if the purpose of the VSM itself is to ensure viability of the organization, System 4 could potentially have an outsize influence on System 5, and that influence could threaten the existence of System 5, in particular if the relationships between the components of the system are not strong. As Hayward noted, the self-identity of the system and the decision-making capabilities of the organization could be shifted due to the influence of System 4 (Hayward, 2004), which would then impede the relationship between Systems 5 and 3.

At a less conceptual level, the will to think and act in ways that challenge organizational norms may also have concrete impacts on the acceptance of foresight within an organization. For example, because of the speculative nature of foresight and the very long-term thinking that it applies, measuring its outcomes is a challenge referenced by the majority of interviewees. This difficulty may be in direct conflict with organizations that privilege short- and medium-term metrics, in particular in relation to reward structures. This may span many types of organizations and environments and could apply to profits, salaries, promotion, re-election, and elevation of status, among other things. Here we see a chasm between the organization and the individual. Reward systems are typically individualistic in nature, rewarding individual performance. If the organization meets its quarterly or annual targets, for example, the end result is a payout or bonus for those who played a part in that success. The outcomes need to be measurable and verifiable to be included in such a system. So here we return for a moment to the concept of process. It is possible that for foresight to be embraced and integrated within organizations, methods for identifying points of intervention at the systems level will need to be defined. These may be ways in which organizations measure and evaluate strategic capacity development, or they could be techniques developed by foresight practitioners and/or organizational strategists to help define and track markers of strategic success over longer-term horizons. We will come back to this later in this report.

Stemming from the research findings presented above, we applied the insights to a Causal Layered Analysis (CLA) (Inayatullah, 1998), as seen in Fig. 9. The CLA identifies four dimensions, which when revealed can deepen our understanding of the future. The first two layers are the most visible. At the superficial level is the litany - what is commonly accepted, or the official and unquestioned view of reality. The data of the litany is questioned at the second layer, which reveals the systemic causes behind these issues. This deeper dimension takes a systemic perspective by focusing on the social, political and economic causes. The third and fourth levels are more difficult to identify, as they go deeper and broader into the underlying causes of the first two layers. The worldview is identified on the third level, revealing deeper unconscious ideologies or assumptions. The fourth and deepest level of inquiry is the myth and metaphors, revealing the unconscious emotive dimensions of the issues. As we begin to integrate all four levels, we deepen our understanding of the issue and can create authentic solutions and identify interventions at each level of the CLA.

When exploring the current barriers to integration of foresight into the organizational context, we reveal four layers of understanding, and can begin to develop interventions and solutions for the issues identified at each of the four levels. At the most superficial level, we see evidence that foresight is viewed as being a valuable practice but not always implemented successfully. There is also a normative view of the organization through which the senior management is solely responsible for strategic decisions. When referring to the Viable System Model (VSM), the leadership team often represents the meta-system, whereas the implementation of those strategic decisions is undertaken by the non-management functions. Our research also revealed that foresight is often conducted in an episodic manner and often attached to other periodic strategic activities such as annual strategic planning or the development of a particular business line. In most current organizational models, individuals are assigned specific responsibilities and have a commitment to deliver on a particular business objective. In our VSM, this is represented as the operational system, which is wired for efficiency and self-optimization.

When looking at the systemic causes for these issues, we start to uncover a deeper layer of understanding. Most evident is the notion that normative business structures can be threatened by foresight. According to Peter Hayward, one reason for this is that “The

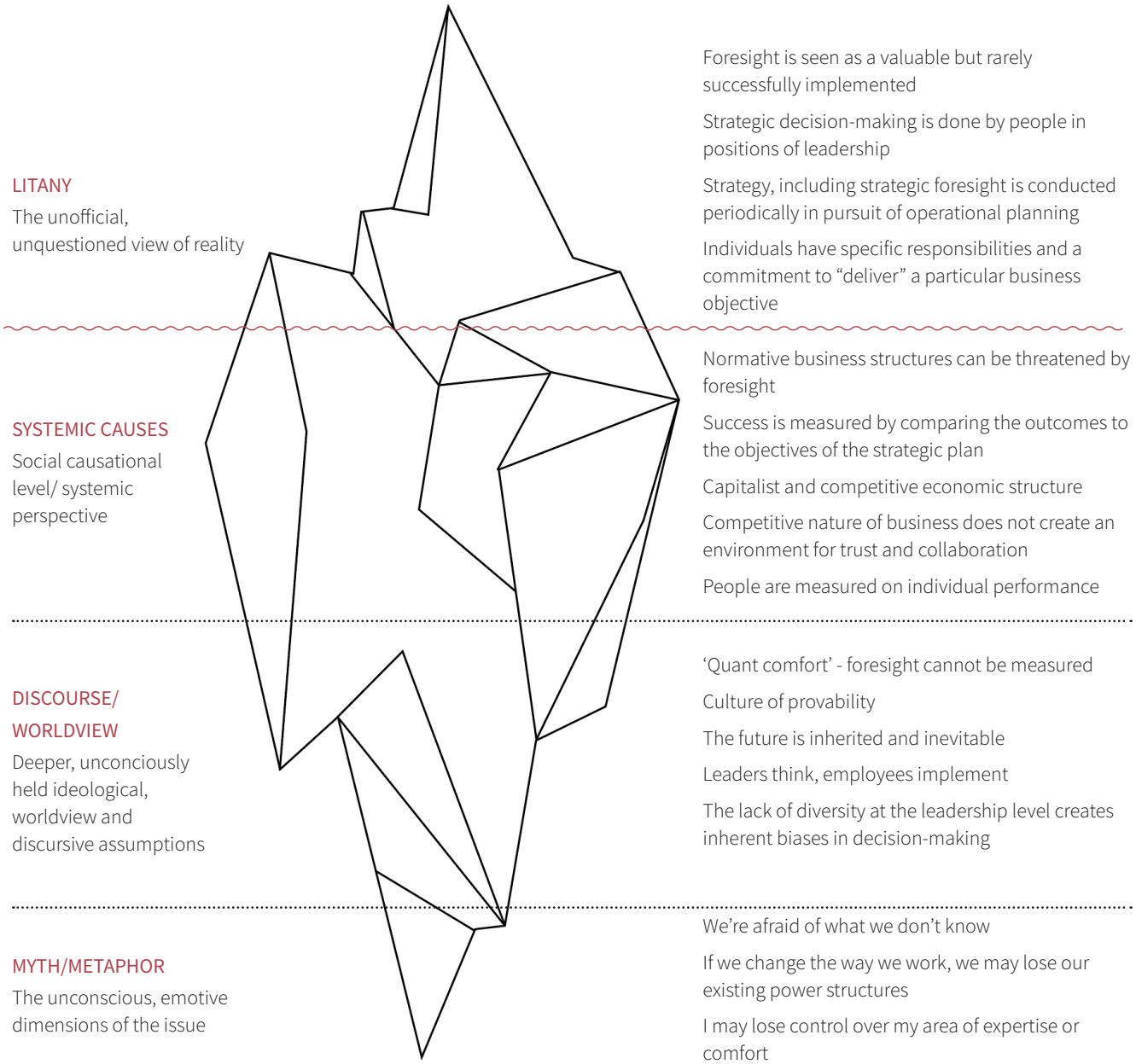


Fig. 9: Causal Layered Analysis uncovering evidence of organizational barriers

System 4 function can be quite challenging for traditional organisations because of its 'outside and then' paradigm that flies in the face of the traditional 12-month business-planning paradigm which is often premised on a projection of the present into the future" (Hayward, 2004). This reason is also supported by the fact that success is typically measured by comparing the outcomes of the objectives laid out in the strategic plan. This common business practice is rooted in a much broader capitalist economic structure wherein business success lies in the achievement of economic growth above all else, thus creating an environment of competition both inside and outside of the organization. The competitive nature of business and the typical individualistic nature of organizational reward systems are not conducive to collaboration and trust, which are key conditions to successfully engaging with foresight.

If we look even deeper to the worldview level, we start to understand the lens we are using to view the world. Current business practice favours quantitative proof, yet there is no way to quantifiably measure the future. Success is based on the 'provability' of solutions, and this thinking is ingrained into the culture of organizations. This view of success also supports the common view that the future is inherited and inevitable. In addition to these worldviews is the commonly-held view that leaders make decisions and employees enact those decisions. In other words, leaders think and employees simply implement. It is also important to note that the lack of diversity at the leadership level creates an inherent bias in decision-making, further supporting the status quo.

Finally, at the myth level, the deeper problem uncovered is that notions of the future are deeply unsettling - we are afraid of what we do not know. If we change the way we work and open ourselves to the uncertainty that is futures work, there is also an existential threat to our current power structure. Again referencing the Viable System Model, we understand that System 4 adds complexity to the system, which is necessary for the overall viability but can be threatening to both System 5 (the identity system) as well as System 3 (the control system). When the system is designed for efficiency and optimization, there may be discomfort with additional complexity, resulting in fear of going down a path that may be too complex to solve.

With this understanding of the CLA above (Fig. 9), coupled with the barriers to integration at the organizational level, we will now turn our attention to the enabling conditions.

Enabling Conditions

While we acknowledged the barriers to integration, our research also uncovered a number of enabling conditions that play a significant role in supporting the foresight process in an organization. Although foresight still remains relatively little known within business circles, there is evidence that the discipline has experienced a rise of prominence in recent years, appearing in mainstream business magazines and reaching a broader business audience. The 2020 pandemic has further intensified the interest in foresight, with increasing examples of business articles that introduce strategic foresight principles and tools as a means to help organizations build robust strategies and better adapt to change in a time of great uncertainty (Scoblic, 2020).

Although broad awareness of foresight is a necessary first step, it is insufficient in and of itself. For successful integration within the organizational context, futures literacy must be present at all levels of the organization, and reach as many people as possible. When people are deliberately thinking about the future, they are also more deliberate about the implications of their day-to-day decisions on the future. According to Sarpong, Davies and Maclean, there is a tacit assumption in many organizations that foresight, or the capacity for foresightfulness, exists only at the upper management level. They argue, however, that "The routine behaviors, activities and organising practices of 'ordinary' organization members have a genuine epistemological relevance to the theory and practice of organizational foresight" (Sarpong et. al, 2013, p. 614).

In response to Sarpong's suggestion that foresightfulness be developed throughout the organization and institutionalized as practice, we recognize a number of enabling conditions that can allow organizational foresight to flourish. Richard Slaughter identified "5 layers of capability" which are essential for upgrading foresight capacity in an organization, starting with people's individual capacity for foresight. He argues that every individual has the capacity for foresight, as they are both reflexive and self-determining beings. Futures discourse, or the capacity to talk about the future, is the catalyst for building people's individual capacity. Only when this built-in capacity is developed and mastered can foresight awareness be embedded into the organization. "It is...the web of distinctively futures-oriented concepts and ideas that opens up the

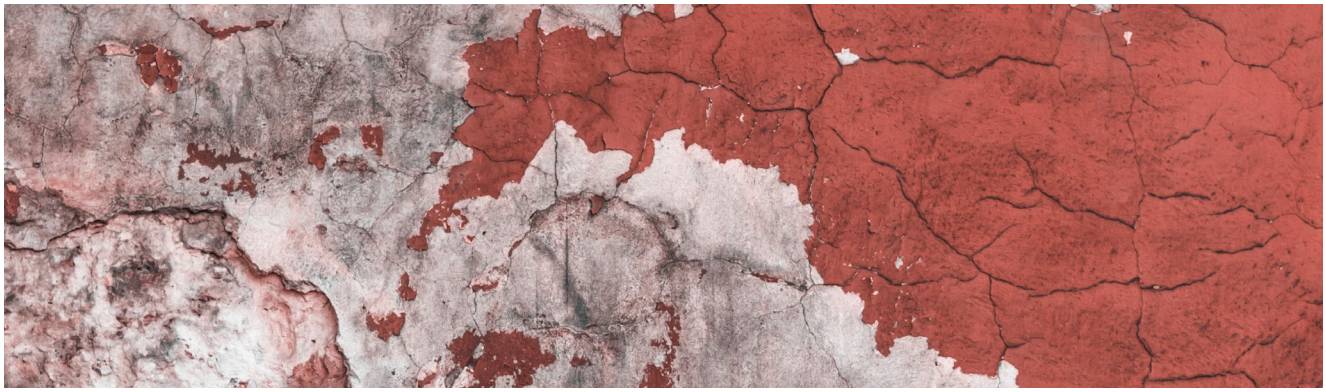
future" (Slaughter, 2002, p. 2). Slaughter's fourth layer recognizes the need for foresight to be permanent and sustained: "For the concepts and methodologies to be able to deliver insights of the highest quality, strategic foresight must not be limited to annual planning exercises or temporary add-on units" (Slaughter, 2002, p. 3). The fifth and final layer is the capacity for foresight to be established at the social level, which is the most desired "since it will serve both to enhance the prospects for individual organizations and for the wider society and culture in which they are located" (Slaughter, 2002, p. 3). This is also supported by Hayward, who explains that the more abstract and the more interconnected the issue, the longer timeframe we need for conversation (Hayward, 2020).

To build an organization's internal capacity, Slaughter outlines several options: upgrading an existing strategic analysis capacity, creating a new team, buying external expertise, or a combination of these strategies (Slaughter, 2002, p. 4). Our primary research uncovered that the current reality of foresight strategists' experience is indeed a combination of Slaughter's suggestions. It was generally agreed that internal capacity is required to understand the organization's structure, capabilities, as well as the internal culture. The internal capacity is also where the decisions happen, and where strategies take form. Conversely, external foresight strategists' roles often include an element of foresight education and training, ensuring internal teams receive theoretical foundations and an understanding of the value of foresight. In many of our interviews, the external foresight strategist viewed themselves as an expert in strategic foresight, acting as a facilitator to the internal group. Most often, the role of the internal group was to be the expert in their industry, their product, and their organization specifically. This division of labour ensures there is rigour and discipline in the process, yet is adapted to the specific needs of the organization and its strategic intent.

Yet for foresight to flourish, organizations cannot rely on over-compartmentalized structures. In response to the organization's normative approach of organizing people into groups based on their roles and functions, the organization should aspire to "Relatively risk free structures of engagement which encourages experimentation without undermining organizational stability and business focus" (Sarpong et. al, 2013, p. 617). An exploration of this last point through our expert interviews revealed that for this to be true, trust must be established between people, teams and with external consultants. It was also noted that the discursive process itself is an enabler to building trust and a collective vision for the future.

According to a research study by Sarpong et. al., the authors note that a congruence of values is another enabling condition: "we found that while the innovation team's enacted image of the future of the yet-to-be realized innovation influenced their choice-oriented behaviors, their choices about the future were consistent with their collective values and beliefs" (Sarpong et. al, 2013, p. 620). This was also supported in our expert interviews, through which it was noted that the participatory process of foresight leads to establishing a common understanding. Through methods such as historical timelines and context framing, people start to create a common vision of the future.

On a more practical level, the literature review reveals



the importance of embedding foresight to affect strategic decisions. Futurist Amy Webb offers different strategies on how to integrate foresight into the strategic planning process and writes in various business publications in an effort to reach business leaders. In her work, Webb acknowledges the broadly adopted strategic planning processes taught in business schools and offers accessible tools to integrate futures thinking into these processes (Webb, 2019). Futures Platform, an online AI platform for scanning future trends and drivers of change also offers an ebook which outlines a systematic approach to integrating foresight tools into the decision-making process. “In practice, the deliverables that the foresight process yields should feed into the strategic planning process, investment decisions, innovation activity and technical roadmaps as a natural part of educated and future-conscious decision-making (Futures Platform, n.d.). The importance of integrating foresight into the existing strategic process was also supported in our expert interviews. Three of the six foresight strategists interviewed shared that the ability to embed foresight into existing processes was an important enabling condition to the success of the foresight engagement.

As a result of our background and primary research, we identified 3 key themes which encapsulate the enabling conditions:

1. **The presence of distinct roles within the foresight team**
2. **The ability for organizational actors to engage in the process**
3. **The ability for foresight to be embedded into the decision-making process**

Enabling Condition 1

The presence of distinct roles within the foresight team

To be successful, a foresight practice requires a network of actors to play various roles to ensure integration within the organization. A collection of internal and external actors, playing distinct roles, helps to ensure that a foresight practice is established and successfully integrated within the organizational strategic process. Furthering Slaughter's notion of building internal foresight capacity, and based on data gathered through our primary research, we have identified the following vital roles comprising a foresight team:

1. The educator and awareness-builder role: All but one of our expert interviews raised the importance of teaching foresight as foundational to a successful foresight engagement. When people have strong theoretical foundations, they are not only more committed to the foresight work, they can also bring their future thinking capabilities to other areas of their daily work. For foresight to be accepted and successfully enacted in an organizational context, it is essential to have a foundational understanding of foresight, both from a theoretical perspective as well as its foundational processes. In most organizations, foresight is little known and most people have never encountered nor worked with foresight in their day-to-day functions. When foresight education and coaching is part of the foresight process - whether through external consultants or internal measures, the foresight process is better positioned for success.
2. The foresight facilitator role: Most often also responsible for education and awareness, the facilitator's expertise lies in the foresight methods and tools -- or processes. Their primary responsibility is to identify the most suitable and useful methods according to strategic intent and engage the organizational actors in specific foresight exercises. As foresight 'generalists,' they have deep expertise in the field of foresight and are responsible for facilitating and activating the foresight discussion, and ensure participants are engaging with the process, and guiding them to embrace uncertainty and creative thinking. Their responsibility also lies in guiding the participatory process toward a clear outcome.
3. The champion role: Almost all expert interviewees raised the importance of having a champion within the organization who has some understanding of foresight or is willing to be trained. The role of the champion is to bring people into the process, build excitement and momentum around the process and be an advocate for foresight in other areas of the business.

4. The authority role: The purpose of this role is not to make the big decisions but rather to give the big permissions. Creating the conditions that allow actors to participate, learn, and explore is vital to the success of this role. If done well, agency can develop throughout the organization, and foresightful practices can emerge. Linked to this is the notion that agency is connected to locus of control in an organization. When people understand the boundaries and are empowered to make decisions within those parameters, they may be more committed to the process.

5. The storyteller: This role may sometimes be performed by the champion, but we identify it as a separate function as it is related to the ongoing communication of foresight within an organization. Two interviewees remarked that the most successful foresight engagement of their careers included an internal client team member who crafted a compelling narrative and whose role it was to broadly diffuse information about the foresight engagement, build awareness, and get people excited, which we posit contributes significantly to the development of foresightful practices.

6. The "seeds:" Although it is not practical to engage the entirety of an organization in the initial foresight process, it is important to identify and engage those individuals who are receptive to the process and are eager to share and diffuse knowledge within their own organizational networks. This ensures broader reach to all levels and functional areas of the organization, and like the role of the storyteller, has the ability to begin to build and shift organizational practices.

A significant dimension to these vital roles is the importance of diversity when exploring the ideas about the future. Half of our interviewees raised the importance of having a broad range of perspectives in order to explore ideas about the future. Furthermore, discussions around shared futures may reflect idealized or biased visions of the future depending on the people participating in the process. The more diverse the team, the more inclusive those futures will be. According to Waehrens and Riis "To be successful, organisational foresight requires a multitude of perspectives and faculties'' (Waehrens and Riis, 2009).

Enabling Condition 2

The ability for organizational actors to engage in the process

Even when the right team is put into place, organizational actors must have the ability to engage with foresight and have the capacity to make decisions. This condition is necessary not only to ensure a successful process, but to ensure the successful enactment of foresight strategies. We identified three interrelated considerations for this condition to be present.

The first consideration is the locus of control among individuals within the organization. One of our interviewees remarked that many organizational actors have an external locus of control, meaning they generally believe that their successes or failures are a result of external factors. To successfully engage with foresight, this must be shifted to an internal locus of control. When people believe their own actions are determining the future, they may be more confident in trying new things and in engaging with the innovation process. The practice of foresight itself can be a powerful tool in helping the organization shift its locus of control, instilling confidence and understanding that the organization can manage its own uncertainty.

This notion is also closely tied to that of agency which was broadly discussed across our interviews. Agency was identified by three experts as a necessary condition for people to constructively engage in foresight. It also has an important connection with the authority role described above. In many organizations an explicit or implicit permission is required for people to feel they have the power and authority to create the future they want and to make the decisions required to get there. If foresight is ultimately about making different choices and taking action, then individuals and groups at all levels of the organization must feel empowered to do so. This particular condition brings to light questions of whether certain organizational structures or leadership qualities can contribute to building a sense of agency within individuals, and while outside the parameters of this report, presents an opportunity for further research.

Lastly, the notion of trust was identified by interviewees as being a necessary condition for foresight to flourish in an organization. Trust must be present for people to engage with the process, yet it can take time to develop an adequate level of trust. As articulated by one of our interviewees, futures work is deeply personal because it is about revealing our hopes and dreams. When people feel safe to speak, they can engage and contribute to the process.

Various strategies were proposed for building trust within an organization or between the organizational actors and the external consultants. Among these were

the importance of starting to have conversations about the future within a narrow context and at a level where people are comfortable. Spending time early in the process to educate and build trust between individuals and teams is also key to a successful integration of foresight strategies. It was also noted that through empathy and the ability to listen to another person's argument, the quality of the discussion becomes more important than the foresight process itself when building foresight capacity in people.

It is important to note that the foresight process itself has the power to build all three conditions within an organization. By engaging in conversations about the future, we start to build a collective understanding of the past and the present, and establish a common language around the future we want. This act of collective sense-making also has the capacity to build empathy: through the act of listening to each others' arguments, it allows us to understand each other and build the tools and interventions needed to formulate the implications of decisions, which is necessary when considering desired strategic outcomes.

Enabling Condition 3

The ability for foresight to be embedded into the decision-making process

The third emerging theme, consistent across the majority of interviews, is the successful integration of foresight processes into the organizational decision-making process. Interviewees remarked that a successful foresight engagement cannot live on its own, disconnected from existing organizational processes as the ambition of foresight is thinking about the future to inform decisions today. To be successful, there needs to be an understanding about where strategic foresight integrates within a broader set of strategic activities that pre-exist within an organization. Foresight engagements are typically connected to strategic activities, such as strategic planning, innovation agendas or research and development activities. In most organizations, such activities exist within established planning cycles and have a particular cadence. Capital, resource and time investments are all conditions which enable the successful integration of foresight within organizations. This includes sufficient investment in foresight activities, as well as capital in foresight outputs.

It is important to point out that the strategic foresight experts represent an external perspective - only one of the seven interviewees had experience leading foresight from within an organization. Given the episodic nature of their foresight engagements, as well as the specific mandate of the foresight consultant, it is unsurprising that a key condition for success would be the integration of these activities within pre-existing planning and investment cycles. It was noted that most often, the entry point into an organization was through the strategy team, the research and development team, or a specific line of business. Although there may be a desire to formalize or map the strategic process and identify how foresight can be "slotted in,'' our interviews also underscored that most organizational processes aimed at strategy are organic and difficult to map out. Furthermore, the overt strategic processes - those that are formalized and published, may be mitigated or counteracted by the organization's covert practices, or the emergent human behaviours that exist beneath the surface.

Although these experts provided an external perspective on the organization, almost all remarked on the importance of ensuring the longevity of the commitment to foresight beyond the episodic engagement. Experts remarked that foresight work was most successfully adopted when the organization had sufficient time to engage with others and to 'marinate' in the future concepts for a period of time. While outliers, two interviewees commented heavily on the importance

of building internal capacity at both the individual and organizational levels, arguing that such activity is necessary if foresight is to flourish throughout an organization. When more people are involved in conversations about a preferred future, there is more awareness of the change that is required to get there, leading to more future-oriented decisions in their day-to-day work. We also propose that while strategic foresight may be episodic in nature, strategic thinking can be a continuous, emergent phenomenon in an organization, and that when this occurs, foresightfulness can begin to be realized in organizational policy, among other activities.

Scholar and foresight strategist Andy Hines puts forward a Foresight Outcomes Framework to help futurists set expectations for how they can contribute to the successful integration of foresight within organizations. He argues that "foresight work should inform decisions relating to the future of the organization - sometimes directly and sometimes indirectly... It might uncover information or insights that will later lead to a decision. Ultimately these decisions will be tied to some action - or a decision not to act" (Hines, 2016, p.6). He further defines the decision-making process as involving three components: learning, deciding and acting. Although acting appears to be the last step in the decision-making process, it should feed back into the decision process and increase the organization's ability to take action over time.

Maree Conway proposes an approach to "infuse" the strategy process with foresight as a way to "strengthen the strategic thinking that ultimately informs your strategic plan, and ensure your strategy is futures ready – this is flexible strategy, ready for whatever challenges and opportunities the future brings to your doorstep" (Conway, 2016, p.13). She argues that using foresight can help organizations to craft strategies that are more robust and help make decisions today that will be relevant within a longer-term context. Conway calls for a reframing of the strategic planning process when she writes, "Organisations often respond to rapid change in their external environments by adopting shorter planning cycles where change that's coming that could disrupt an organisation's business model completely is often missed. A longer term perspective that is structured, formula free, based on strong strategic thinking and that lets new information into the organisation is what is needed now" (Conway 2016, p.49).

Continuing along this thread, Sarpong, et al. warn against the over-compartmentalizing of organizational structures: "While the normative organizing architecture of an innovation team help give form to the innovation process, they often resulted in packing team members in subgroups or tribes based on their roles, duties, relational rights, and functions... This organizing arrangement, we observed, generates adverse sectional interest and stifles a team's ability to take relevant

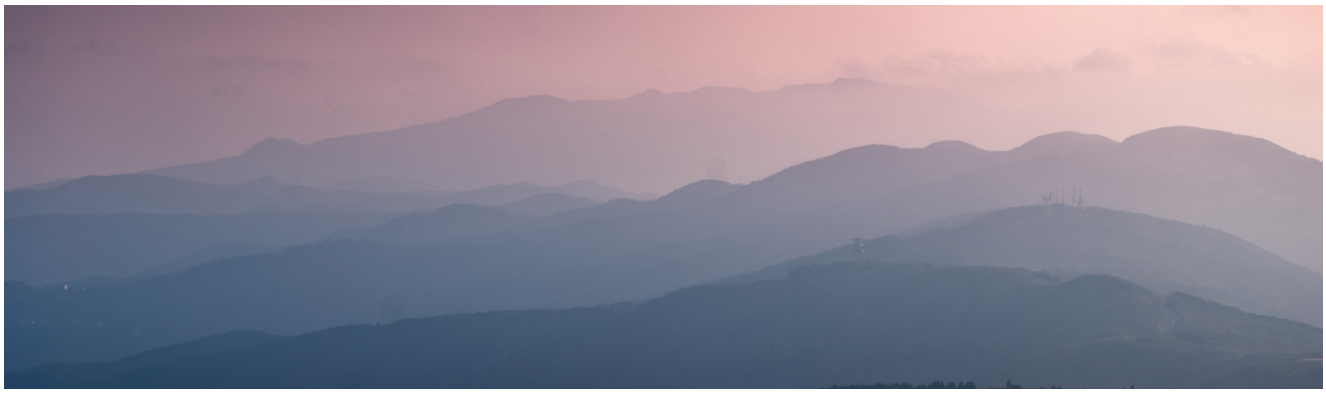
actions aimed at improving the collective understanding of the cost, returns, efficiency of a chosen pathway into the future" (Sarpong et. al, 2016, p.618).

This supports the notion that the strategic process is not limited to a linear or episodic planning process but that strategic decisions are made every day and at every level of the organization. Therefore, for foresight to be holistically integrated into organizations, it is imperative to look beyond the formal strategic process and identify how foresight can transform the decision-making process.

Having reached the end of our problem finding and problem framing, the remainder of this report will be aimed at synthesizing and making sense of it all. Moving forward, our primary concern will be to understand how the practice of organizational foresight can be successfully integrated in such a way as to benefit the organization holistically, ensure viability, and support a flourishing futures-oriented organizational practice.

6

Making sense of it all



Considering the barriers in relation to the enabling conditions, we begin to explore the principles that might promote the integration of futures-thinking and foresight strategy enactment within an organization. To do this we return to the social construction paradigm and systems thinking, especially in relation to our earlier discussion of practice. Using the definition of social constructivist above, which emphasizes knowledge building and knowledge transfer through collaboration and active engagement, we have identified that the place in which to focus the remainder of our exploration is organizational practice. With that in mind, three principles emerge as the result of our research. All three principles spotlight the extent to which the integration of strategic foresight can be promoted at two critical connection points in the foresight process. One of those points is the relationship between the foresight consultant and the client organization. The second is within and among the various Systems within the organization. As might be expected from a research project that invokes systems thinking, rather than deal with each of the two connection points individually, we will explore them in more depth in the following section, in which we investigate the three principles that we believe promote the integration of foresight within an organization, which are:

1. **Foresight is a team sport.** The development of futures-thinking capacity that supports strong inputs into the foresight process and makes possible its integration into strategic planning and strategy management is best achieved when approached as a collective endeavour.
2. **Foresight is a verb, not a noun.** Foresight is a transforming practice and foresightfulness must be practiced if it is to be integrated into the organization. Like any skill, if it is not practiced the capacity for it becomes diminished. Building on the notion of foresight as a team sport, if it is not practiced by the team, the collective efforts of the team cannot be honed or optimized.
3. **The organization is a system,** and while the various levels of the system are integral to the development of practice within the organization, the connecting points between the components of the system are also active zones of practice.

We will expand on each principle below, but first want to situate the principles within the context of knowledge building and knowledge transfer through collaboration and active engagement. To do this, we draw on the work of Peter Senge. In his influential book *The Fifth Discipline; The Art and Practice of the Learning Organization* (2006), Senge lays out three "lessons" about organizational structure. First, he suggests that systems cause their own crises, not external forces or individuals' mistakes. Second, he posits that in human systems structure equates to the basic interrelationships that control behaviour, including how people make decisions. These interrelationships form the "operating policies" whereby we translate perceptions, goals, rules, and norms into actions. And third, people in organizations fail to exercise the potential leverage that they have because they focus solely on their own decisions and ignore how their decisions affect others (Senge, 2006,p. 40).

These three lessons expose what could take place when an organization fails to practice at the systems level. Disfunction in the organization, as suggested by the lessons, is the result of a breakdown at the interstitial connections between places in the system. Thinking back to Hayward's interpretation of the VSM, these interrelationships are also the places where knowledge is passed and adapted to the purpose of a particular place in the system - where the "operating policies" develop.

For Senge, the structure of the organizational system is vital. He suggests that "only [structural explanations] address underlying causes of behaviour at a level at which patterns of behaviour can be changed" (Senge, 2006, p.53). He continues, "Structures produce behaviour, and changing underlying structures can produce different patterns of behaviour" (Senge, 2006, p.53). In other words, changes to the system can produce new and different practices. Strengthening the structural supports between Systems 4 and 5, for example, could elicit more well-developed forms of awareness, reflection, and openness to the work done in System 4 (where foresight resides). The result of strengthening structural supports could be more foresightful strategy and future-oriented decision-making coming from System 5, which would then flow to System 3 to be interpreted and reimagined in operational policies and practices. "In this sense, structural explanations are inherently *generative*" (Senge, 2006, p.53).

Through Senge, it may be possible to link the

conceptual nature of the VSM to the concrete nature of organizational structure. Senge concludes that "since structure in human systems includes the 'operating policies' of the decision makers in the system, redesigning our own decision making redesigns the system structure" (Senge, 2006, p. 53), and we would argue, creates new opportunities for practices to be established.

Senge himself writes of the importance of practice, calling it the "missing link" in organizational learning. He writes, "It cannot be stressed too much that learning is a team skill" (Senge, 2006, p. 240). He declares that "A group of talented individual learners will not necessarily produce a learning team, any more than a group of talented athletes will produce a great sports team. Learning teams learn how to learn together" (Senge, 2006, p. 240). In other words, they develop a practice. Senge goes on to suggest that developing team skills is a significant organizational challenge, and addresses the need for particular conditions to exist in order for team skill to develop. He writes, "team skills are more challenging to develop than individual skills. This is why learning teams need 'practice fields,' ways to practice together so that they can develop their collective learning skills'' (Senge, 2006, p. 240). He posits that "the total absence of meaningful practice or rehearsal is probably the predominant factor that keeps most management teams from being effective learning units" (Senge, 2006, p. 240).

Referencing scholar Donald Schon, who developed the concept of reflective practice and contributed to organizational learning theory, Senge defines practice as "experimentation in a 'virtual world'," which he further describes as "a constructed representation of the real world" (Senge, 2006, p. 241). Senge interprets this virtual world as a place for experimentation, where "action can be slowed down or speeded up. Phenomena that stretch out over very long time periods can be speeded up to see more clearly the consequences of particular actions" (Senge, 2006, p. 241).

Although he is referring to practice in general, Senge's comments could be applied to the practice of foresight specifically - these are the actions that foresight processes are intended in part to elicit. Putting them into practice within organizations would accomplish many of the benefits foresight is intended to afford the organization: preparedness, resilience, empathy, and preference for a particular future, to name only a few. Ultimately, as Senge points out, this is experimentation with ideas. He states that in organizations, "there is little opportunity to form reasoned assessments of the wisdom of different decisions, and there is no opportunity to step back, as a team, and reflect on how we might arrive at better decisions together" (Senge, 2006, p. 242). For Senge, the remedy to this lack of opportunity is in learning how to practice within organizations: "This starts with creating distinct 'practice fields' so that a team can begin to develop its joint skill in fostering a team IQ that exceeds individual IQs" (Senge, 2006, p. 242), and this takes place, in part, by treating the organization as a living system (Senge, 2006, p. 267-68).

We will come back to this idea when we elaborate on the third of our three principles. First we will deal with principles one and two. Of note is that the principles build on one another. The notion of the collective makes possible the concept of actively learning together, which in turn is bound all together by the system itself.

We propose that the three principles, embodied in the team, the practice, and the system, need to be thought of as linked and that they are recursive in nature, meaning that they are a set of principles that when linked achieve successive results, represented by Fig. 10. The team develops a practice that is supported by the system; in turn the system becomes stronger from the increases in organizational capacity that result from practices that are honed by the team. This recursive pattern takes place over and over, and increases capacity within the team, the practice, and the system individually and in an ongoing manner. When linked the organization overall emerges as a recursive system.

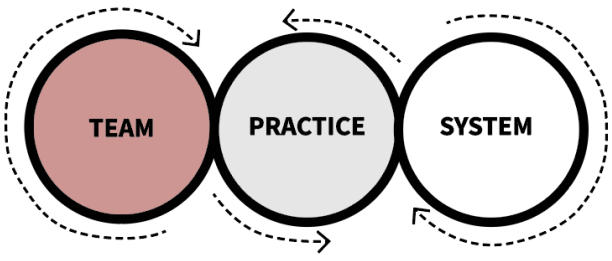


Fig. 10: The three principles as represented in a recursive loop.

We also propose that the three principles can be viewed as a nested system, in which team, practice, and system are each both a whole and parts, and that there is something of a hierarchy among the parts in order to make up the whole. For example, in order to develop a team practice, there must first be a team; in order to have a system, there must be parts of the system. We propose that the team creates the practice, and that the team practice exists within the system. A representation of this nested system can be seen in Fig. 11.

With the notions of recursivity and holism in mind, we will describe each principle in further detail below.

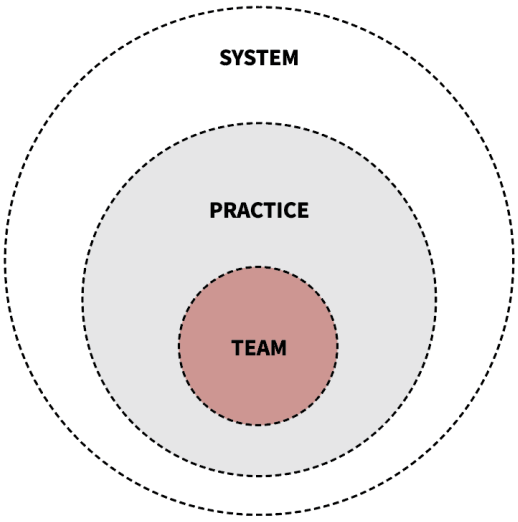


Fig. 11: The three principles as represented in a nested system

Principle 1

Foresight is a team sport

In order to integrate foresight within an organization a collective needs to be established. This collective can have intermittent members, but must always have consistent members. The intermittent members can comprise consultants who parachute in for episodic engagement as well as others within the organization. However consistent membership should come from within various levels of the organization. This idea is supported by Peter Hayward when he says that futures-thinking capacity is enabled at the individual level but enacted at the organizational or community level, and when he declares that individual foresight skills are necessary, but insufficient (Hayward, 2020). Similarly, through his work on the Three Horizons technique, Bill Sharpe writes that the essential task of the practice "is to develop both an individual and a shared awareness," (Sharpe, 2013, p. 29). He expands by writing, "Future consciousness can only be fully developed as a universal shared practice in which every person is a unique source of transformative insight and human potential" (Sharpe, 2013, p. 31).

The foregrounding of the collective addresses the three barriers described in Section 4 in the following ways:

1. Lack of organizational capacity is addressed when enough team skill is developed for the organization to think foresightfully and enact foresight at the various levels of the system.
2. The inability to sustain energy and commitment around the foresight work is addressed because a shared future consciousness sustains the thinking throughout the organization.
3. A lack of organizational willingness to think expansively and in ways that may challenge power structures and accepted measures of success is addressed when the collective shares a future consciousness. The threat that one part of the system will undermine other parts decreases or disappears.

On the flip side, by emphasizing the collective nature of foresight, it is possible to elevate the enabling conditions in the following ways:

1. Distinct roles that work in relation to one another form a de facto team that spans parts of the organization. The "seeds" further spread knowledge and information, helping to develop foresight practices across the entity.
2. Broad participation in the process naturally focuses on the collective, and while it should also help to develop individual learning, the collective capacity grows.
3. Foresight can become embedded into the decision-making process when foresight capabilities are represented across the organization's teams.

Principle 2

Foresight is a verb, not a noun

Foresight is a transforming practice and a skill that must be consistently applied by the team throughout the organization in ways that are relevant to the specific context, or organizational system, and in ways that relate the systems through their active interrelationships. In other words, the foresight team must learn to learn together (Senge, 2006). Foresight must be practiced in an interrelated manner in order for futures-thinking to be enacted and for integration of foresight within the organization to take place.

Enacting foresight as practice may help to overcome the barriers identified in Section 5 in the following ways:

1. Lack of organizational capacity is addressed because the team is learning to learn together, which builds capacity at the individual and organizational levels.
2. The inability to sustain energy and commitment around the foresight work is addressed because an ongoing commitment to practice implies consistent effort is applied by the team and across the organization.
3. A lack of organizational willingness to think expansively and in ways that may challenge power structures and accepted measures of success is addressed because the organization is developing a shared future consciousness that does not threaten existing structures because it is a shared view.

On the other hand, the notion of developing foresight as a practice (making it a verb, or an action to participate in) integrates with the enabling conditions as follows:

1. The creation of distinct roles supports the active development of the foresight practice because it creates a holistic experience of foresight that approaches the work from multiple angles, each adapting foresight to a relevant level in the system. In doing so, we again see that practice becomes adapted to purpose depending on the site of the practice.
2. Broad participation in the process is, again, likely a natural outgrowth of the development of practice. The more participation, the more likely it is that shifts in the day to day ways of doing things will result in changes to practice that are increasingly foresightful.
3. The ability for foresight to be embedded into the decision-making process can be achieved by including foresight processes into the organizational strategic practices.

Principle 3

The organization as a system

The organization is a system, and while the various levels of the system are integral to the development of practice within the organization, the connecting points between the components of the system are also active zones of practice. While, as Hayward suggests, the interrelationships between the organizational systems are where organizational self-awareness, openness, self-repair, self-organization, and self balancing take place (Hayward 2004), they may also be the sites in which knowledge is passed, molded and adapted to become relevant to each particular system level. While knowledge is adapted to purpose as it is shared throughout the system, the organizational practice develops and becomes ingrained. Futures-thinking capacity and foresightfulness are achieved. According to Senge, the ability to think of the organization as a system also makes it possible for individuals within that system to perceive themselves and their organizations in new ways; we begin to see ourselves not as separate from the organization, but connected to the organization. “A learning organization is a place where people are continually discovering how they create their reality” (Senge, 2006, p. 12). Tsoukas also ties success to the organizational dynamic when he writes that “foresightfulness becomes a systemic capability, as opposed to being an activity for the experts alone, to the extent that the organization institutionalises a process of collective inquiry and learning” (Tsoukas, 2004, p. 140).

When we think of the organization as a system we can address the barriers to foresight integration as follows:

1. Lack of organizational capacity is addressed because the system is structured to support learning, both individual and collective, and sites of learning occur at the various places in the system as well as in the interrelationships between the places in the system, and individuals see themselves as comprising the system and having agency in the system.
2. The inability to sustain energy and commitment around the foresight work is addressed because knowledge and information pass throughout the places in a system and become adapted to purpose at each place. Further, a system is inherently interconnected and can be structured to allow many elements, including energy and commitment, to flow throughout.
3. A lack of organizational willingness to think expansively and in ways that may challenge power structures and accepted measures of success is addressed because seeing the organization as a system exposes gaps and delays in the system, making it possible to reflect on and resolve structural issues that impede holistic practices.

Turning to the enablers, with regard to a systemic view of the organization, it is possible to see that:

1. The creation of distinct roles addresses the system-view of the organization in particular through

the interrelationships between the system levels, which the roles are designed to bridge and connect, with each of the roles having an inherent pan-organizational influence.

2. Broad participation in the process supports a systems-oriented lens because it brings foresight and futures-thinking to all levels of the system, where foresightful practices may eventually be established in the recursive systems at all levels. In this way, foresight gets adapted to purpose at the systems levels.

3. Foresight can be embedded into the decision-making process when it is integrated across the system and adapted to purpose at various levels of the system.

The following table depicts how the barriers and enabling conditions are addressed for each of the three principles for foresight integration. Thinking back to the recursive loop and nested system shown in Figs. 10 and 11, the table helps us to combine the two models while applying the three principles to the barriers and enabling conditions. The table allows us to envision how, by addressing the barriers and enablers, the three principles support a thriving future for the organization, and ultimately support the potential for an emergent new way of being that amalgamates system and practice. This site of amalgamation is something of a crucible from which an ever-present futures-thinking organizational mindset emerges.

Principles	Foresight is a Team Sport	Foresight is a Verb
Barriers/ Enablers		
Organizational Capacity	Team skill develops	A practice develops and is applied consistently
Energy and Commitment to Foresight	The organization as a whole participates in futures-thinking	Futures-thinking is actively applied in an ongoing manner
Will to Accept the Inherent Challenges that Foresight can Expose	Trust develops within the organization	Structures and norms shift in relation to the needs of the future organization
Distinct Team Roles: **Teacher/ Facilitator/ Authority/ Champion/ Storyteller/ Seeds**	As on a sports team, each role works toward a particular task and is in service to the other positions on the team	A symbiotic team practice develops that is nurtured and suppported by individual strengths working together
Organizational Actors are Part of the Process	The foresight team grows within the organization	Larger numbers of people begin to think and act foresightfully
Foresight is Embedded in the Decision-Making Process	The team as a whole has foresight built into its norms, values, and identity	Organizational actors and teams practice futures-oriented decision-making and enactment
The Result	The organization has developed foresight capacity	A regenerative practice-oriented culture emerges

The Organization is a System	**The Result**
Levels of a system develop capacity appropriate to the particular context, but also the interrelationships between the levels are involved in exchange of information and become sites of practice unto themselves	A skilled team, developing a team practice that is connected across the organization at system levels and in the connecting points between the levels
Energy and commitment moves through the system	Like water and nutrients moving through a tree, energy and commitment to foresight moves through and supports all parts of the organization
Delays and gaps in the system are exposed and can be addressed	The organization becomes increasingly able to withstand unexpected events and/or move toward a preferred future
A “team IQ” that exceeds the capabilities of individual IQs develops (Senge, 2002, p. 242)	The organization has become a learning organization
System-wide futures-thinking capacity develops; Operating policies emerge	All levels of the system are futures-thinking and acting accordingly
Foresight is fit for purpose at all levels of the system as well as at the interrelationships of the various levels	The organization’s viability is supported by a futures mindset
The emergent, intended and realized strategies are balanced	**An ever-present futures-thinking organizational mindset emerges**

Fig. 12: A proposed framework for successful enactment of foresight in an organization.

The table in Fig. 12 demonstrates both the recursivity and holism suggested earlier in Figs. 10 and 11. Continuous capacity development within a self-organizing system emerges, producing an ever-present futures-thinking mindset across the organization, or as Sharpe says, as shared future consciousness. Its emergent nature creates resiliency and produces viability. In the language of the VSM, the organization exhibits embodied recursivity.

If we reconsider organizational foresight with our analysis of the barriers and enablers in mind, and according to our three principles, it is possible to reconceive the Causal Layered Analysis as a way to shape the future of organizational foresight practice, as represented in Fig. 13.

Comparing the CLA for the world as it is, as represented in Fig. 9, to the world of integrated organizational foresight in Fig. 1, a stark difference emerges: fear in the former as compared to hope in the latter. In the world as it is, foresight pushes up against fear of the unknown, loss of control, and problems that are potentially too large and complex to be solved. In our vision of organizational foresight represented in Fig. 13, on the other hand, foresight is a route to a balanced system in which knowledge and practice has equipped the organization to face the complexities of the future. This, we believe, is the ultimate demonstration of agency. An organization, and the teams and individuals within it, feel empowered to face the rigors and challenges of an unknown future because they have developed the knowledge and skills to remain viable within it.

What, then, might be some practical methods for approaching the barriers, capitalizing on the enabling conditions, and enacting the three principles? The following section suggests some recommendations.

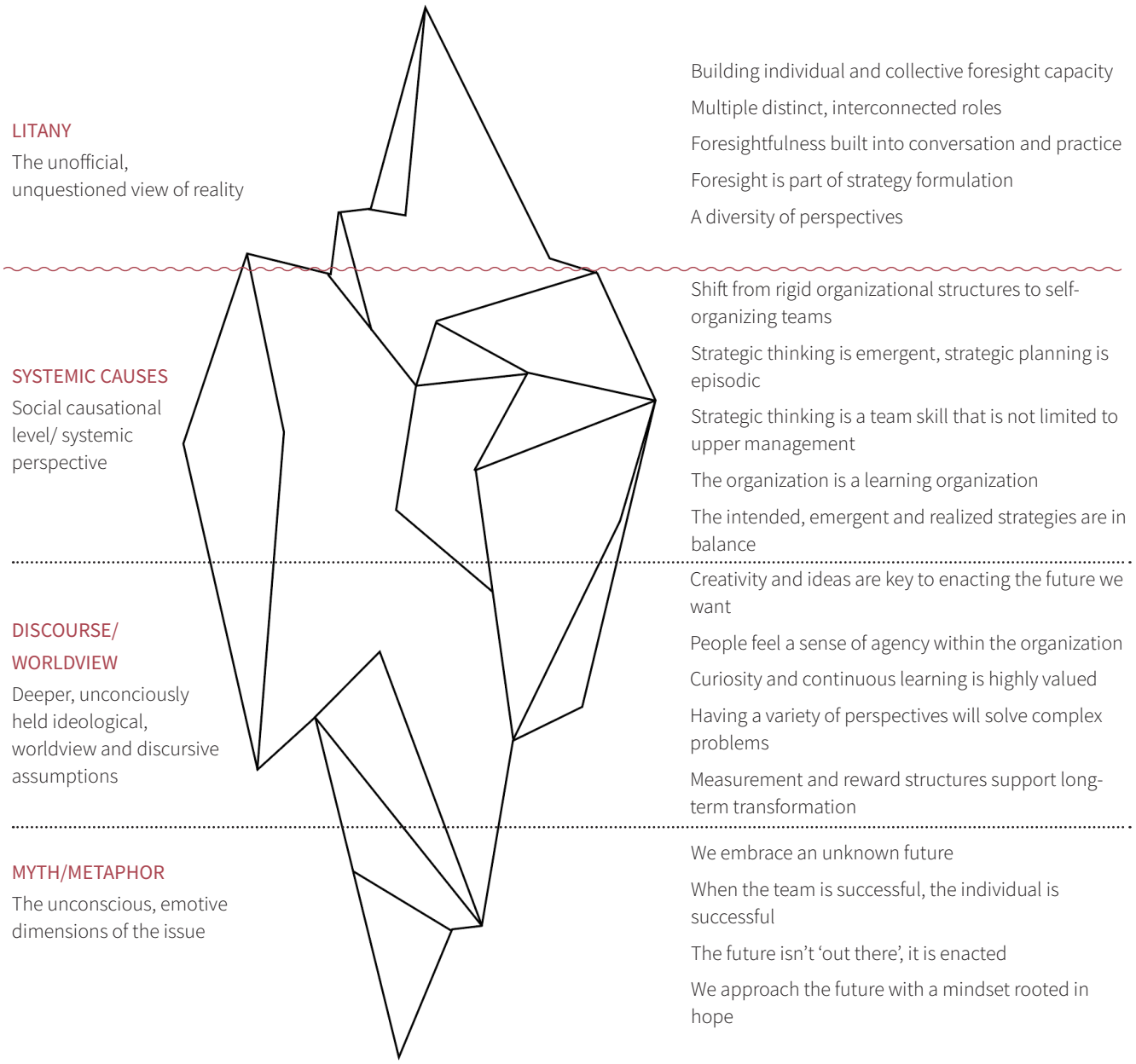


Fig. 13: Revised Causal Layered Analysis uncovering evidence leading to enactment of foresight

7

Recommendations & Next Steps

We recognize that the organization described in Fig. 12 and the CLA in Fig. 13 is conceptual in nature. That said, it is based on the experiences of real practitioners in the real world. While achieving systems-wide integration of foresight and developing a futures-oriented mindset is, we acknowledge, likely a lengthy and challenging task within an organization, the experiences we learned about while conducting the research for this report point to some more immediate opportunities. We have bundled them into two groups: things the foresight practitioner can do, and things the organization can do.

Recommendations for Foresight Practitioners

We are calling on foresight practitioners to improve comfort and accessibility as related to the language and processes of foresight. This is not about softening trends or glossing over scary elements of potential futures. It is about making exploratory, creativity-driven processes accessible for people who do not often work that way. Most of our expert interviewees discussed how they find that people with business backgrounds are made comfortable by evidence, numbers, measurable outcomes, not with exploratory thinking and speculative ideas. We do not doubt the validity of these statements. We do, however, recognize that within organizations, individuals are personally assessed most often by the nature of their convergent thinking, and that much of one's social capital within an organization is derived from their success at convergence (Woodman et. al., 1993, p. 299-300). Significant elements of foresight require the opposite kind of thinking, and research by George Land tells us that it is not possible to do both types of thinking at the same time. Competing neurons in the brain do not allow for it (Land and Jarmons, 1998). While it may sound like a simple recommendation, it is intended to combat what Sarpong alarmingly describes as the "diminution

of the importance of strategic foresight" (Sarpong et al., p. 34). If organizational actors struggle to get behind the processes and the practice of foresight, they may also have trouble accepting the outcomes.

Alternatively, we know that creativity is valued in organizations. A brief internet search for the most in-demand skills in the workforce turned up results from such news and professional development organizations as Linked In, Forbes, Medium, CNBC, and others, showing list after list that place creativity among the top three most desirable skills now and in the future. In 2010 IBM Global Business Services surveyed 1500 CEOs, asking them what they looked for in leadership competencies. The top competency was creativity, as cited by 60% of respondents (IBM, 2010). This strikes us as an important part of the value proposition for foresight consultancies. Not only will an organization receive important strategic inputs that will improve the organization's viability, but in doing so, the organization will also be helped to develop creative capacity among its staff and improve people's understanding of the value of creativity in the organization.

Identifying specific tools and exercises that elicit creativity and develop creative capacity are beyond the scope of this MRP, however it presents a potentially fruitful avenue for further research. We see this area as having three prongs: The first is to make the case for the development of creativity within teams. If team practice skills are needed for successful organizational foresight, then team creative skill would logically also be needed.

The second prong is to create the conditions in which individuals in teams feel comfortable being creative. In this, we refer back to the notion that divergence and convergence cannot neurologically be done simultaneously. If people in a typical organization, in which they are assessed based on their convergent thinking and doing, are suddenly asked to attend a workshop and think divergently, it seems plausible that such a leap may simply be too far to travel just by having entered the room. Being creative can make people feel vulnerable. Putting forward untested ideas in an environment that is not accustomed to them takes courage. Foresight experts may be more successful in their engagements by acknowledging this, discussing it with their clients, and initiating creativity elicitation exercises that help organizational actors begin to think differently. Developing those exercises is beyond the scope of this project, but we believe it could be highly valuable and presents an area for further research.

And the third prong is to make the language of foresight more accessible. The jargon associated with foresight is significant. While we loved it as design students, we also recognize that terms like cone of plausibility, backcasting, windtunneling, futures wheel, three horizons and others may be alienating in an environment that is already feeling vulnerable with the work.

The second area in which we think foresight practitioners could advance the integration of foresight within organizations is to develop better understanding of their individual client organizations. Our survey pointed out that people in organizations believe they understand what foresight is, but in fact probably do not. Unless that gap is bridged, integration is likely to be challenging from the start. As we identified earlier in this report, an internal foresight team is critical to foresight's integration within the organization. If that

team is operating under misguided assumptions or incorrect understandings of foresight processes and their intentions, they cannot successfully lead integration efforts. Since it is the expert practitioner who knows, it is therefore the practitioner's responsibility to assess, understand, and guide the development of competencies within the internal team. Furthermore, it is in the practitioners' best interests, as the viability of the field of foresight resides in part on organisations being able to produce results based on the foresight work they engage with.

One last recommendation for practitioners is to require that the organization identify an internal team and help them understand the jobs that they must do (authority, champion, storyteller, seeds). We believe that this enabling condition can contribute to achieving the three principles in a significant way, and also that it can bring about the other two enabling conditions (1. actors become part of the process and 2. embedding foresight into decision-making). We believe that processes and tools for forming this team and keeping them engaged should be developed and made a part of the practitioner's toolkit. While developing those tools and processes is not within the scope of this project, we see it as an exciting area for further investigation.

Recommendations for Organizations

Realizing that there may be an unacknowledged gap in the organization's understanding of foresight in general, we propose that organizations approach foresight engagements with an open-mind to the organization's possible rudimentary understanding of foresight. We acknowledge that this may not be an easy task; organizations and the individuals within them prize expertise and competency. Our research uncovered, however, that in the case of foresight knowledge, organizational actors may know far less than they think they know, and this gap is potentially harmful to the development of foresight strategy, and possibly much more harmful to the integration of that strategy into organizational decision-making. Moreover, as we have also come to understand that in many organizations the 'outside-then' functioning of System 4 is underdeveloped. Prior to beginning the work, therefore, it may be useful for organizations that are engaging with foresight to spend time developing an understanding of what they wish the foresight work to accomplish as well as a clear plan for how they will integrate it within their strategy processes. This work can be done in partnership with foresight consultants, but we believe it is best done in relation to the specific conditions within the organization in order to realistically include clear action plans around enactment and integration. This could take many forms, but one that comes to mind is to develop a charter that identifies the purpose of the foresight work, the expectations for integrating it into the strategy process overall, the expected levels of participation and commitment, and, very importantly, identifies the

specific core team and the roles each person on the team will have and the deliverables associated with those roles (teacher, facilitator, authority, champion, storyteller, seeds). In this charter, we believe the foresight consultants should be included (role of the teacher and facilitator, for example) and the ways in which all members of the core team are to interact should be identified. By identifying the interaction, we believe it will instigate the development of an organizational practice, as well as, thinking back to Senge, serve to establish a practice field. The team must learn to learn together, and a foresight project charter may be a fruitful method to begin that in practice.

From a research perspective, prototyping and evaluating the introduction and use of the team charter is, we believe, an exciting opportunity for further research. While we have briefly suggested some high level inclusions to the charter above, a deeper understanding of the objectives and potential implications, and ways to measure success could be interesting next steps.

Our second recommendation for organizations also opens up a very exciting area for potential future research, and has two prongs. The first is to undertake an understanding of how organizations can develop creative capacity at the individual and team levels. We are particularly interested in team creative capacity, but recognize that this may be inextricably linked to individual creative capacity. We also recognize that developing creative capacity is enticing for organizations and individuals alike. Based on the desirability of creativity as a skill that will make organizations increasingly successful and viable, it is in both the organization's interest and the individual's interest to pursue creativity as an area for growth and development. This would require the organization to understand and consider the implications of divergent thinking as compared to convergent thinking, and the conditions that might be required for each, in particular as they are distinct and, according to George Land, asynchronous.

Which leads to our second prong: we believe that organizations can make room in their structures for divergent thinking, which may require them to define additional and/or alternative measures of success that challenge traditional reward structures. While out of scope for this MRP, a potential next step could be to align reward structures to the Double Diamond framework which identifies and aligns project processes to periods of divergent and convergent thinking. By mapping phases of a strategy process onto the Double Diamond, it may become possible to evaluate the outcomes of divergent thinking, in addition to those of convergent thinking. If successful, this could uncover a game-changing way in which to value creative, exploratory processes and their outcomes in such a way that uncouples them from convergent, decision-oriented outcomes that can more easily be regarded through a quantitative lens. Again, we believe an investigation of how reward structures can be designed to value creative, convergent thinking and their outcomes is a fascinating potential next step stemming from this project.

8

Conclusion

In Section 3 of this report we stated numerous suggestions as to the vital role strategic foresight plays in organizations. Its transformative power lies in its unique ability to help firms find and seize new opportunities, understand in advance what the future may bring and therefore not be caught off guard by it, and ultimately steward superior performance. With such value, it seems reasonable that discovering how to maximize the impact of foresight is a worthy pursuit. That being the case, understanding the barriers to doing so, and conversely the conditions that support the successful integration of foresight into strategy formulation and the organizational practices that bring strategy to life, became one of the goals of this report. By developing an understanding of the barriers and enablers, we were able to propose a framework that suggests an approach to building a futures-thinking practice within and throughout an organization, and that this practice-based approach may be instrumental in integrating foresight within the organization. We recognize that both the foresight practitioner and the organization have a role to play in realizing this solution, and that the nature of the relationship between them is one of the keys to building foresightful capacity within the organization. We also acknowledge that the likelihood of foresight flourishing as a field is itself dependent on the success with which organizations that engage with foresight are able to realize its benefits, underscoring the interest foresight practitioners should take in contributing to its successful integration within their client organizations. The viability of organizations in achieving their purpose and serving their constituents is a direct result, in part, of a quality foresight engagement that is integrated and sustained within the organization itself. It is our goal that the recommendations herein and the potential areas for further research toward those recommendations serve to support both the viability of the organization and of the field of foresight, so that both can realize thriving futures.

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