Organisational Resilience: Good Practice Guide

CONTENTS

PREFACE

The Department of Home Affairs commissioned this project with the University of Tasmania to update the Australian Government publication, Organisational Resilience: Good Business Guide. This updated version of the Good Business Guide brings a revised evidence based methodology for the now-titled Good Practice Guide, as outlined below. The Good Practice Guide, along with the updated Organisational Resilience HealthCheck Tool, are key deliverables of the 2023 Critical Infrastructure Resilience Plan, in support of the objectives of the 2023 Critical Infrastructure Resilience Strategy. These resources aim to uplift organisational resilience maturity within Australian organisations, ensuring Australia is more robust in the face of all hazards.

The Good Practice Guide and its goals align with the 2023 Critical Infrastructure Resilience Strategy, which provides a framework for how industry, state and territory governments, and the Australian Government will work together to mature the security and resilience of critical infrastructure, and to anticipate, prevent, prepare for, respond to, and recover from all-hazards. We believe that this Guide will help critical infrastructure owners and operators mature their resilience in the face of all hazards and in the process safeguard Australia.

INTRODUCTION

Organisational resilience is essential for adapting to the dynamic global market and managing short-term disruptions from various sources such as natural disasters, cyber attacks, physical or supply chain hazards. This is crucial for Australia's critical infrastructure sectors.

Australian critical infrastructure provides services that are essential for everyday life such as energy, food, water, transport, communications, health and banking and finance. Secure and resilient infrastructure supports productivity and helps to drive the business activity that underpins economic growth. A disruption to critical infrastructure could have serious implications for business, governments, and the community, impacting supply security and service continuity.

Beyond adaptability, organisational resilience also involves addressing long-term challenges, prominently including the implementation and evaluation of Environmental, Social, and Governance (ESG) principles.[1] ESG principles are pivotal, aligning organisations with sustainable practices and enhancing the resilience in alignment with the Australian Government's 2023 Critical Infrastructure Strategy.[2] Thus, a resilient organisation is defined not only by its adaptability but also by its commitment to robust ESG principles.

EVENT   RESPOND   ABSORB AND ADAPT   RECOVER   IMPROVE

Figure 1: Enhancing critical infrastructure security and resilience by strengthening cross-sector dependencies can help organisations to anticipate, prepare for, respond and recover from existential threats while improving resilience capabilities.

BACKGROUND

The Australian Government publication, *Organisational Resilience: Good Business Guide*[3], provided a framework to assess organisational resilience. The framework was based on a multi-year research project in New Zealand that investigated organisational resilience.[4 5 6 7] The framework included 13 behavioural indicators that contribute to organisational resilience.

The indicators in this Good Practice Guide have been updated based on contemporary thinking and best evidence-based practice.

Figure 2: 13 Organisational Resilience Indicators.

The *Organisational Resilience: Good Practice Guide* introduces an **Organisational Resilience Maturity Framework.** This is a modified version of the United Nations' Organizational Resilience Maturity Model[8] that has four levels of organisational maturity from developing to generative.

An organisation has commenced the organisational resilience journey. They have some systems and processes in place to manage key aspects of resilience, but don't necessarily recognise it as such. These organisations may have experienced disruption that has led them to explore opportunities to improve.

Key functionalities that support organisational resilience are implemented in a formal, structured and documented manner, with stable processes, standards and guiding principles.

Organisations have recognised that standard processes alone will not effectively support the organisation with future uncertainties. These organisations are socialising and extending the internal engagement of organisational resilience to identify improvements in capability, adaptability and agility.

Organisational resilience is embedded in the culture of the organisation and frames everything the organisation does. It is a key 'lens' through which the organisation views the world. This level of maturity produces new outcomes, opportunities and ways of thinking for the organisation to manage an uncertain future.
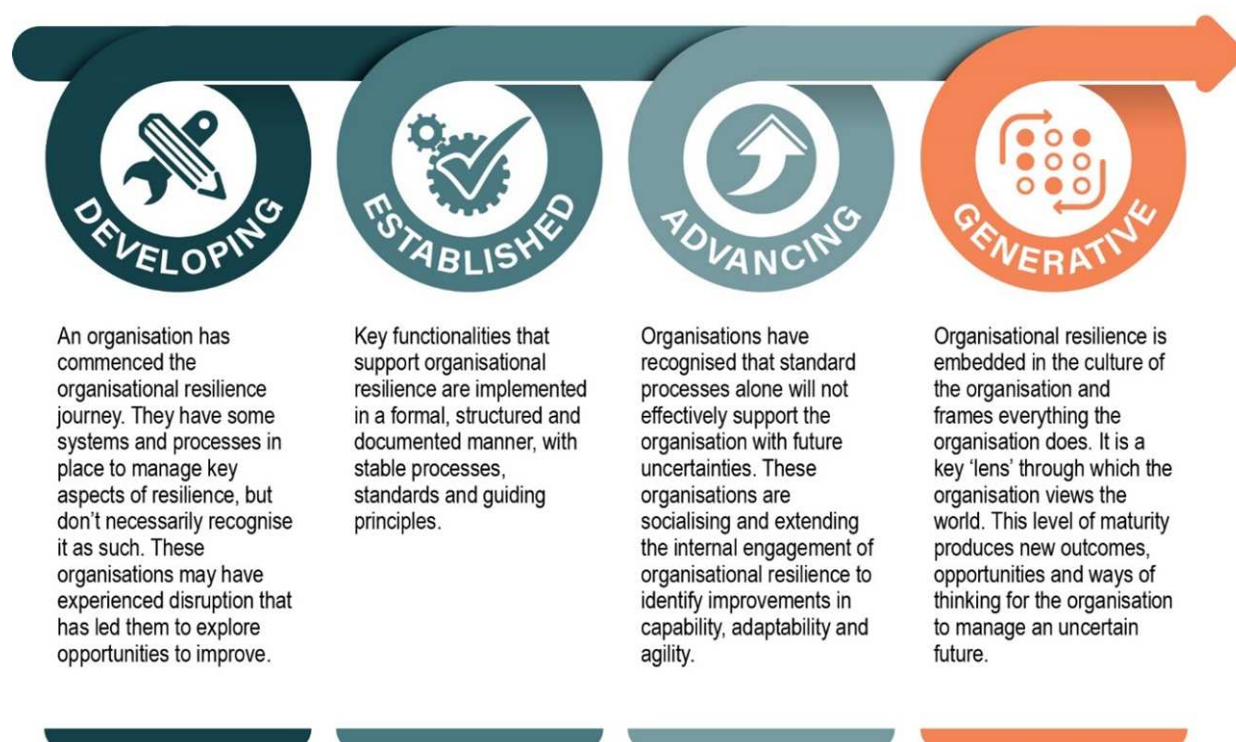
Figure 3: Organisational Resilience Maturity Framework.

If you are reading this Guide, or have completed the Australian Government's Organisational Resilience HealthCheck Tool, you have either commenced your organisation's resilience journey, or you are continuing to enhance your organisation's resilience. Either way, you are building organisational resilience maturity.

Combining an organisational resilience framework with an organisational resilience maturity model offers specific guidance for each indicator on how to enhance your organisation's resilience that is tailored to your organisation's current level of organisational resilience maturity.

USING THIS GUIDE

This Good Practice Guide can be used to assess perceptions of organisational resilience. There are many ways to assess organisational resilience and the soundest methods compare multiple sources of information. There are also several approaches to using this Guide. It could be used to assess the perceptions of a team, such as the cyber team, human resources team, finance team, or a business unit or department, or a combination of these. Further, it could be used strategically by the executive to identify key gaps in the organisation's resilience.

Any assessment needs to recognise its limitations. This Guide is not designed in its current approach for an organisation wide survey due to the challenges in disseminating and collating the responses. Finally, it is important to remember that any assessment is a snapshot in time and perceptions are likely to change over time and in response to internal and external contexts.

The remainder of this Guide will provide an overview of each of the thirteen indicators in the organisational resilience framework. Each indicator includes the following **four sections**:

A **brief description** about the indicator

A Case Study that explores how the indicator has been used in practice

A **series of statements** that will help you consider how that specific indicator is applied in your organisation

Some **advice** on how your organisation may wish to enhance its capability for that specific indicator based on the level of organisational resilience maturity

Advice is provided for the first three levels of organisational resilience maturity to assist organisations in developing, establishing and advancing their level of organisational resilience. No advice is provided for the 'Generative' level of organisational maturity as this type of organisation is likely to understand how to further their level of organisational resilience for that particular indicator.

In order to produce a tailored assessment of your organisation's resilience and receive specific advice based on your level of organisational resilience maturity, you will need to complete the online version of this assessment using the Organisational Resilience HealthCheck Tool.

ORGANISATIONAL RESILIENCE INDICATORS

Leadership

Description

Leadership involves guiding an organisation through uncertain situations, such as a crisis. [9] It also involves making rapid strategic decisions and effectively communicating with stakeholders to mitigate the impact of a disruption and minimising any potential impacts.[10] [11]

Organisational resilience leadership is also about shaping the culture in such a way that the organisation can grow and enhance its capability post-event, to a position that is better than it was before.[12] [13] [14] [15]

Critical competencies (styles of leadership) that have been identified as being essential for leaders in times of uncertainty include creativity, personal resilience, the ability to make decisions under pressure, and adopting an inclusive, ethical and virtues driven leadership style.[16] [17]

Case Study

Maggie Timoney, the first female CEO of Heineken USA, has continued to buck the trend with her inclusive leadership style. Timoney encourages inclusion throughout her workforce and emphasises the importance of creating simple channels to 'receive feedback from the people who make your business run'. Her inclusive leadership starts with 'listening to everyone, not just the loudest voices'. Timoney advocates that the business must foster a continuous listening approach to shape a culture where all people feel heard and valued. To foster this inclusiveness, Heineken USA runs schemes such as reverse mentorship, where perspectives and expertise can be imparted from employees at all levels, helping to further a culture of inclusion by mitigating potential age-related biases.[18]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our leadership maintains visibility of the external risk environment to ensure timely consideration of threats and opportunities.**
2. **Our leadership proactively navigates the organisation through times of uncertainty and disruption.**
3. **Our leadership communicates effectively with its employees and external stakeholders.**
4. **Our leaders promote a culture of organisational resilience.**
5. **Our leaders demonstrate justice, fairness, care and integrity in their leadership.**
6. **During an adverse event, the strategic decision making of our leaders is transparent.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- *Developing* – consider providing leadership development programs and training that specifically focus on building resilience competencies such as problem-solving, decision-making under uncertainty, emotional intelligence, effective communication, change management, and strategic thinking, to enhance leaders' human capabilities.

- *Established* – consider fostering adaptive leadership practices that will enable leaders to respond effectively to changing circumstances and encourage proactivity, flexibility, and responsiveness.

- *Advancing* – consider enhancing strategic partnerships and collaborations with external stakeholders, including industry peers, government agencies, and community organisations, that establish MOUs that will provide access to expertise, resources, and support during times of crisis or disruption.

For additional advice about contemporary leadership practices, consider reading the following document from the Australian Civil Military Centre titled, **Interagency Taskforce Leadership Guide**. Although the Guide is aimed at public sector interagency leadership, the core leadership principles are relevant to any business embarking on inter-departmental projects or joint ventures.

Decision Making

Description

Decision making is the ability to understand what a reasonable solution to a problem would look like, acting to reach a solution, and evaluating the effects. [19] Effective decision making can help organisations increase their efficiency and resilience. [20] Both the process (structures) and the outcomes of decisions need to be captured, validated and recorded.

In volatile, uncertain, complex, and ambiguous environments, organisations should create a psychologically safe decision-making environment, embrace critical thinking, and manage stakeholder expectations. Adopting these characteristics in the decision-making process can help organisations increase their adaptive capability. [21] [22]

Case Study

Johnson & Johnson faced some challenging decisions during COVID-19 when they experienced an over demand for an HIV anti-viral drug due to unproven claims it would help COVID-19. They needed to ensure decisions were made on the allocation of medicines was ethical. The organisation worked with independent experts, ensured transparency of scientific data, and applied an ethical framework globally, that included their supply chain, helping to ensure their decision-making was rational, ethical, and equitable. Johnson & Johnson also decided not to lessen the medicine's availability to HIV patients, and to only allocate excess drugs to COVID-19 researchers.[23]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our decision making considers both short term and long term objectives and applies critical thinking in reaching solutions.**
2. **We have the systems in place to adequately record our decisions and the associated consequences.**
3. **When making decisions we have established processes to communicate those decisions and manage stakeholder expectations.**
4. **We create a psychologically safe environment, where people feel that they can voice their opinions, before making decisions.**
5. **We integrate the principles of risk management into our decision making.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- ***Developing*** – consider embedding principles of psychological safety into team environments so people feel safe to 'speak up' and use structured processes to record decisions and document why the decision was made to ensure any decisions are defendable at a later date.

- ***Established*** – consider managing the team's cognitive biases throughout the decision making process using a structured technique such as the Cognitive Bias Aide Memoire, to ensure that thinking is not distorted and errors are not made.

- ***Advancing*** – consider combining both critical thinking and creative thinking when making strategic decisions in times of uncertainty to enhance adaptive capacity.

For additional advice on how to enhance the strategic decision making capability of your crisis management team, consider accessing the Australian Government publication, *Decision making during a crisis: a practical guide*.

Situational Awareness

Description

Situational awareness is quite simply, knowing what is going on around us and how to respond. Organisations that value situational awareness have a comprehensive understanding of their shared goals that can lead to more actionable insights.

Situational awareness involves perceiving and understanding internal and external elements in an environment to comprehend what is occurring in that environment. These elements are specific to individual systems and contexts, and continuously change to form flows of information. Situational awareness also includes the ability to project future actions that are relevant to the organisation's situation.[24] [25] Modern interpretations of situational awareness recognise the cyclical nature of this phenomenon and the need to share understanding between individuals to develop a shared awareness.

Case Study

During the COVID-19 pandemic, the UK Department of Health & Social Care required national and regional levels to have situational awareness of the estimates of incidence and prevalence of COVID-19 and associated demographics. To enhance situational awareness, clear processes were developed to integrate data streams across boundaries with weekly local action committee meetings. These meetings allowed key updates and policy recommendations to be escalated across the levels. This allowed data analysis and assessment to be rapidly shared across Government and provided to national decision-making committees in a timely manner.[26]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our organisation promotes rapid and transparent sharing of information to create organisational situational awareness.**
2. **Situational awareness is enshrined in our business frameworks.**
3. **We identify internal and external signals about our operating environment using data driven intelligence.**
4. **Using intelligence, we develop a plausible understanding of our shifting world and refine or abandon the understanding depending on its credibility.**
5. ***During a disruptive event we have a common platform that provides a real-time shared overview of events.***

🗨 Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- ***Developing*** – consider building a greater understanding of the value of sharing information during disruptions through the use of standardised templates such as situation reports to ensure consistency of information.

- ***Established*** – consider using a dedicated software platform that allows the improvement of sharing real-time information across the organisation during adverse events.

- ***Advancing*** – consider using artificial intelligence to identify weak signals that can be translated into a predictive tool to identify potential disruptions.

For additional advice about situational awareness, consider accessing the United States Department of Homeland Security Cybersecurity and Infrastructure Agency guide titled, *CRR Supplemental Resource Guide – Volume 10 – Situational Awareness.*

Creativity and Innovation

✏️ Description

Creativity is the ability to produce new and original ideas that can lead to innovation.[27] [28] [29] Organisations that encourage creativity can generate more diverse and creative solutions to challenges and problems.[30] [31] Creativity involves the use of imagination and originality to produce something that is valuable or useful in some way.[32]

Creativity in an organisation is the ability of a team to collectively generate new and innovative ideas. One aspect of creativity is divergent thinking, which is the generation of a variety of ideas and alternative solutions to problems.[33] This is facilitated by an environment that encourages openness, risk-taking, problem-solving, collaboration and constructive criticism.[34] [35]

📰 Case Study

Due to the fluid nature of today's business environment, organisations can benefit from a culture of creativity that encourages and produces novel or unique ideas and solutions. Technology giant Google places a particular emphasis on cultivating creativity within their teams. Google's infamous '20% time' rule encourages employees to take one full day per week to work on a passion project. It's an example of how built-in time for play and imagination can spark creativity and lead to increased productivity. Google recognises that elements of creativity, such as intrinsic motivation and collaboration, are vital in all areas of an organisation if it wishes to foster a culture that emphasises creativity and innovation, and not just in those departments that are classically concerned with innovation, such as research and development.[36]

📄 Statements

Consider the following statements in the context of organisational resilience.

1. **We are encouraged to think creatively to solve problems and create new solutions so the organisation can innovate and evolve.**
2. **We use a collection of different divergent thinking techniques.**
3. **Within our current organisational structures, we can translate creative ideas into tangible outcomes that harness innovation both independently and collaboratively.**
4. **We encourage creativity in business as usual operations as well as during crises or disruptive events.**

> **Advice**
>
> To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:
>
> - ***Developing*** – consider using techniques that support people to think outside the box such as the SCAMPER technique to explore different approaches to reframe a problem.
>
> - ***Established*** – consider embedding divergent thinking techniques into current systems and processes and providing training to improve creative thinking so that people can 'think outside the box'.
>
> - ***Advancing*** – consider the integration of the principles of creativity and innovation into organisational resilience strategies to drive a cultural change that looks for opportunities in all situations, including times of uncertainty and disruption.
>
> For additional advice on different types of creative thinking techniques, consider accessing a handbook created by a team of NATO intelligence specialists that is titled, *Thinkertoys: a handbook of creative-thinking techniques*.

Employee Engagement

Description

Employee engagement is the simultaneous investment of an individual's physical, cognitive, and emotional energy in their work. [37] Employee engagement is a critical driver of organisational success as high levels of engagement promote retention of talent (promotion), foster customer loyalty, and improve organisational performance and stakeholder value. [38]

When employees are engaged, they are investing their hands, head, and heart in their performance. Engaged employees seek learning, and are aligned with the organisation's purpose, thereby committing emotional energy. This results in an engaged workforce that has meaningfulness and is therefore committed to their organisation's success. [39]

Case Study

In the early 2000s, employee engagement in the UK public sector was very low. Only a third of workers were highly engaged and productivity was nearly 20% behind that of other G7 countries. The UK Government commissioned a report on employee engagement titled, Engaging for Success. This report identified that departments with highly engaged employees demonstrated the following enablers: providing a strategic narrative; possessing engaging managers; providing employees with a voice; and being a department that values integrity. In 2011 the UK Prime Minister provided the backing for a new national employee engagement task force, Engage For Success. In 2021, Engage For Success became a 100% volunteer led movement that is now committed to promoting employee engagement across the public, private and not-for-profit sectors in the UK.[40]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our organisation proactively encourages the retention of talent to enhance organisational resilience.**
2. **Our organisation strives to attract talent by setting a compelling vision and values that embeds resilience and attracts a workforce that embraces the challenges.**
3. **Our team invests emotional energy into the organisation to enhance resilience.**
4. **Our organisation provides us with learning opportunities to enhance our individual and combined resilience.**

💬 Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- ***Developing*** – consider developing a database of internal disruption case studies that can be used to train, exercise and develop employee understanding of their organisation's resilience context.

- ***Established*** – consider developing a talent retention plan that targets key roles to support the medium-term viability of these roles.

- ***Advancing*** – consider developing a mentorship program for resilience professionals in the organisation that provides a pathway of growth and opportunities to contribute to broader sector resilience.

For additional advice on how to develop a mutually beneficial environment that encourages everyone to relate to the objectives, purpose and values of the organisation, consider accessing the following standard, *ISO 23326:2022 Human resource management – Employee engagement – Guidelines.*

Collaboration

Description

Collaboration is the ability to work together to achieve a common goal. It gives committed organisations the opportunity to achieve what is not achievable through a siloed approach.[41] Through a mutually beneficial collaboration, organisations can coordinate activities and combine strengths to benefit from the specialist expertise and resources of others and gain new perspectives and ideas.[42] Collaborative relationships can also enhance resilience building.[43] Finally, effective governance, trust, and boundary spanning are significant skills for creating and nurturing collaborative relationships.

Case Study

OXFAM and the Vanuatu Business Resilience Council shared knowledge and skills to develop the Unblocked Cash Collaboration Project when category 5 Cyclone Harold hit Vanuatu in 2020. The damage was immense and the requirement for humanitarian assistance was substantial. The required collaborative effort needed OXFAM's global expertise in emergency humanitarian response and the governance skills to coordinate the project. But the project also needed the Vanuatu Business Resilience Council's accessibility and knowledge of the local community to target the most effective means of response and recovery. This collaborative project won the European Union Horizon 2020 award for blockchain technology use in the aid sector.[44] [45]

Statements

Consider the following statements in the context of organisational resilience.

1. **We develop collaborative relationships in order to build trust within and between teams.**
2. **We have information systems and collaboration mechanisms in place that facilitate coordinated activities between different teams within the organisation.**
3. **Our organisation builds role clarity and regularly promotes opportunities to understand individual and shared accountabilities as a strategy to enhance collaboration.**
4. **Our governance structures facilitate coordinated activities between different teams within the organisation.**
5. **We have mechanisms to span inter-organisational boundaries to liaise with key stakeholders.**
6. **We embrace and build partnerships with all stakeholders within our value and supply chains as key contributors to the success of our organisation.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- *Developing* – to quickly build collaboration in any team, consider regularly clarifying everyone's roles and do this whenever the team composition changes, as this is a simple way of quickly building trusting relationships.

- *Established* – consider combining details of the role, expertise, and future interaction of team members, within existing information systems to enhance collaborative relationships.

- *Advancing* – when working within temporary teams, both internally and with other organisations, consider integrating dedicated boundary spanning roles as a mechanism to foster trusting relationships between organisations.

For additional advice on how to enhance your collaborative capabilities with internal and external stakeholders, consider accessing the Tasmanian Government publication: *Working together in recovery*. Although this guide is in the context of not-for-profit and public sector collaboration, the fundamental principles are applicable for any type of organisation.

Resource Management

Description

Resource management is a series of processes and techniques used to ensure an organisation has all the necessary physical, human and other assets available to complete a project or meet business objectives.[46] The goal of resource management is to use the optimal combination of these assets to satisfy requirements while also realising these same resources are likely to be in demand elsewhere in the organisation. Effective resource management ensures best use of resources by eliminating waste to maximise efficiency. It can also increase an organisation's agility and ability to pivot faster, thereby minimising response time when unexpected change occurs.[47] Resource management involves developing resource capacity; planning and scheduling resources; and utilising and prioritising resources. [48]

Case Study

Swissgrid is Switzerland's national electricity supplier. To keep pace with their continuous growth that resulted in expanded responsibilities and increased complexity, Swissgrid set up its Project Management Office as a company department in its own right. This enabled the organisation to make significant improvements to the efficiency of its project management in a very short timeframe. It facilitated this by implementing a powerful, integrated project and portfolio management system. One of the portfolio management system's top features was the provision of more visibility for resource planning, utilisation, and resource availability approvals. It enabled end-to-end resource planning that forms the foundation of flexible yet meaningful reports for management. Implementation of the system has allowed Swissgrid to carefully balance their resources and meet resource requirements within projects and line departments in a transparent manner, while ensuring optimal capacity utilisation for all the resources involved.[49]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our resource management capability ensures that we have resources available to meet our strategic objectives.**
2. **Our human resource management processes ensure that our personnel develop and learn.**
3. **We have on-demand, real-time visibility of our physical resources.**
4. **In business as usual, we dynamically respond to the changing demand for our resources to enhance our organisational resilience.**
5. **During a disruptive event, we are agile in quickly redeploying resources to maximize efficiency and maintain the continuity of operations.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- **Developing** – consider developing or reviewing business continuity plans to demonstrate the ability to manage critical processes through disruption.

- **Established** – consider reviewing business continuity plans to determine opportunities for improved continuity measures such as extra asset redundancy.

- **Advancing** – consider implementing a program to progressively transfer the responsibility for continuity across the organisation in order to build a culture of continuity management.

For additional advice on human resource management, you may wish to consider accessing the following standard, *ISO 30414:2018 – Human resource management – Guidelines for internal and external human capital reporting.*

Knowledge Management

Description

Knowledge management is the process of capturing, sharing, and using data, intelligence, insights and other information within an organisation.[50] Managers must create a culture that encourages these processes so that organisational knowledge can be leveraged for the benefit of the organisation.[51] [52] By capturing and sharing knowledge within an organisation, employees can make better decisions and solve problems faster, which can lead to increased productivity, innovation, and competitiveness. [53] [54] Knowledge management has also been found to enhance organisational resilience. [55] [56] Finally, knowledge management has been shown to enhance collaboration and communication between employees and teams, which can lead to improved teamwork, better relationships, and a more engaged workforce. [57]

Case Study

The knowledge management practices of Amazon have been identified as being among the key factors that has allowed them to become the e-commerce giant they are today. Amazon uses a single interface and portal to capture and share information across all categories of goods on their website, from books to electronics or clothing. Furthermore, any telephone calls to Amazon's call centre are reduced because they place an emphasis on making their website as user friendly and as comprehensive as possible. Ultimately, this access to information allowed Amazon to save money and importantly, create a more satisfying customer experience.[58]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our information resources and information management capabilities enable us to learn and adapt to known and emerging risks.**
2. **We use database management software to store and retrieve organisational information linked to disruptive events.**
3. **In our workplace we can discover, use, and interrogate knowledge relevant to our organisational resilience and encounter and interact with others who are doing the same.**
4. **We conduct after-action reviews following a disruptive event, to learn and enhance our capability.**
5. **Knowledge management provides us with a competitive edge, securing our viability and overall success.**

🗨 Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- ***Developing*** – consider conducting a thorough assessment of the organisation's knowledge needs with respect to organisational resilience. This should include identifying the critical knowledge areas, both explicit and tacit, that are important for achieving the organisation's objectives in this domain.

- ***Established*** – consider reviewing how the organisation captures, organises, and stores knowledge. This may include creating a centralized knowledge repository, implementing document management systems, or utilizing collaborative platforms and intranets that can expedite knowledge sharing.

- ***Advancing*** – consider fostering a culture of knowledge sharing about disruptions within the organisation that encourages employees to contribute their knowledge, insights and experiences in order to increase workforce inclusion and 'buy-in'.

For additional advice about establishing, implementing, maintaining, reviewing and improving an effective management system for knowledge management in your organisation, consider accessing the following standard, *ISO 30401:2018 – Knowledge management systems – Requirements.*

Silo Mentality

Description

A silo mentality places unnecessary barriers between parts of the same organisation, where internal departments or teams break into units creating a gulf of 'us versus them'.[59] A silo has a negative impact on work relationships and can cause a breakdown in communication, cooperation, and coordination with external parties, and within organisations.[60] Repercussions of a silo mentality can also include inefficiency and inconsistency through inefficient resourcing, openly discouraging collaboration, and duplicating work. Breaking silos and fostering a collaborative environment can lead to network leveraging behaviours vital for the adaptive ability of an organisation responding to unprecedented challenges. [61]

Case Study

The municipality of Trondheim in Norway identified a way to break down institutional silos when they revised their climate and energy plans. Firstly, they encouraged less sectorisation by linking the administrative and political branches of the municipal council. They also gained cooperation across departments by holding meetings between project leaders and compiling a broad working group representing different departments and teams. Writing of the climate energy plans was divided between group members who acted as department representatives and advisors to their departments. The process resulted in one of learning and proactively finding common ground.[62]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our organisation has active initiatives to break down boundaries between organisational units and actively and openly celebrates cross business success outcomes.**
2. **Our organisation creates opportunities to reduce duplication of work across the business by encouraging teams to work collaboratively.**
3. **Our organisation applies advances in team performance such as promotion of diversity, equity, information sharing and the development of social capital to improve business outcomes.**
4. **We break down silos through the use of cross organisational teams and capabilities to manage disruptive events.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- *Developing* – consider setting up cross-team discussions that help employees see the world through the eyes of their colleagues in other parts of the organisation to increase knowledge and synthesize diverse input into new solutions.

- *Established* – consider establishing systems that develop and deploy cultural brokers who can act as a go-between, allowing people in different areas of the organisation to collaborate with minimal disruption to their day-to-day routine.

- *Advancing* – consider creating a culture that teaches and encourages employees the art of inquiry to reinvigorate their sense of curiosity and generate new perspectives.

For additional advice on how to break down organisational siloes, consider accessing the following article from the Harvard Business Review titled, *Cross-Silo Leadership,* which provides four simple steps to create more value by connecting experts from inside and outside the organisation.

Exercise Management

Description

Exercise management provides a structured approach to organisational exercises of varying complexity (discussion, functional, field, testing, training, experimental) that seek to simulate a potential adverse event that could occur. It highlights the phases required to develop the concept of an effective exercise, to design, plan, conduct and evaluate the exercise. An organisation can use exercises as controlled, objective-driven activities for testing or practicing plans, or evaluating processes or capabilities of an organisation. Robust exercise management processes can help organisations ensure that they are prepared to manage unpredictable and complex situations, and that the arrangements put in place are familiar to those involved. [63]

Case Study

In 2018 the Bank of England developed an exercise management program to assess the institution's capability to absorb and recover from a cyber incident and continue services without economic impact. They established clear baseline expectations and set impact tolerances when they committed to performing regular cyber stress testing. However, due to the non-typical financial effects of the COVID-19 pandemic, and the heightened level of cyber risk in the COVID environment, they realised there was a need for a more comprehensive approach. From 2020 to 2022, in response to the fast-paced and dynamic nature of disruptions in the environment, the Bank of England modified their exercise management program. They expanded the use of their cyber stress testing program approach to explore multiple different scenarios and to evaluate and expand other processes and capabilities of the organisation to improve their knowledge of the organisation in complex environments, and its resilience in a wider range of disruptive scenarios. [64]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our exercises are aligned to our strategic risks and provide value by improving organisational capability.**
2. **Our exercises have a coordinated approach in their design and planning involving relevant personnel from throughout the organisation.**
3. **We integrate lessons management into our exercise management program.**
4. **Our exercise management program includes exercises of varying complexity from relatively simple discussion exercises to field exercises involving other organisations and/or jurisdictions.**
5. **Our exercises not only test our physical systems but also provide the opportunity for real-time training of people, partners and stakeholders.**

💬 Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- *Developing* – consider developing standardized templates, guidelines, and procedures for conducting exercises to ensure consistency across exercises and to help streamline the planning, execution, and evaluation processes.

- *Established* – consider reviewing the Exercise Management Framework to clearly define the overall approach, objectives, and principles of exercise management within the organisation.

- *Advancing* – consider streamlining exercise execution through a range of exercise types including scenario-based rapid discussion exercises, and consider implementing a structured approach to measure real time performance and enhance human capabilities in reflective practice.

For additional advice on exercise management, please consider accessing the following guide developed by the Australian Institute of Disaster Resilience titled, *Managing Exercises Handbook*.

Foresight

Description

Foresight assists decision makers to make sense of complex problems with a view to guiding future-orientated (futures thinking) decisions and planning. [65] [66] Foresight can therefore also be described as 'looking forward' to these futures, examining and perceiving factors or drivers which are likely to induce future change, and then dealing with these changes through appropriate organisational decision-making.[67] Foresight differs from forecasting in that it does not attempt to make concrete predictions, but rather helps decision makers to explore a wide range of plausible futures that can be used to inform strategy and policy.[68] A range of strategic foresight tools exist that include, but are not limited to, horizon scanning, scenario planning, visioning, backcasting and wind tunnelling.

Case Study

Shell, a multinational oil and gas company, uses scenario planning as a tool for their strategic decision making. Scenario planning involves creating different possible future scenarios and analysing the potential organisational impact of each scenario. Scenario planning has alerted Shell's leadership team in advance about some of the most confounding events of their times including the 1973 energy crisis, the more severe price shock of 1979, the collapse of the oil market in 1986, the fall of the Soviet Union, the rise of Muslim radicalism, and the increasing pressure on companies to address the challenges of environmental, social and governance.[69] Scenario planning also allows Shell to anticipate and prepare for potential changes in the market and the industry, such as changes in government regulations or shifts in consumer demand. Shell is drawing on its culture of scenario planning to address the fundamental future shift in global energy supplies towards lower-carbon sources and position itself as the largest global electricity company by the 2030s.[70]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our organisational vision is aligned to and aware of a range of future scenarios that in turn directs our medium and long term strategies.**
2. **We use a wide range of foresight tools depending on the context.**
3. **Our leaders drive a futures-thinking mindset and culture that embraces an uncertain future.**
4. **We recognise plausible alternative futures and apply the insights in our present-day planning.**
5. **We integrate foresight into our risk management practices.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- *Developing* – consider developing a set of plausible future scenarios, that ask the question 'what if this occurred in our business', to socialise futures-thinking into business as usual activities.

- *Established* – consider developing systems that encourage a futures literacy mindset that allows people to better understand the role of the future in what they see and do in their workplace.

- *Advancing* – consider deploying dedicated forward looking teams, like a Pandora Cell, both inter and intra-organisationally to explore possible futures with key upstream and downstream interdependencies.

For additional advice on a number of different foresight methodologies, please considering accessing the following United Kingdom Government document titled, *The Futures Toolkit*.

Unity of Purpose

Description

Unity of purpose results from the connection of employees' individual purposes to the organisation's purpose so they are more able to identify with the organisation and internalise its objectives.[71] Unity of purpose helps provide cohesion and solidarity and increases an individual employee's willingness and motivation to work together to create a powerful organisational unit.[72] To obtain unity of purpose and induce effort and commitment amongst individuals, an organisation needs clarity of structure, roles and responsibilities, and to provide individuals with a values-based direction that resonates to create a mutually beneficial relationship with the organisation. [73]

Case Study

To capture their employees' passion and connect it to the organisation's purpose, U.S.-based KPMG created the "10,000 Stories Challenge". This initiative encouraged employees to create 10,000 posters to share how they were making a difference by answering the question "What do you do at KPMG?". Over 27,000 employees produced 42,000 posters, and this was even after the reward of two extra days holiday had been awarded. KPMG had found a simple yet brilliant initiative to help employees personally identify with its collective purpose. A review of the initiative identified that their employees' engagement and pride in their work increased, recruiting new employees improved, turnover decreased, and costs decreased.[74]

Statements

Consider the following statements in the context of organisational resilience.

1. **Our statement of purpose aligns our organisational and individual team member values.**
2. **Our organisational structures are clear, efficient and effectively promote the principles and practises of organisational resilience.**
3. **Our roles and responsibilities in both business as usual and disruption are clear.**
4. **Our organisation is able to maintain focus on its purpose and values during disruptive events.**

💬 Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- ***Developing*** – consider establishing or improving open and transparent communication channels within the organisation during disruption to ensure the regular sharing of updates.

- ***Established*** – during disruptions and business as usual, consider encouraging inclusive decision making processes that involve stakeholders from various levels and departments within the organisation, to assess the degree to which these improve alignment with organisational purpose.

- ***Advancing*** – consider fostering a culture that values collaboration and supports interdepartmental cooperation to encourage knowledge sharing, cross-functional projects, and joint problem-solving.

For additional advice about how to enact a unity of purpose using a simple framework, consider accessing the following document from The British Academy titled, *Enacting Purpose within the Modern Corporation*.

Proactive Posture

Description

A proactive posture involves an organisational strategy that is geared towards taking early and precautionary action rather than passively or reactively responding to events as they occur. [75] [76] [77] Acknowledging the organisation's vulnerability and proactively responding to crises or uncertainty in the environment, significantly reduces damage from an adverse event.[78] [79] Organisations can proactively guard against damage from potential adverse events by implementing organisation-wide plans. This prepares an organisation to respond quickly, minimise harm, and restore or improve post-event operations. [80] [81] An important aspect of a proactive posture is change readiness that refers to an employee's willingness to make necessary changes within their organisation.[82] Proactivity can also be supported by data-driven approaches that identify where, when and how events are likely to occur.

Case Study

In an uncertain world with confusing macroeconomic signals, such as an economic downturn combined with record low unemployment and labour shortages as currently experienced in Europe and the U.S., organisations have to change tack. According to the CEO of IKEA, previously, everything that used to be in a 'risk matrix file' is more or less happening. Current geopolitical crises and the recent global pandemic has meant that organisations have to encompass a more proactive approach. Instead of setting out specific goals for the year, IKEA now has a set of scenarios to give the organisation wiggle room as the outlook changes. This approach allows the organisation to acknowledge that widely different outcomes are possible, and importantly, teaches the organisation about agility in how they operate.[83]

Statements

Consider the following statements in the context of organisational resilience.

1. **We predict, prevent and respond to early signs of change in the organisation's internal and external environment before they escalate into an adverse event.**
2. **We use data-driven approaches to identify early warning signals that may indicate an emerging issue or opportunity.**
3. **We are encouraged to take the initiative and make necessary changes to improve a current situation.**
4. **We actively seek to improve our capability after an adverse event.**
5. **We have dedicated specialist resources to guide the implementation of our resilience strategy and/or framework to drive a proactive approach.**
6. **We have organisation-wide plans that address high-level priorities in security, continuity and crisis management.**

Advice

To achieve a level of generative maturity, you may wish to consider the following three pieces of advice, depending on your level of maturity for this particular indicator:

- *Developing* – consider using megatrends reports such as the World Economic Forum Global Risk Report, to identify potential driving forces for your own organisation.

- *Established* – consider combining artificial intelligence trends platforms such as Quantumrun Foresight, with existing systems that identify driving forces specific to your organisation, to identify early warning signals.

- *Advancing* – consider changing the organisational structure to elevate the status of specialists in order to drive a culture of proactivity.

For additional advice on how to enhance your proactive posture using driving forces, consider accessing the Singapore Government's Centre for Strategic Futures 'Driving Forces Cards' that can assist with sparking conversations about the key forces of change shaping the operating environment.

For further information please contact us at: **cir@homeaffairs.gov.au**

REFERENCES

1 Larcker DF, Tayan B, Watts EM. Seven myths of ESG. (2022). European Financial Management. 28(4), pp 869-82.

2 Ibid. Australian Government. "Critical Infrastructure Strategy".

3 Australian Government, "Good Business Guide," Organisational Resilience, Department of Home Affairs, 2016.

4 A. V. Lee, J. Vargo, and E. Seville. (2013, February). "Developing a Tool to Measure and Compare Organizations' Resilience". *Natural Hazards Review*, vol. 14, issue 1, pp. 29–41.

5 S. McManus, E. Seville, D. Brunsdon, and J. Vargo, "Resilience Management: A Framework for Assessing and Improving the Resilience of Organisations," 2007.

6 S. McManus, E. Seville, J. Vargo, and D. Brunsdon. (2008). "Facilitated process for improving organizational resilience". *Natural Hazards Review*, vol. 9, issue 2, pp. 81–90.

7 A. Stephenson, E. Seville, J. Vargo, and D. Roger, "Benchmark Resilience: A study of the resilience of organisations in the Auckland Region," 2010.

8 United Nations, "Organizational Resilience Maturity Model."

9 Y. L. Wu, B. Shao, A. Newman, and G. Schwarz. (2021, May). "Crisis leadership: a Review and Future Research Agenda". *The Leadership Quarterly*, vol. 32, issue 6, p. 101518.

10 R. R. Ulmer and T. L. Sellnow. (2000, May). "Consistent questions of ambiguity in organizational crisis communication: jack in the Box as a case study". *Journal of Business Ethics*, vol. 25, issue 2, pp. 143–155.

11 B. W. Ritchie. (2004, December). "Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry". *Tourism Management*, vol. 25, issue 6, pp. 669–683.

12 L. P. Wooten and E. H. James. (2008, June) "Linking Crisis Management and Leadership Competencies: The Role of Human Resource Development". *Advances in Developing Human Resources*, vol. 10, issue 3, pp. 352–379.

13 M. E. Brown and L. K. Treviño. (2006, December). "Ethical leadership: a Review and Future Directions". *The Leadership Quarterly*, vol. 17, issue 6, pp. 595–616.

14 L. Kohler. (2023, January). *Heineken USA CEO Maggie Timoney On Increasing Inclusion In The Alcohol Industry.*

15 G. A. Klein, J. Orasanu, R. Calderwood, and C. E. Zsambok, Decision making in action: Models and methods, vol. 3. Norwood, NJ: *Ablex Publishing Corporation*, 1993.

16 Australian Government, Decision Making during a Crisis: a practical guide, Department of Home Affairs, 2018, pp. 1–20.

17 S. Curnin, B. Brooks, C. Owen, and O. Brooks. (2022, December). "Perceptions of strategic decision-making by crisis management teams during exercising: Establishing key dimensions". *Journal of Contingencies and Crisis Management*, pp. 1–5.

18 S. Curnin, B. Brooks, and C. Owen. (2020, April). "A case study of disaster decision-making in the presence of anomalies and absence of recognition". *Journal of Contingencies and Crisis Management*, vol. 28, pp. 110–121.

19 S. Curnin, B. Brooks, C. Owen, and O. Brooks. (2022, December). "Perceptions of strategic decision-making by crisis management teams during exercising: Establishing key dimensions". *Journal of Contingencies and Crisis Management*, pp. 1–5.

20 S. Curnin, B. Brooks, and C. Owen. (2020, April). "A case study of disaster decision-making in the presence of anomalies and absence of recognition". *Journal of Contingencies and Crisis Management*, vol. 28, pp. 110–121.

21 J. Waldstreicher. (2021, June). "How Johnson & Johnson Made Hard Decisions During Covid". *Harvard Business Review*.

22 S. T. McManus. (2008). "Organisational resilience in New Zealand". *University of Canterbury*.

23 M. R. Endsley. (1995, March). "Measurement of Situation Awareness in Dynamic Systems". *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 37, issue 1, pp. 65–84.

24 Department of Health & Social Care, "Situational awareness, analysis and assessment (chapter 4)," GOV.UK, 2022.

25 T. M. Amabile, "Creativity and Innovation in Organizations," 1996.

26 T. M. Amabile and M. G. Pratt. (2016). "The Dynamic Componential Model of Creativity and Innovation in organizations: Making progress, Making Meaning". *Research in Organizational Behavior*, vol. 36, issue 1, pp. 157–183.

27 T. M. Amabile. (1983). "The social psychology of creativity: A componential conceptualization". *Journal of Personality and Social Psychology*, vol. 45, issue 2, pp. 357–376.

28 M. A. Runco and S. Acar. (2012, January). "Divergent Thinking as an Indicator of Creative Potential". *Creativity Research Journal*, vol. 24, issue 1, pp. 66–75.

29 J. P. Guilford. (1967, January). "Creativity: Yesterday, Today and Tomorrow". *The Journal of Creative Behavior*, vol. 1, issue 1, pp. 3–14.

30 B. Brooks, S. Curnin, C. Owen, and J. Boldman. (2019, October). "New human capabilities in emergency and crisis management: From non-technical skills to creativity". *The Australian Journal of Emergency Management*, vol. 34, issue 4, pp. 23–30.

31 J. P. Guilford, "Intelligence, creativity, and their educational implications". *Edits Pub,* 1968.

32 S. Taggar. (2002, April). "Individual Creativity and Group Ability to Utilize Individual Creative Resources: A Multilevel Model". *Academy of Management Journal*, vol. 45, issue 2, pp. 315–330.

33 J. Oliver Schwarz. (2008, April). "Assessing the future of futures studies in management". *Futures*, vol. 40, issue 3, pp. 237–246.

[34] J. Stillman. (2018, April). "Here are all the tools Google uses to encourage innovative thinking absolutely free". *Inc.Australia*.

[35] W. A. Kahn. (1990, December) "Psychological Conditions of Personal Engagement and Disengagement at Work". *Academy of Management Journal*, vol. 33, issue 4, pp. 692–724.

[36] B. L. Rich, J. A. Lepine, and E. R. Crawford. (2010, June). "Job Engagement: Antecedents and Effects on Job Performance". *Academy of Management Journal*, vol. 53, issue 3, pp. 617–635.

[37] D. R. May, R. L. Gilson, and L. M. Harter. (2004, March). "The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work". *Journal of Occupational and Organizational Psychology*, vol. 77, issue 1, pp. 11–37.

[38] C. Brown. (2018, January) "Outcomes through engagement: How the public sector improves citizen outcomes through employee engagement". *Engage for Success*.

[39] A. de Waal, M. Weaver, T. Day, and B. van der Heijden. (2019, December). "Silo-Busting: Overcoming the Greatest Threat to Organizational Performance". *Sustainability*, vol. 11, issue 23, pp. 6860.

[40] S. Curnin and D. O'Hara. (2019, September). "Nonprofit and public sector interorganizational collaboration in disaster recovery: Lessons from the field". *Nonprofit Management and Leadership.*

[41] P. W. Mattessich and B. R. Monsey, *Collaboration: What Makes It Work. A Review of Research Literature on Factors Influencing Successful Collaboration*, St. Paul, MN: Amherst H. Wilder Foundation, 1992.

[42] Vanuatu Business Resilience Council, "Unblocked Cash". *Vanuatu Business Resilience Council*, 2020.

[43] K. Lyons. (2020, April). "*Communications down after category 5 Cyclone Harold hits Vanuatu*," The Guardian.

[44] J. Kantola. *Organizational Resource Management*. CRC Press, 2019

[45] V. S. Inampudi and A. Ganz. (2010, August). "RESPLA: A decision support framework for emergency resource planning". *2010 Annual International Conference of the IEEE Engineering in Medicine and Biology.*

[46] S. Townsend, "What is resource management and why is it important?," Planview.

[47] H. Mintzberg. (1973). "Strategy-making in three modes". *California Management Review*, vol. 16, issue 2, pp. 44–53.

[48] L. G. Pee and A. Kankanhalli. (2009). "A Model of organizational knowledge management maturity based on people, process, and technology". *Journal of Information Knowledge Management*, vol. 8, issue 2, pp. 79–99.

[49] T. H. Davenport. (1998, December). "Ten principles of knowledge management and four case studies". *Knowledge and Process Management*, vol. 4, issue 3, pp. 187–208.

[50] F. O. Omotayo. (2015, April). "Knowledge management as an important tool in organisational management: A review of literature," *Library Philosophy and Practice,* pp. 1238–1261.

[51] R. Bose. (2003, January). "Knowledge management-enabled health care management systems: capabilities, infrastructure, and decision-support". *Expert Systems with Applications,* vol. 24, issue 1, pp. 59–71.

[52] W.-T. Wang and S.-Y. Wu. (2020, December). "Knowledge management based on information technology in response to COVID-19 crisis". *Knowledge Management Research & Practice*, vol. 19, issue 4, pp. 1–7.

[53] Ibid.

[54] I. Godwin and E. Amah. (2013). "Knowledge management and organizational resilience in Nigerian manufacturing organizations". *Developing Country Studies*, vol. 3, issue 9.

[55] M. Rosenberg, "The knowledge management genius of Amazon.com," The Learning Guild, Santa Rosa, CA, Jul. 29, 2014.

[56] T. Fenwick, E. Seville, and D. Brunsdon, "Reducing the impact of organisational silos on resilience: A report on the impact of silos on resilience and how the impacts might be reduced". Christchurch, NZ, 2009.

[57] Ibid. W.-T. Wang and S.-Y. Wu. (2020, December).

[58] F. Cilliers and H. Greyvenstein. (2012, January). "The impact of silo mentality on team identity: An organisational case study". *SA Journal of Industrial Psychology*, vol. 38, issue 2.

[59] T. Mohapeloa, "Effects of silo mentality on corporate ITC's business model," in *Proceedings of the International Conference on Business Excellence*, 2017, vol. 11, issue 1, pp. 1009–1019.

[60] S. E. Oseland. (2019, May). "Breaking silos: can cities break down institutional barriers in climate planning?". *Journal of Environmental Policy & Planning*, vol. 21, issue 4, pp. 345–357.

[61] Australian Institute for Disaster Resilience, "Managing Exercises Handbook," 2017.

[62] Bank of England, "Financial Policy Summary and Record of the Financial Policy Committee Meeting on 11 March 2021," Mar. 2021.

[63] H. Mintzberg and J. A. Waters. (1985, July). "Of strategies, deliberate and emergent". *Strategic Management Journal*, vol. 6, issue 3, pp. 257–272.

[64] G. Burt and A. K. Nair. (2020). "Rigidities of imagination in scenario planning: Strategic foresight through 'Unlearning'". *Technological Forecasting and Social Change*, vol. 153, pp. 119927.

[65] M. Marinković, O. Al-Tabbaa, Z. Khan, Z., and J. Wu. (2022). "Corporate foresight: A systematic literature review and future research trajectories," *Journal of Business Research*, vol. 144, pp. 289-311.

[66] D. Mietzner and G. Reger. (2005). "Advantages and disadvantages of scenario approaches for strategic foresight". *International Journal of Technology Intelligence and Planning*, vol. 1, issue 2, p. 220.

[67] A. Kleiner, "The man who saw the future," PWC Strategy & Business, Spring 2003, Issue 30.

[68] E. Crooks and A. Raval, "Shell aims to become world's largest electricity company," Financial Times, Mar. 2019.

[69] C. Mowll, "The Value of unity to an organisation," Jul. 20, 2015.

[70] M. Mališauskaitė, "Increasing the unity of purpose of CR practice group at law firm Sorainen," ISM University of Management and Economics, Vilnius, Lithuania, 2020.

[71] R. E. Quinn and A. V. Thankor, "Creating a purpose-driven organization," Harvard Business Review, p. 9, Jul. 2018.

[72] Ibid.

[73] H. Mintzberg. (1973). "Strategy-making in three modes". *California Management Review*, vol. 16, issue 2, pp. 44–53.

[74] K. Unsworth and S. K. Parker, "Promoting a proactive and innovative workforce for the new workplace," in *The New Workplace: A Guide to the Human Impact of Modern Working Practices*, D. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, and A. Howard, Eds. John Wiley & Sons, 2003.

[75] C. Girtz. (2021). "Optimising cyber threat intelligence for your organization". *Cyber Security: A Peer-Reviewed Journal,* vol. 5, issue 2, pp. 135–141.

[76] J. M. Crant. (2000). "Proactive behavior in organizations". *Journal of Management*, vol. 26, issue 3, pp. 435–462.

[77] I. I. Mitroff, P. Shrivastava, and F. E. Udwadia. (1987, November). "Effective Crisis Management". *Academy of Management Perspectives*, vol. 1, no. 4, pp. 283–292.

[78] A. E. Rafferty, N. L. Jimmieson, and A. A. Armenakis. (2012, September). "Change readiness: a multilevel review". *Journal of Management*, vol. 39, issue 1, pp. 110–135.

[79] A. A. Armenakis, S. G. Harris, and K. W. Mossholder. (1993). "Creating readiness for organizational change". *Human Relations*, vol. 46, issue 6, pp. 681–703.

[80] Ibid. R. E. Quinn and A. V. Thankor (2018)

[81] Ibid. H. Mintzberg. (1973).

[82] A. Chassany, "CEOs forced to ditch decades of forecasting habits", Financial Times, Feb. 2023.

[83] Ibid.