# **Organisational Competencies: The Essence of Emerging Resilience**

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Abstract: This paper investigates organisational resilience as an emergent property arising from the interactions of specific organisational competencies. Drawing on the principles of emergence and the Resource-Based View (RBV) theory, the study aims to support Small and Medium Enterprises (SMEs) by identifying the competencies that contribute to resilience; and defining how these competencies should interact for an organisation to be considered resilient. The paper outlines the process for consolidating an organisational resilience framework based on the ISO 22316 and BS 65000 international standards, as well as on the resilience cycle defined by the Fraunhofer institute. The methodology employed in this study includes a review of the relevant literature on organisational resilience, systems thinking, and the RBV theory. Additionally, the paper provides an analysis of the relationships between the three pillars of the framework, as well as the identification and merging of activities and abilities from both the ISO 22316 and BS 65000 standards. The study then identifies the organisational competencies required to acquire the abilities and execute the activities present in the organisational resilience framework. It also classifies the identified competencies into a competence atlas based on Erpenbeck's competence atlas but adapted to organisational competencies. The methodology applied in this work supports SMEs by defining a process for: identifying organisational competencies; and, defining their interactions to achieve desirable properties at the organisational level, while offering significant insights for the strategic planning process of organisations. Furthermore, it aims to raise awareness on the importance of carefully analysing the interactions among organisational assets in complex operational scenarios. Finally, the findings obtained, provide organisations with a set of organisational competencies, classified into a competence atlas, which enables them to become resilient in accordance with a resilience framework based on internationally recognized standards.

Keywords: Organisational resilience, Emergent property, Organisational competencies, ISO 22316, BS 65000, Resilience cycle

### 1. Introduction

Organisational resilience is a complex and multifaceted concept that has gained increasing attention in recent years due to the growing recognition of the need for organisations to be able to adapt and respond to unexpected challenges and disruptions. Its complex nature makes it difficult for organisations of any type to understand, thus hindering the definition of strategies for developing organisational resilience systematically and repeatedly. This is especially true for SMEs due to the specific challenges they confront (Stephanus, 2020).

Systems thinking has been recognized as an effective means to cope with complexity and generate effective solutions to complex management problems (Jackson, 2019). Systems thinking is a discipline for seeing wholes, concerned with identifying all the entities (and other issues) that might be important to the system (Crawley, 2016), as well as for understanding, or intervening in problem situations, based on the principles and concepts of the systems paradigm (Adcock, 2023). The essence of systems thinking discipline lies in seeing interrelationships rather than linear cause-effect chains and seeing processes of change rather than snapshots (Senge, 1990).

The contents presented in this paper are the result of applying systems thinking to the analysis of organisational resilience. The objective of the work is to better understand organisational resilience's nature with the aim of defining an approach which will enable organisations to become resilient in a more deterministic way.

The paper considers the resilience as a property possessed by organisations and analyses it through one of the core principles of systems thinking, namely emergence. According to this principle, every model of a human activity system exhibits properties as a whole entity, that derive from its component activities and their structure, but cannot be reduced to them (Checkland, 1998). These properties, called emergent properties, can be desirable or undesirable (Walden, 2015).

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# 2. Methodology

In the following, the conceptual context of this paper (see 2.1 system & RBV theory) and the process followed (see 2.2) are described as well as a review of the relevant literature on organisational resilience and systems thinking (see 2.3) and a definition of organisational competencies (see 2.4) is given as theoretical background.

#### 2.1 Conceptual Context

The conceptual basis of the work presented in this paper is that organisations are considered systems, in accordance with the definition of *engineered system* provided by ISO 15288 (2023) standard. The standard considers *engineered systems* as systems designed or adapted to interact with an anticipated operational environment to achieve one or more intended purposes while benefiting users and other stakeholders, as well as, complying with applicable constraints (Walden, 2023). Organisations of any type, including business organisations, are entities formed for the purpose of carrying on commercial enterprises. Therefore, they adjust to the definition of *engineered system* and, as it is described in section 2.3.1, they can be considered as sociotechnical systems.

Any system consists of four kinds of constituents (Meadows, 2009): (1) The boundary which defines what belongs to the scope of the system and what not; (2) the elements which are the constituent parts of the system; (3) the interconnections which are the relationships between elements of the systems; and (4) a function or purpose, for non-human and human systems, respectively. *Engineered systems* may be composed of any or all the following elements: people, products, services, information, processes, and/or natural elements (Walden, 2023). Related with system elements and relationships, the architecture of a system is an abstract description of the entities of a system and the relationships between those entities (Crawley, 2004).

Complementing the application of systems thinking, the Resource-based-view (RBV) theory is considered. According to this theory, an organisation can be considered as a collection of resources (Barney, 1991; Amit and Shoemaker, 1993). RBV theory emphasises internal resources and capabilities of a firm in formulating strategy to achieve sustainable competitive advantages in the marketplace, suggesting that the source of competitive advantage lies in: (1) the differences in the resources, both tangible and intangible, acquired and accumulated over time and available to the organisation; and (2) the heterogeneity of these resources (Srivastava, 2005). In this way, resources that are valuable, rare, inimitable, and non-substitutable make it possible for businesses to develop and maintain competitive advantages. These resources can be divided into assets (having resources), and competencies (doing resources) (Hall, 1992).

Taking these two pillars as a foundation, within the scope of this work, organisations are considered as sociotechnical systems, in which organisational competencies are considered their constituent elements. The paper postulates that organisational resilience is a desirable emergent property resulting from the interaction of a subset of organisational competencies.

### 2.2 Process Followed

The results of the study presented in this paper have been produced in three work packages which build upon each other.

The first work package has been focused on the definition of a resilience framework taking three elements as main references: The British Standard BS 65000 (2014), the international standard ISO 22316 (2017) and the resilience cycle defined by the Fraunhofer institute (Patzwald, 2021). The framework has been defined in three consecutive steps: first, the goals and objectives for building organisational resilience stated by the BS 65000 standard are mapped, by means of a matrix, into the different phases of Fraunhofer's resilience cycle; then, the attributes and activities of resilient organisations specified by the ISO 22316 standard are mapped, also by means of a matrix, to the BS 65000's objectives; finally, the activities and abilities stated in both standards are merged into a single comprehensive list of activities and abilities.

The second work package applies the principle of emergence and the concept of emergent properties, aligned with the RBV theory, to identify the organisational competencies associated to resilience. The work package is executed in three steps: first, every activity identified in the previous work package is considered in isolation from the rest. The organisational competencies enabling an organisation to carry out that specific activity are identified. The identification of competencies is made through brainstorming and analysis; once all the activities have been analysed in isolation, the competencies identified for all the activities are consolidated into a single list, in which every competence appears only once. This is necessary since some competencies are enablers for

several activities at the same time. Finally, the identified competencies are classified into a taxonomy, a so-called competence atlas, with several dimensions.

The third, and last, work package, analyses the defined competence atlas to better understand the architecture of organisational competencies and the dynamics through which resilience property emerges at organisational level. The analysis is performed from two different point of views: (1) from the point of view of BS 65000's goals and (2) from the point of view of Fraunhofer's resilience cycle.

### 2.3 Theoretical Background

The following sections provide a brief introduction in the basic concepts and relevant literature on organisational resilience as well as systems thinking and emergence.

# 2.3.1 Resilience

Resilience involves dealing with disruption, uncertainty and change with clear intent, coherence and appropriate resourcing. It is a combination of maintaining continuity through disruptive challenges, and long-term viability against a backdrop of strategic change and the changing external environment (BS 65000, 2014). Resilience is inherently relative, and no organisation, person, network, or system can be absolutely resilient, as they experience constant change and operate under varying degrees of uncertainty (BS 65000, 2014).

Organisational resilience describes the ability of organisations to fend off actual or potential threats, prepare for them, account for them, handle them, recover from them, and successfully adapt over and over again (Scharte et al., 2014). Being able to deal with the unexpected is crucial to not only survive in a volatile, uncertain, complex and ambiguous environment (VUCA environment for short), but also to benefit from it (Herbane, 2019).

## 2.3.2 Fraunhofer's resilience cycle

The resilience cycle defined by the Fraunhofer Institute (Patzwald, 2021), conceives organisational resilience as an adaptive process rather than a static steady state. The Fraunhofer Resilience Cycle can be divided into five phases which repeat in a never-ending sequence: (1) Prepare; (2) Prevent; (3) Protect; (4) Respond; and (5) Recover. Figure 1 shows the Fraunhofer resilience cycle with the main characteristics of its phases. Each phase of the resilience cycle requires different competencies that need to be trained in different areas of the organisation.

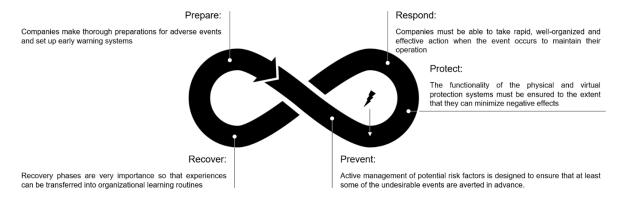


Figure 1: Fraunhofer resilience cycle

# 2.3.3 BS 65000

The British standard BS 65000 (2014) gives guidance on achieving enhanced organisational resilience. It describes organisational resilience, articulates its benefits, and explains how to build resilience by: clarifying the nature and scope of organisational resilience for top management; identifying the principal components of resilience to enable an organisation to review its resilience and to implement and measure improvements; and, identifying and recommending good practice already defined in existing standards and disciplines (BS 65000, 2014). BS65000 defines the following six different goals that contribute to building resilience: (1) Be informed; (2) Set direction; (3) Bring coherence; (4) Develop adaptive capacity; (5) Strengthen the organisation; and (6) Validate and review.

#### 2.3.4 ISO 22316

The international standard ISO 22316 (2017) provides guidance to enhance organisational resilience for any size or type of organisation. It is not specific to any industry or sector. It establishes the principles for organisational resilience and identifies the attributes and activities that support an organisation in enhancing it. ISO 22316 identifies the following nine common attributes demonstrated by resilient organisations, which supported by activities, guide their utilization, evaluation and enhancement: (1) Shared vision and clarity of purpose; (2) Understanding and influencing context; (3) Effective and empowered leadership; (4) A culture supportive of organisational resilience; (5) Shared information and knowledge; (6) Availability of resources; (7) Development and coordination of management disciplines; (8) Supporting continual improvement; and (9) Ability to anticipate and manage change.

## 2.3.5 Organisations as sociotechnical systems

An organisation consists of a purposeful combination of interdependent resources (e.g. people, processes, organisations, supporting technologies, and funding) that interact with each other to coordinate functions, share information, allocate funding, create workflows, and make decisions, and that interact with their environment(s) to achieve business and operational goals through a complex web of interactions distributed across geography and time (Rebovich, 2011).

An organisation must do two things: (1) develop things within the enterprise to serve as either external offerings or as internal mechanisms to enable achievement of enterprise operations, and (2) transform the enterprise itself so that it can effectively and efficiently perform its operations and survive in its competitive and constrained environment (Walden, 2023).

Each organisation brings its own set of organisational competencies, and the unique combination of these competencies leads to the overall operational competence of the whole enterprise. There are three different main kinds of competencies: organisational competence, system competence, and operational competence. New competencies are developed to enhance enterprise competitive advantage in response to stakeholder's concerns about a problem situation (Walden, 2023). Figure 2 shows an abstraction of an organisation as a sociotechnical system.

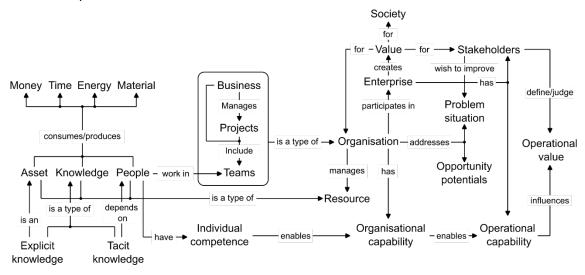


Figure 2: Concept map of an organisation as a sociotechnical system

It must be noted that the term *organisational capability* shown in Figure 2 is defined as "the ability to do something useful under a particular set of conditions." (Walden, 2023). In this paper, as stated in section 2.4, the term *organisational competence* is defined as a "Demonstrated ability or proficiency in performing specific tasks or activities" is used instead.

## 2.3.6 Emergence

Emergence is a fundamental property of all systems (Sillitto and Dori, 2017). Emergence describes the phenomenon that whole entities exhibit properties which are meaningful only when attributed to the whole, not to its elements (Walden, 2023). Emergence refers to what appears, materializes, or surfaces when a system operates (Crawley, 2016). Walden (2015) further expands this idea, emphasizing that the system elements

interact among themselves and with the environment, creating emergent properties. Insights into the emergent properties of a system can, therefore, only be gained from understanding the interrelationships of the system elements and the relation of these to the whole (system), as well as between the system and its environment (Walden, 2023). This interaction will cause function, behaviour, performance and, other intrinsic properties to emerge (Crawley, 2016).

Emergence results in form of inhibition, interference, resonance, or reinforcement of any system property (Walden, 2023). Emergence is a phenomenon which can be anticipated or unanticipated and, have desirable or undesirable effects (Walden, 2023). Figure 3 illustrates the concept of emergence, showing the existence of an emergent property at system level as the result of interactions between at least two elements of the system.

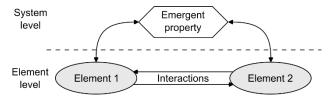


Figure 3: Concept of emergence

## 2.4 Organisational Competence

Competence refers to the unique set of skills, knowledge, and capabilities possessed by an organisation or firm, which are integrated and coordinated to create value for the organisation and deliver superior value to customers. These competencies are not limited to individual skills or technologies but involve a combination of various skills and technologies (Srivastava, 2005). Possessing core competencies alone is not sufficient; the key lies in the organisation's ability to effectively manage and leverage these competencies for its benefit. Additionally, organisational competence refers to the quality and degree of capitalization of the human resources owned by an organisation. It encompasses the process of integrating activities such as schooling, professional orientation, training, recruitment, integration, and career development. Organisational competence ensures high efficiency within the organisation by creating and developing individual professional competencies and utilising them to gain significant advantages.

Organisational Competence such as resilience are not static but adapt and evolve in response to changing market conditions, emerging opportunities or disruptive events, allowing the organisation to survive, create value, achieve superior performance and maintain its competitive advantage. Competence emerges as a result of the firm's ability to identify, develop, and integrate these resources in a way that is aligned with its strategic objectives. The concept of emergence, in the context of competence, highlights the dynamic and evolving nature of organisational capabilities. Competence is not a static concept but emerges and evolves over time through organisational learning, adaptation, and the accumulation of knowledge. As a company, the firm interacts with its environment, it gains valuable insights, adapts its competencies, and develops new ones to respond to changing market conditions and emerging opportunities. Competence emerges as a result of the firm's ability to learn from its experiences, experiment with new approaches, and continuously improve and innovate.

Considering RBV and emergence, in the scope of this paper, organisational competence is defined as follows: Organisational Competence refers to the distinctive and dynamic set of skills, knowledge, and capabilities possessed by an organisation which provides it a demonstrated ability or proficiency in performing specific tasks or activities.

# 3. Results

The results of the work executed following the steps described in section 2.2 are condensed in the following three elements:

## 3.1 Resilience Framework

The combination of the ISO 22316 and BS 65000 standards with the resilience cycle of the Fraunhofer institute results in a solid framework which defines the logical dependencies among the elements of the three sources. The resilience framework relates the activities that an organisation needs to be able to carry out in order to fulfil the objectives contributing to the achievement of goals associated to organisational resilience. It also enables the identification of goals, activities and abilities relevant at each stage of the resilience cycle. Figure 4 visualizes the resilience framework defined by combining the ISO 22316 standard, the BS 65000 standard and the

Fraunhofer resilience cycle, which constitutes the basis for identifying the competencies related to resilience as an emergent property.

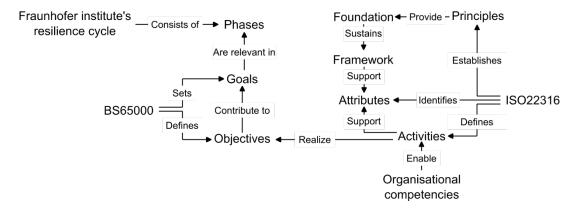


Figure 4: Resilience framework

#### 3.2 Resilience Competence Model

The identified resilience-related organisational competencies have been classified into a taxonomy based on the Erpenbeck Competence Atlas (Erpenbeck, 2017). This atlas is a framework that provides a comprehensive model for understanding and developing competencies in individuals. Figure 5 shows the developed Competence atlas for resilience-related organisational competencies.

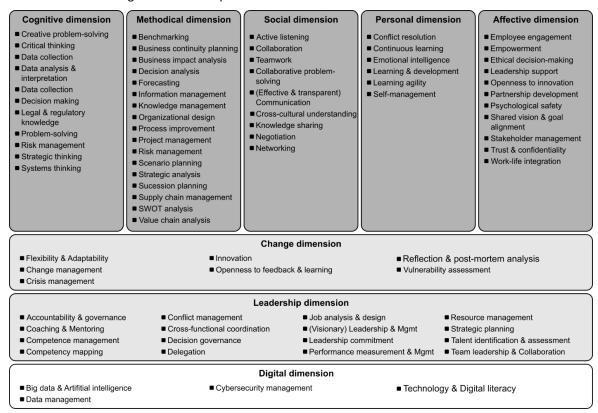


Figure 5: Resilience-related competence atlas

As it can be seen in Figure 5, Erpenbeck's five dimensions *Cognitive Dimension, Methodical Dimension, Social Dimension, Personal Dimension* and *Affective Dimension* have been extrapolated and extended for the organisational context, considering organisations as sociotechnical systems, into the following eight dimensions:

• Cognitive Dimension: Comparable to Erbenbeck, this dimension refers to the knowledge, skills and abilities required for effective task performance by the organisation and can be extended to the intellectual capital within the organisation.

- Methodical Dimension: Following Erpenbeck, this dimension focuses on the processes, methods, and techniques employed to achieve organisational goals and would encompass the various methodologies, systems, and procedures utilized within the organisation.
- Social Dimension: This dimension refers to competencies related to interpersonal relationships, collaboration, and communication. In the context of organisational competencies, this dimension becomes crucial in understanding how individuals work together and interact within teams and across departments.
- Personal Dimension: Following Erpenbeck, this dimension focuses on self-awareness, self-management, and personal development. Includes competencies related to individual growth, motivation, and adaptability.
- Affective Dimension: Comparable to Erpenbeck's framework this dimension addresses the values, attitudes, and motivation that influence behaviour and performance of the organisation and encompasses the shared values, culture, and organisational climate.
- Change Dimension: This dimension is an addition to Erpenbeck's competence atlas and refers to an organisation's ability to effectively manage and lead change.
- **Leadership Dimension:** This additional dimension refers to competencies that are essential for guiding and influencing others within the organisation.
- **Digital Dimension:** In today's digital age, this additional dimension is crucial since organisations need to possess digital competencies.

## 3.3 Competencies Heatmap

Even if organisational resilience requires the interaction of all the competencies contained in the competence atlas shown in Figure 5, not all the competencies possess the same degree of significance and contribution to the determination of the characteristics of the emergent resilience. The heatmap contained in Table 1 analyses the contribution of each identified organisational competence to organisational resilience from two different perspectives: The first, located on the left side of Table 1, analyses the significance of competencies to the achievement of the resilience goals defined by the BS 65000 standard; the second, located on the right side of Table 1, analysis the significance of competence in every of the phases within the Fraunhofer resilience cycle. In both cases, the numbers in every row represent the number of repetitions in which the corresponding organisational competence appears in activities associated to the Goals of BS 65000 and the Fraunhofer resilience cycle, respectively.

#### 4. Discussion and Conclusion

There is much diversity in the definition of competencies at international level (Delamaire, 2005). The systems thinking approach applied in this work considers both, humans and organisations as complex systems. This allows to transfer the person-centred approaches to the organisation and thus derive a resilience-specific model of competencies.

The paper considers organisations as sociotechnical systems and analyses organisational resilience as a property associated to the system by applying one of the core principles of systems thinking, namely emerge. The paper abstracts an organisation as a collection of organisational competencies and analyses the competencies and the interactions among them, required to obtain properties such as resilience at organisational level, which are not observable when taking the organisational competencies independently.

The identified competencies have been classified into a taxonomy, called resilience-related competence atlas, with several dimensions, which serves as a useful tool for businesses and provides them benefits like standardization; strategic alignment, skill gaps analysis, knowledge management and Performance benchmarking with competitors.

Erpenbeck's Competence Atlas has been chosen as a basis for defining the dimensions of the competence atlas. However, and extrapolation and extension of the original dimensions to the organisational context has been necessary. Erpenbeck considered the competencies contained in his competence atlas as independent entities. The application of the emergence principle on top of the Erpenbeck's competence atlas, results in emergent properties not identified in the original atlas. Original competence atlas has been extended with three additional dimensions of significant importance: cross-cutting competencies that arise in correlation with the main dimensions.

Table 1: Analysis of organisational competencies in relation to the resilience framework

Goals of BS65000 standard						Competencies	Fraunhofer Resilience Cycle				
Be informed	Set direction	Bring coherence	Develop adaptive capacity	Strengthen the organisation	Validate & review	alphabetically sorted	Prepare	Prevent	Protect	Respond	Recover
0	0	0	0	5	0	Accountability and governance skills	0	5	5	5	5
0	0	1	0	0	0	Active listening skills	1	1	1	0	0
2	1	0	13	15	0	Flexibility and Adaptability skills	3	20	17	30	19
3	0	0	0	0	0	Benchmarking	3	3	0	0	3
2	0	0	0	0	0	Business continuity planning	2	2	0	0	2
1	0	0	0	0	0	Business impact analysis	1	1	0	0	1
1	3	3	0	4	5	Change management	12	16	7	4	4
0	4	0	0	0	0	Coaching & mentoring	4	4	0	0	0
11	3	6	0	16	0	Collaboration	20	36	22	16	27
0	3	3	0	0	0	Teamwork	6	6	3	0	0
1	0	0	0	0	0	Collaborative problem-solving	0	1	0	0	1
15	9	6	3	29	0	(Effective & Transparent) Communication skills	30	59	35	32	44
0	1	0	0	0	0	Competence management	1	1	0	0	0
0	1	0	0	0	0	Competency mapping	1	1	0	0	0
1	0	0	0	0	0	Conflict management	1	1	0	0	1
2	0	1	0	0	0	Conflict resolution	3	3	1	0	2
0	0	0	0	0	4	Continuous learning	4	4	0	0	0
0	0	0	12	3	0	Creative problem-solving skills	0	3	3	15	3
0	0	0	0	10	0	Crisis management skills	0	10	10	10	10
10	0	1	0	0	0	Critical thinking	11	11	1	0	10
3	0	0	0	0	0	Cross-cultural understanding	3	3	0	0	3
0	0	1	0	0	0	Cross-functional coordination	1	1	1	0	0
1	0	0	0	0	0	Cybersecurity management	1	1	0	0	1
0	0	0	0	4	6	Data analysis and interpretation	6	19	4	4	4
12	0	2	0	0	0	Data collection & analysis	14	14	2	0	12
0	0	1	0	0	0	Decision Analysis	1	1	1	0	0
0	0	1	0	0	0	Decision Governance	1	1	1	0	0
7	0	1	0	0	0	Decision making	8	8	1	0	7
0	0	0	5	12	3	Delegation skills	3	15	12	17	12
0	0	0	2	10	1	Digital competence such as IT security skills	1	11	10	12	10
1	0	1	0	0	0	Emotional intelligence	2	2	1	0	1
0	0	2	0	0	0	Employee Engagement	2	2	2	0	0
0	4	0	0	0	0	Empowerment	4	4	0	0	0
1	0	0	0	0	0	Ethical decision-making	1	1	0	0	1
7	0	0	0	0	0	Forecasting	7	7	0	0	7
0	0	1	0	0	0	Information management	1	1	1	0	0

Goals of BS65000 standard						Competencies	Fraunhofer Resilience Cycle					
Be informed	Set direction	Bring coherence	Develop adaptive capacity	Strengthen the organisation	Validate & review	alphabetically sorted	Prepare	Prevent	Protect	Respond	Recover	
0	1	0	0	0	0	Innovation	1	1	0	0	0	
0	1	0	0	0	0	Job Analysis and Design	1	1	0	0	0	
2	0	0	0	0	0	Knowledge management	2	2	0	0	2	
1	0	0	0	0	0	Knowledge sharing	1	1	0	0	1	
3	9	3	17	36	0	(Visionary) Leadership and management skills	15	51	39	53	39	
0	0	1	0	0	0	Leadership Commitment	1	1	1	0	0	
0	0	1	0	0	0	Leadership support	1	1	1	0	0	
0	4	6	0	12	0	Learning & development	10	22	18	12	12	
0	0	0	15	3	0	Learning agility	0	3	3	18	3	
1	0	0	0	0	0	Legal & regulatory knowledge	1	1	0	0	1	
3	0	1	0	0	0	Negotiation	4	4	1	0	3	
1	0	0	0	0	0	Networking	1	1	0	0	1	
0	0	0	5	0	0	Openness to feedback and learning	0	0	0	5	0	
1	0	0	0	0	0	Openness to innovation	1	1	0	0	1	
0	1	0	0	0	0	Organisational design	1	1	0	0	0	
1	0	0	0	0	0	Partnership development	1	1	0	0	1	
0	4	1	0	0	1	Performance measurement and management	6	6	1	0	0	
0	0	1	0	0	0	Problem-Solving	1	1	1	0	0	
0	0	0	0	0	4	Process improvement	4	4	0	0	0	
0	0	1	0	0	0	Project Management	1	1	1	0	0	
0	0	1	0	0	0	Psychological safety	1	1	1	0	0	
2	0	0	0	0	0	Reflection & post-mortem analysis	2	2	0	0	2	
0	0	0	0	0	2	Resource management	2	2	0	0	0	
0	0	0	0	0	4	Risk assessment	4	4	0	0	0	
10	0	3	14	29	0	Risk management skills	13	42	32	43	39	
3	0	0	0	0	0	Scenario planning	3	3	0	0	3	
1	0	0	5	8	3	Self-management skills and competencies	5	13	13	13	9	
0	0	1	0	0	0	Shared Vision and Goal Alignment	1	1	1	0	0	
1	0	1	0	0	0	Stakeholder management	2	2	1	0	1	
2	0	0	0	0	0	Strategic analysis	2	2	0	0	2	
0	0	2	0	0	2	Strategic planning	4	4	2	0	0	
10	1	0	14	3	0	Strategic thinking	11	14	3	17	13	
0	1	0	0	0	0	Succession planning	1	1	0	0	0	
1	0	0	0	0	0	Supply chain management	1	1	0	0	1	
1	0	0	0	0	0	SWOT analysis	1	1	0	0	1	
8	0	0	0	0	0	System thinking	8	8	0	0	8	
0	1	0	0	0	0	Talent identification & assessment	1	1	0	0	0	

Goals of BS65000 standard						Competencies	Fraunhofer Resilience Cycle				
Be informed	Set direction	Bring coherence	Develop adaptive capacity	Strengthen the organisation	Validate & review	alphabetically sorted	Prepare	Prevent	Protect	Respond	Recover
0	0	0	0	4	6	Team leadership and collaboration	6	10	4	4	4
0	0	1	0	0	0	Technology and Digital Literacy	1	1	1	0	0
1	0	0	0	0	0	Trust & confidentiality	1	1	0	0	1
2	0	0	0	0	0	Value chain analysis	2	2	0	0	2
1	0	0	0	0	0	Vulnerability assessment	1	1	0	0	1
0	0	1	0	0	0	Work-life integration	1	1	1	0	0

The results presented in the paper will help organisations of any size and sector to effectively focus their efforts on the development of organisational resilience by providing a clear orientation as well as a prioritization for their development, in accordance with the resilience cycle. The identified set of organisational competencies and their analysed relevance for different goals and phases in resilience cycle will be useful are relevant in the strategic planning process of organisations, if the long-term survivability of the company and the development of competitive advantages while operating in turbulent contexts, is in focus. This is the case, for example for managers in organisational analyses, but also in connection with mergers and acquisitions, outsourcing, restructuring or change processes. The results are also relevant as part of the introduction of strategic competence management in organisations.

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