



# MEGASTRAT

**Making Megatrends Applicable For Individual  
Opportunity Forecasts And Strategic  
Development**

**WPD2.1 Report  
Success factors in long-term  
foresight and planning**



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## Executive summary

To identify, analyse, and evaluate known success factors that strategic foresight professionals face in long term foresight, we conducted a study that involved three stages of research. First, to collect and pinpoint relevant papers, we used a bibliometric analysis to establish an overview of in the potentially relevant literature as well as of the in this literature discussed topics and their interconnection. We used the terms given in the research question (“What are the success factors of strategic foresight professionals and strategy trainers/coaches related to long-term foresight/ planning?”) as keywords and added thesaurus synonyms and keywords used in recent literature reviews. After generating search string combinations from the listed keywords, we collected 179 articles from which – after a thorough assessment process – we excluded 138. The remaining 41 articles were submitted to a co-occurrence analysis of keywords using the bibliometric tool VOSviewer 1.6.8 to aggregate the data in a graphical map. In the end, this process resulted in 9 cluster topics and 36 keywords that co-occurred with them.

Our second step was a qualitative content-analysis of the remaining papers to gain a meso- and micro perspective on the literature and identify the searched-for success factors amongst the with the bibliometric analysis identified topics. During the rigorous content analysis process that involved three researchers in the data coding to avoid subjectivity, eight further articles were excluded. The qualitative content analysis identified 81 success factors allocated to seven topical clusters as presented in Table 1).

Clusters	Subclusters	Success factors
1) Methods and tools for strategic foresight	Scenario development methods and tools	1) Delphi method, 2) storytelling, 3) involving experts, 4) conventional and unconventional scenarios 5) trend- and event-based scenarios, 6) co-design
	Traditional methods and tools	6) co-design 7) SWOT analysis, 8) Pestel analysis, 9) value chain analysis, 10) mission & vision statements, 11) participatory backcasting, 12) multiple criteria decision analysis, 13) Best Worst method, 14) roadmaps, 15) both/and strategy



2) Environmental forecasting		16) environmental scanning, 17) considering environmental pressures, 18) embracing uncertainty
3) Management	Participative Management	19) future oriented (change-willing) management, 20) participation, 21) shared inquiry, 22) openness, 23) transparency, 24) balanced scorecard, 25) performance analysis, 26) targeting specific niche, 27) proactive entrepreneurship, 28) building expertise, 29) availability of resources
	Financial Management	30) setting clear, quantifiable financial goals, 31) profitability, 32) cutting costs, 33) cost-benefit analysis
	Technology Management	34) assessing emerging technologies, 35) developing technological strategies, 36) identifying industry need for high-tech, 37) developing high tech technologies, 38) availability of technical staff, 39) integration of ICTs
	HR Management	40) selection of the right employees, 41) integrated system dynamics, 42) creating feed-forward and feedback channels, 43) maintain the soft "core" skills
	Communication	44) efficient in- and external communication, 45) firm alignment with the ethical professional standards, 46) sales and marketing communication plan 47) alignment of internal planning and external communication
	Marketing	48) consumer orientation, 49) consumer research, 50) consumer-based marketing strategies, 51) building and maintaining relationships, 52) building long-term interactive relationships with customers, 53) customer engagement, 54) customer value creation, 55) market-based knowledge gathering, 56) identifying user-defined narratives
4) Strategic flexibility		57) infuse firm knowledge with clear understanding of resources, constraints, capabilities, and the market needs; 58) foster proactive behaviour
5) Organizational learning	Knowledge Management	59) unlearning, 60) inquiry & relearning, 61) challenging managerial assumptions, 62) recognizing rigidities of imagination, 63) data forecasting 64) uplearning





	Education	65) practice orientation, 66) application of tools and skills, 67) strategic management pedagogical model
6) Enhancing competitiveness		68) specialisation, 69) competitive advantage strategies, 70) diversification, 71) Competitive Intelligence (CI) process, 72) creating valuable competences, 73) building relationships, 74) implementing emerging strategies, 75) continuous monitoring & evaluating
7) Organizational culture		76) values, 77) trust, 78) empathy, 79) guiding principles. 80) creativity, 81) quality-focused production philosophy

**Table 1: Clusters, sub-clusters and success factors identified with the qualitative content analysis**

The content analysis revealed the importance of participation of both internal staff at different managerial levels and of external stakeholders in long-term forecasting. Further, knowledge, communication, and continuous monitoring and evaluation play crucial roles in long-term forecasting.

In the third step, we ran a sentiment analysis of LinkedIn business blog pages to gain insights into the terminology used in the discourse of professionals when they discuss challenges and success factors in long-term strategic foresight. A total of approximately 640 posts related to strategic planning were collected from LinkedIn. In a thorough content analysis of these posts, the sentiment analysis proved to be complementary to the qualitative content analysis of the literature insofar as it confirmed many of its findings such as the importance of participation, communication, and knowledge dissemination. However, the sentiment analysis revealed the lack of the long-term perspective in the discourse, what indicates that long-term foresight is still a novel phenomenon amongst practitioners.





# 1 Introduction to the research design

To identifying, analyze, and evaluate known success factors that strategic foresight professionals face in long term foresight, we conducted a systematic literature review comprising a bibliometric analysis and a qualitative content analysis and combined it with a sentiment analysis of business blogs. Figure 1 visualizes the research design of this study.

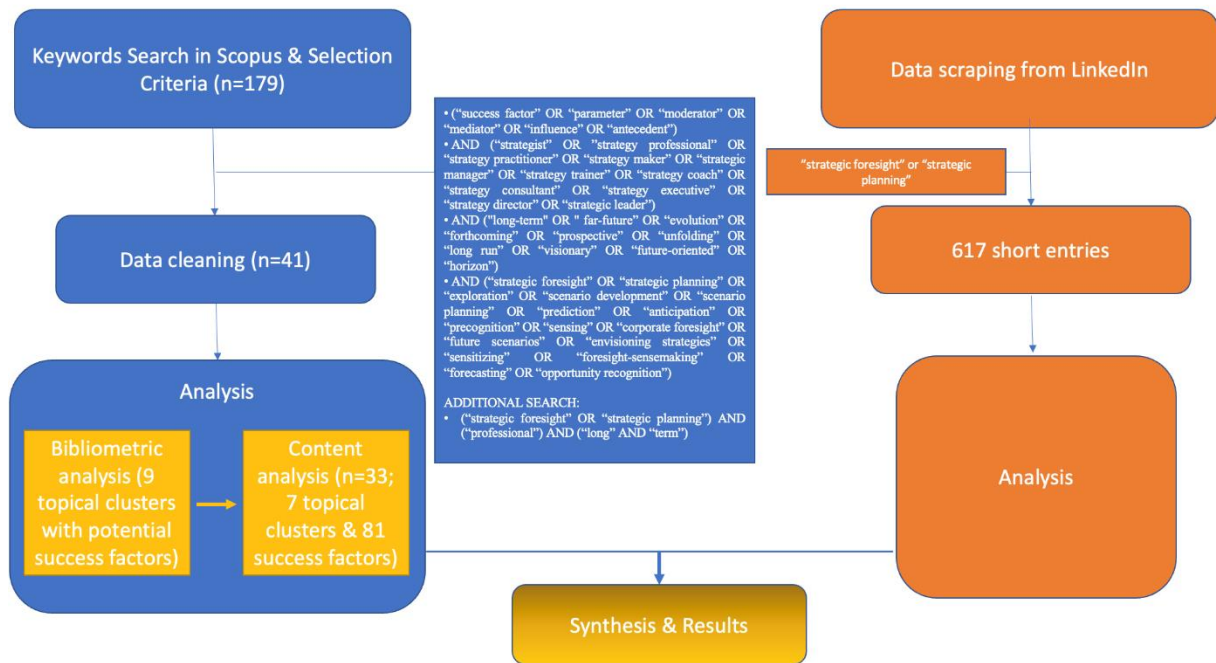


Figure 1: Research design

The systematic literature review is a research method that allows to identify, evaluate, and map the knowledge created about a given topic or research area and thus represented an appropriate method to start our research (Singh *et al.*, 2020, Gaviria-Marin *et al.*, 2019; Snyder, 2019). Our study incorporated three stages of research: First, to collect and identify relevant papers, we used a bibliometric analysis. Bibliometric studies allow to investigate the macro-picture of the intersection of topics in a body of literature, but they are not a substitute but a complement to traditional methods of literature investigation (Verma & Gustafsson, 2020).

Therefore, in a second research phase, we combined our bibliometric analysis with a classical qualitative content-analysis-based literature review for a meso and micro





investigation of the literature (Tranfield *et al.*, 2003). This allowed us to include an in-depth analysis of the content of the identified articles to answer our research question through assessing the collected papers using qualitative content analysis (Merli *et al.*, 2018; Petzold *et al.*, 2019; Snyder, 2019).

In a third (partly parallel) phase, we run a sentiment analysis of LinkedIn business blog pages to gain insights into the terminology used in the discourse of professionals when they discuss challenges and success factors in long-term strategic foresight. Sentiment analysis (also known as opinion mining) is a method that applies natural language processing and text mining to automatically assess opinions or emotions present in a text (Cambria *et al.*, 2017). Sentiment analysis is often connected with social media analytics where the analysed texts are tweets or posts (Öztürk & Ayvaz, 2018). There are several models for text classification in sentiment analysis ranging from identifying the simple polarity of a text (positive, neutral, negative) to more complex affective states such as anger, anticipation, disgust, fear, joy, sadness, surprise and trust (Mohammad & Turney, 2010). Word frequency analysis can be applied as part of a sentiment analysis as a method to identify the most frequently occurring words that contribute to or are associated with different categories of affective states (Das *et al.*, 2018).

## 2 Bibliometric analysis

### 2.1 Approach

The bibliometric analysis was focused on gaining an overview on the available body of literature to the research question “What are the success factors of strategic foresight professionals and strategy trainers/coaches related to long term foresight/planning?”. In a first step, we defined the keywords for the study. We used the terms given in the research question and added thesaurus synonyms and keywords used in recent literature reviews as displayed in Table 1 below. All keywords were translated into German, Spanish, and Danish to allow for identifying articles in the partner’s national languages.

<b>Important terms from research question</b>	<b>Thesaurus synonyms</b>	<b>Additional keywords used in recent literature reviews</b>
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Success factor	parameter, moderator, mediator, influence, antecedent, dimension	
Strategist	strategy professional, strategy practitioner, strategy maker, strategic manager, strategy trainer, Strategy coach, strategy consultant, strategy executive, strategy director	strategic leader (Fernandes et al., 2022)
Long-term	far-future, evolution, forthcoming, prospective, unfolding, long run	<ul style="list-style-type: none"> <li>visionary (Fernandes et al., 2022)</li> <li>future-oriented (Marinković et al., 2022)</li> <li>horizon (Robinson et al., 2021.)</li> </ul>
Strategic foresight/ strategic planning	exploration, scenario development, scenario planning, prediction, anticipation, precognition, sensing	<ul style="list-style-type: none"> <li>Corporate Foresight, future scenarios, envisioning strategies, sensitizing (Marinković et al., 2022)</li> <li>foresight-sensemaking (Sakellariou &amp; Vecchiato, 2022)</li> <li>forecasting (Iden et al., 2017.)</li> <li>opportunity recognition (Robinson et al., 2021)</li> </ul>

**Table 1: Keywords for literature search**

The data for this study was extracted from the Scopus database because of its wide coverage of scholarly journals (Guz & Rushchitsky, 2009). We used the above keywords in the following search string combination in all four languages:

- (“success factor” OR “parameter” OR “moderator” OR “mediator” OR “influence” OR “antecedent”)
- AND (“strategist” OR “strategy professional” OR “strategy practitioner” OR “strategy maker” OR “strategic manager” OR “strategy trainer” OR “strategy coach” OR “strategy consultant” OR “strategy executive” OR “strategy director” OR “strategic leader”)
- AND (“long-term” OR “far-future” OR “evolution” OR “forthcoming” OR “prospective” OR “unfolding” OR “long run” OR “visionary” OR “future-oriented” OR “horizon”)
- AND (“strategic foresight” OR “strategic planning” OR “exploration” OR “scenario development” OR “scenario planning” OR “prediction” OR “anticipation” OR “precognition” OR “sensing” OR “corporate foresight” OR “future scenarios” OR “envisioning strategies” OR “sensitizing” OR “foresight-sensemaking” OR “forecasting” OR “opportunity recognition”)





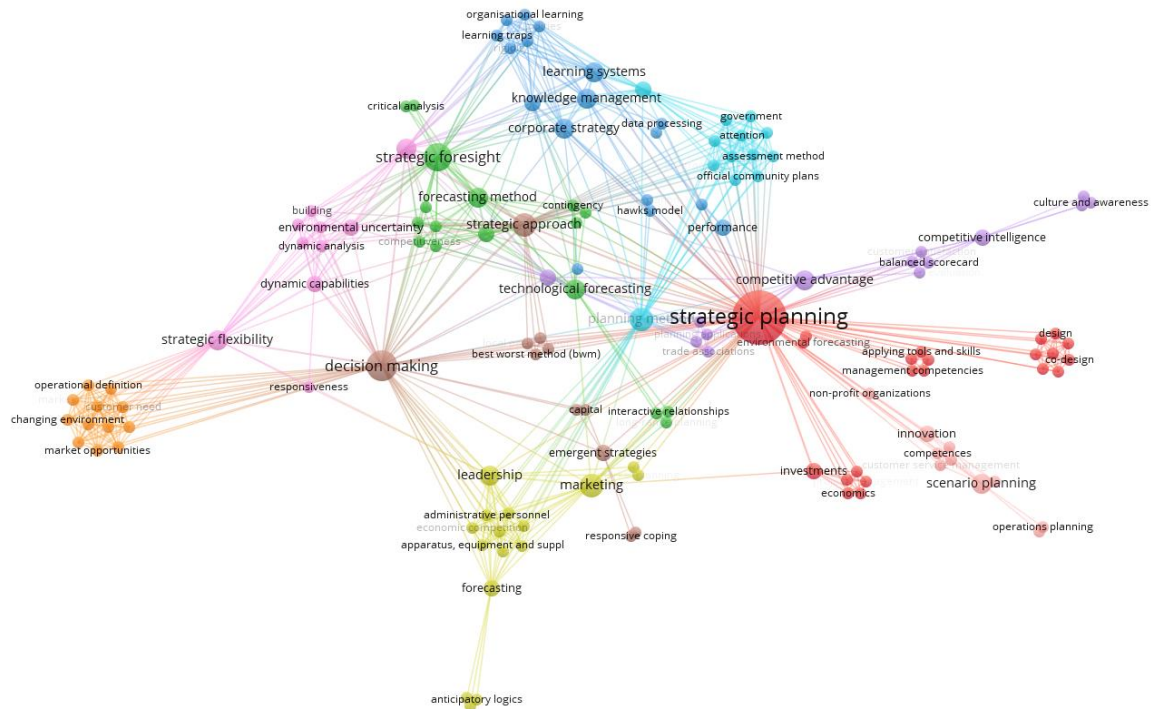
The search with this exhaustive list of keywords was repeated in the three additional partner languages and limited to the area of business and to peer-reviewed articles. It yielded only 15 articles, all of them in English language.

We therefore decided to run an additional search using a simplified search string that combined the terms from the research: (“strategic foresight” OR “strategic planning”) AND (“professional”) AND (“long” AND “term”). We consciously did not include success factor in this search as we hoped that the search results would point to these factors. This second search was again limited to the area of business and to peer-reviewed articles, repeated in the partner languages and provided us with 164 articles, all of them again in English language. The overall sample of articles gained from the bibliometric analysis thus consists of 179 articles. The search was followed by a thorough assessment of the abstracts of these articles to decide on their relevance for the research purpose. We excluded 15 duplicates, and 123 articles that did not fit the focus of our research. At the end of this cleaning process, 41 articles remained. These articles were submitted to a co-occurrence analysis of keywords using the bibliometric tool VOSviewer 1.6.8 to aggregate the data in a graphical map. The graphical map is a network of items built through text mining. The distance between items in a network is interpreted as an indication of the relatedness of the items. More specifically, the smaller the distance between the items (e.g., keywords), the stronger the items are related to each other.



## 2.2 Findings

We arrived at nine clusters of keywords which co-occur in the articles that discuss our research question. Figure 2 presents the network.



**Figure 2: Network of clusters identified with bibliometric analysis**

The red cluster is most central and largest cluster, which is no surprise as *strategic planning* is the main theme of the study. Our analysis shows that 1) the proper application of tools, skills, and the managerial competencies, 2) (co-)design, 3) operations planning, 4) competences, 5) environmental forecasting, and 6) innovation are discussed together with strategic planning and represent potential success factors. Furthermore, 6) the possession of relevant knowledge about investments and economics is a topic that relates to strategic planning in this cluster.

The brown cluster is centered around the topic of *decision making*. It is further connected to the yellow, orange, pink, and green clusters. In this cluster, 7) strategic approach, 8) emergent strategies, 9) Best-Worst Method, 10) responsive coping, and 11) capital awareness co-occur with decision making.

The yellow cluster's common topic is *leadership and marketing*. In the context of our research, these keywords are closely connected to disposing over 12) the necessary



administrative personnel, and 13) the right apparatus, equipment, and supply. Furthermore, 14) applying a so-called anticipatory logic is mentioned in this context. *Reaching strategic flexibility* is the main topic of the pink cluster. Co-occurring keywords that might represent success factors are 15) considering environmental uncertainties, 16) having dynamic capabilities such as responsiveness, and 17) conducting dynamic analysis.

The orange cluster is focusses on *strategic flexibility and decision making*. Without having a clear core, it demonstrates the interrelatedness and joint appearance of 18) market opportunities, 19) operational definition, and 20) awareness of the changing environment.

*Strategic foresight* is the main topic of the green cluster. We see this topic appearing together with the discussion of 21) forecasting methods, 22) critical analysis and 23) technological forecasting, and 24) awareness of contingencies.

The dark blue cluster is centered around *knowledge management and corporate strategy*. Related keywords discussed in the literature are 25) learning systems, 26) organizational learning, 27) learning traps, 28) data processing and 29) performance. The light blue cluster is focused on *planning methods*. Scholarly work in this cluster investigates 30) assessment methods, 31) attention, 32) government and 33) official community plans.

The purple cluster is centered around *competitive advantage* and scholarly contributions related to 34) cultural awareness, 35) competitive intelligence and 36) the balance scorecard.



**2.3 Summary and synthesis**

Table 2 below provides an overview on the cluster topics and the 36 keywords that co-occur with them.

<b>Cluster focus</b>	<b>Co-occurring keywords</b>
Strategic planning (red)	1) proper application of tools, skills, and the managerial competencies, 2) (co-)design, 3) operations planning, 4) competences, 5) environmental forecasting, 6) innovation, 7) the possession of relevant knowledge about investments and economics
Decision making (brown)	8) strategic approach, 9) emergent strategies, 10) Best-Worst Method, 11) responsive coping, 12) capital awareness
Leadership and marketing (yellow)	13) necessary administrative personnel, 14) right apparatus, equipment, and supply, 15) applying an anticipatory logic
Reaching strategic flexibility (pink)	16) considering environmental uncertainties, 17) having dynamic capabilities such as responsiveness, 18) conducting dynamic analysis
Strategic flexibility and decision making (orange)	19) market opportunities, 20) operational definition, 21) awareness of the changing environment
Strategic foresight (green)	22) forecasting methods, 23) critical analysis and 24) technological forecasting, 25) awareness of contingencies
Knowledge management and corporate strategy (dark blue)	26) learning systems, 27) organizational learning, 28) learning traps, 29) data processing, 30) performance
Planning methods (light blue)	31) assessment methods, 32) attention, 33) government and 34) official community plans
Competitive advantage (purple)	35) cultural awareness, 36) competitive intelligence and 37) the balance scorecard

**Table 2: Overview on clusters and co-occurring keywords identified with bibliometric analysis**

While the clusters are potential important topics that need to be managed to become successful in long term foresight/ planning, the co-occurring keywords potentially represent success factors. What is striking is keywords that reappear across different clusters, such as observation of and responsiveness to environmental contingencies in strategy making, mastery of forecasting and management methods, and availability of relevant knowledge and resources. Yet, the bibliometric analysis is not providing us with insights on the nature of the relationship between the cluster topics and the keywords (it might also be that the keywords are for example outcomes or antecedents), so that we needed a qualitative analysis to gain in-depth insights to identify success factors.



## 3 Qualitative content analysis

### 3.1 Approach

To obtain a more precise picture about the success factors of strategic foresight professionals and strategy trainers and coaches related to long term foresight and planning, the bibliometric analysis was followed by the qualitative content analysis. During the process 7 further articles were excluded because they were irrelevant to the research question, and another one was only accessible in Persian. This results in total 33 articles on which the qualitative content analysis was conducted.

We adopted Krippendorff's (2013) content analysis methodology to ensure a robust analysis. To balance the risk of subjectivity in data analysis, we triangulated investigators by involving three researchers in it (Denzin 1989; Flick, 2009).

One researcher coded data segments that reported success factors in all articles with an open coding approach to thematically classify text (Onwuegbuzie et al., 2016: 137). The other two researchers then reviewed these codes. After that, the three researchers came together and discussed meanings of the first-level codes. In this step, no significant inconsistencies emerged. In the second coding cycle, the derived first-level codes were analyzed for commonalities using pattern coding, a coding approach that allows for grouping codes by similarities (Onwuegbuzie et al., 2016: 138). Again, the researchers discussed the coding in an iterative exercise, and no significant inconsistencies arose. This step resulted in seven pattern codes (Miles et al., 2014) that represent the thematic clusters of success factors. In consequence, the originally nine clusters that emerged from the bibliometric analysis were partly dissolved and merged into seven success factor clusters.

### 3.2. Findings

The articles in the red cluster include a collection of different *methods and tools enabling successful strategic forecasting* to support strategic thinking and innovation. Applying the 1) Delphi method, 2) storytelling and 3) involving experts in the creation of knowledge during scenario making and planning is found to lead to 4) conventional and unconventional 5) trend- and event-based scenarios that should all be considered (Nováky & Tyukodi, 2010; Haarhaus & Liening, 2020; Fleener & Barcinas, 2020; Bruun et al., 2002). The 6) co-design of scenarios in participatory actions across stakeholder





groups is emphasized as important success factor (Castañeda et al., 2023; Fleener & Barcinas, 2020). Several traditional strategic planning methods and tools are mentioned as part of a successful strategic foresight such as 7) SWOT analysis (Kazaz & Ulubeyli, 2009), 8) pestel analysis (Marinković et al., 2022), 9) value chain analysis (ibid), and 10) the development of mission & vision statements (Critelli, 2005). Additionally, scholarly literature stresses the value of participatory methods like 11) participatory backcasting (Sisto et al., 2022), 12) multiple criteria decision analysis (ibid), 13) Best Worst Method (ibid), 14) roadmaps (Marinković et al., 2022), and 15) both/and strategies as helpful approaches (Fleener & Barcinas, 2020).

Regarding *environmental forecasting*, the content analysis highlights the importance of 16) environmental scanning (Haarhaus & Liening, 2020) and 17) considering environmental pressures (Morrison & Misener, 2021). Moreover, Fleener & Barcinas (2020) accentuate that 18) embracing uncertainty and becoming comfortable with it lays at the heart of the long-term planning process. This justified to integrate the articles about responding to a changing environment from the orange cluster in the bibliometric analysis into this cluster.

According to the bibliometric analysis, the brown cluster centers around decision making. The content analysis showed that the main topic here is *management* in a broader sense: This cluster includes many subclusters such as financial management, technology management, HR management, communication, and marketing. We merged the brown with the former yellow cluster (leadership and marketing) and articles on the management-related parts of the green cluster on technological forecasting. Furthermore, the new brown cluster absorbed the remaining orange cluster with articles related to defining operations and marketing. The key success factors directly attached to management are 19) future oriented (change-willing) management (Marinković et al., 2022), 20) participation (Hanif et al., 2022), 21) shared inquiry (Horst et al., 2019), 22) openness (ibid), 23) transparency during the strategic planning process (ibid.), and the 24) application of the balanced scorecard (Hwang & Rau, 2007). The participation in long term forecasting should include staff from the managing board, divisional managers, employees' council, planning staff and consultants (Kloeze et al., 1980).







Further success factors for managing participatory long term forecasting processes are 25) performance analysis (Smith, 1998), 26) targeting specific niches (King, 2008), 27) proactive entrepreneurship (Smith, 1998), 28) building expertise (King, 2008), and 29) the availability of resources (Marinković et al., 2022). The success factors regarding financial management are 30) setting clear, quantifiable financial goals (Smith, 1998) and 31) profitability (Marinković et al., 2022) - including 32) cutting costs (Smith, 1998) and 33) carrying out a cost-benefit analysis (Kazaz & Ulubeyli, 2009). The qualitative analysis also provided more precise insights into the success factors of technology management in the frame of technological forecasting: 34) Assessing emerging technologies (Marinković et al., 2022) and 35) developing technological strategies (Fallah Haghghi et al., 2021) are crucial activities to implement technological forecasting. Furthermore, 36) identifying industry need for high-tech (Fallah Haghghi et al., 2021), 37) developing high tech technologies (ibid), 38) availability of technical staff (Kazaz & Ulubeyli, 2009) and 39) the integration of information and communication technologies (ICTs) are key (Bryson et al., 2010).

The involvement of HR management in long term strategic planning processes was stressed as essential, since 40) the selection of the right employees – regarding skills, knowledge, and competences – is the very first step in successful strategic planning (Diamantidis & Chatzoglou, 2011; Hafeez & Aburawi, 2013). When it comes to planning and developing competences, a framework for 41) integrated system dynamics should be employed to 42) create numerous feed-forward and feedback channels (ibid). Furthermore, it is also pivotal to 43) maintain the soft “core” skills within the company (ibid).

Communication emerged as another important subcluster, communication which was not visible in the bibliometric analysis. Yet, for successful long-term scenario planning, scholars consider it crucial to 44) maintain efficient in- and external communication (McDougal et al., 2021), 45) align the firm with the ethical standards of professional communication policies (Strang, 2018) and have 46) a sales and marketing communication plan which keeps up with and secures the information flow (Germano & Stretch-Stephenson, 2012). Furthermore, research points out that firms need to 47) align the internal planning and the external communication (McDougal et al., 2021).







Marketing emerged as a subcluster within the theme of management with a significant importance for achieving successful strategic planning. Here, the 48) consumer orientation was the dominant success factor which entails 49) consumer research and 50) consumer-based marketing strategies (Garber et al., 1999). Further, 51) building and maintaining relationships (Gummesson, 1987), 52) building long-term interactive relationships with customers (ibid), 53) customer engagement (Germano & Stretch-Stephenson, 2012), and 54) customer value creation (ibid) bore significance. Further pivotal success factors are 55) market-based knowledge gathering and 56) identifying user-defined narratives were also pivotal success factors. *Strategic flexibility*, the pink cluster in the bibliometric analysis, is on the one hand fostered by strategic planning, and must thus be understood as dynamic capability (Haarhaus & Liening, 2020). The positive impact of strategic foresight on strategic flexibility becomes more pronounced in case of environmental uncertainty (Haarhaus & Liening, 2020). On the other hand, strategic flexibility is an important success factor for strategic planning as it enables firms to 57) infuse firm knowledge with a clear understanding of resources, constraints, capabilities, and the market needs (Kandemir & Acur, 2012). It is also important to 58) foster proactive behaviour (ibid). Knowledge management made up the blue cluster in the bibliometric results. This theme was further refined after the content analysis: It became part of an *organizational learning* cluster, together with another subcluster labeled as “education”. Knowledge management is important for all parts of the organizational learning processes during strategic foresight that are 59) unlearning, 60) inquiry & relearning, 61) challenging managerial assumptions, and 62) recognizing rigidities of imagination (Burt & Nair, 2020). Furthermore, 63) data forecasting and 64) uplearning were highlighted as success factors (Fleener & Barcinas, 2020). The education subcluster refers to teaching strategic management (business pedagogy) with 65) practice orientation and the 66) application of tools and skills (David et al., 2021). David et al, (2021) propose a 67) strategic management pedagogical model which aims to target the gap between the skills and knowledge that graduates possess and what employers require. In the bibliometric analysis, the purple cluster united competitive advantage with culture and awareness. Based on the content analysis, these elements require two different clusters. Firstly, *enhancing competitiveness* defines a cluster where 68)





specialization (Kazaz & Ulubeyli, 2009), 69) competitive advantage strategies (ibid.), 70) diversification (ibid), and 71) Competitive Intelligence (CI) process are the crucial success factors (Hanif et al., 2022). Furthermore, 72) creating valuable competences (Michopoulou & Buhalis, 2008), 73) building relationships (Fleener & Barcinas, 2020), 74) implementing emerging strategies (King, 2008), and the 75) continuous monitoring & evaluating are highlighted as essential (Guyadeen et al., 2023). Secondly, another cluster of scholarly work revolves around *organizational culture* which is understood as supportive element for strategic foresight. Here, 76) values, 77) trust, 78) empathy, and 79) guiding principles are the main success factors (Fleener & Barcinas, 2020). Moreover, 80) creativity and the 81) quality-focused production philosophy are important subthemes of this cluster (Kazaz & Ulubeyli, 2009).

### 3.3 Summary and synthesis

Table 3 summarizes the insights gained from the qualitative content analysis.

Clusters	Subclusters	Success factors
Methods and tools for strategic foresight	Scenario development methods and tools	1) Delphi method, 2) storytelling, 3) involving experts, 4) conventional and unconventional scenarios 5) trend- and event-based scenarios, 6) co-design
	Traditional methods and tools	6) co-design 7) SWOT analysis, 8) Pestel analysis, 9) value chain analysis, 10) mission & vision statements, 11) participatory backcasting, 12) multiple criteria decision analysis, 13) Best Worst method, 14) roadmaps, 15) both/and strategy
Environmental forecasting		16) environmental scanning, 17) considering environmental pressures, 18) embracing uncertainty
Management	Participative Management	19) future oriented (change-willing) management, 20) participation, 21) shared inquiry, 22) openness, 23) transparency, 24) balanced scorecard, 25) performance analysis, 26) targeting specific niche, 27) proactive entrepreneurship, 28) building expertise, 29) availability of resources
	Financial Management	30) setting clear, quantifiable financial goals, 31) profitability, 32) cutting costs, 33) cost-benefit analysis
	Technology Management	34) assessing emerging technologies, 35) developing technological strategies, 36) identifying industry need for high-tech, 37) developing high tech technologies, 38)





		availability of technical staff, 39) integration of ICTs
	HR Management	40) selection of the right employees, 41) integrated system dynamics, 42) creating feed-forward and feedback channels, 43) maintain the soft “core” skills
	Communication	44) efficient in- and external communication, 45) firm alignment with the ethical professional standards, 46) sales and marketing communication plan 47) alignment of internal planning and external communication
	Marketing	48) consumer orientation, 49) consumer research, 50) consumer-based marketing strategies, 51) building and maintaining relationships, 52) building long-term interactive relationships with customers, 53) customer engagement, 54) customer value creation, 55) market-based knowledge gathering, 56) identifying user-defined narratives
Strategic flexibility		57) infuse firm knowledge with clear understanding of resources, constraints, capabilities, and the market needs; 58) foster proactive behaviour
Organizational learning	Knowledge Management	59) unlearning, 60) inquiry & relearning, 61) challenging managerial assumptions, 62) recognizing rigidities of imagination, 63) data forecasting 64) uplearning
	Education	65) practice orientation, 66) application of tools and skills, 67) strategic management pedagogical model
Enhancing competitiveness		68) specialisation, 69) competitive advantage strategies, 70) diversification, 71) Competitive Intelligence (CI) process, 72) creating valuable competences, 73) building relationships, 74) implementing emerging strategies, 75) continuous monitoring & evaluating
Organizational culture		76) values, 77) trust, 78) empathy, 79) guiding principles. 80) creativity, 81) quality-focused production philosophy

**Table 3: Clusters, sub-clusters and success factors identified with the qualitative content analysis**

The qualitative content analysis identified 81 success factors allocated to seven topical clusters. Overall, the qualitative content analysis leads us to the following (simplified) model:



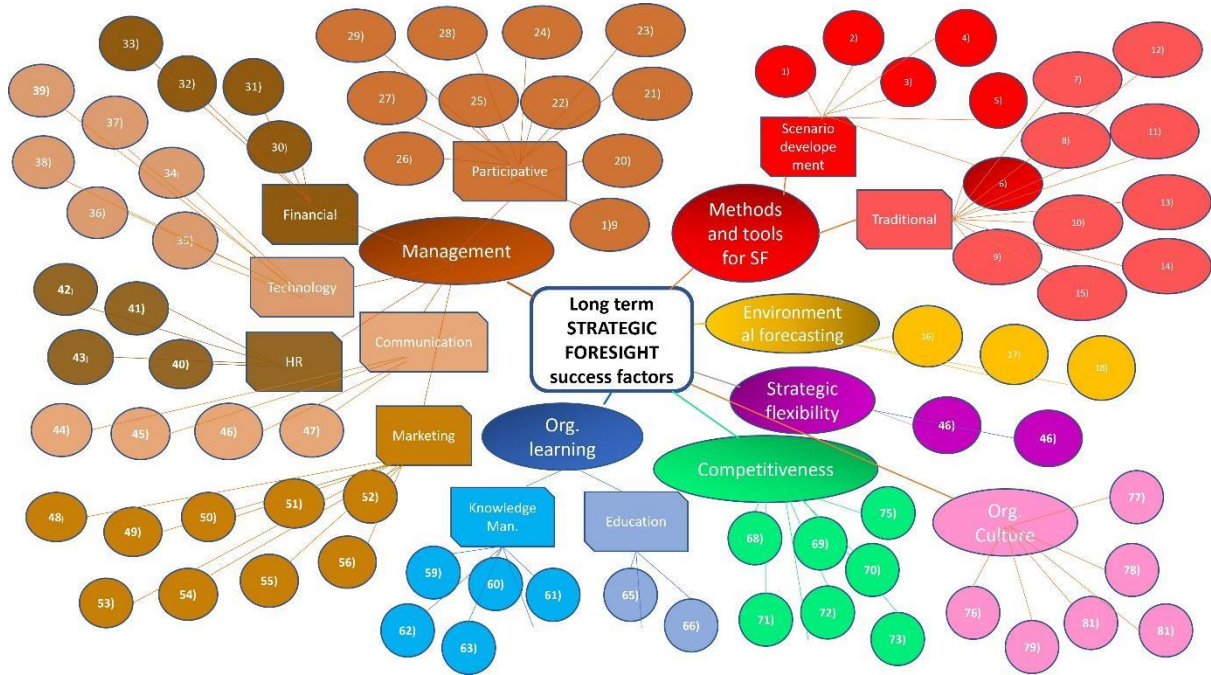


Figure 3: Network of clusters identified with qualitative content analysis

There are some success factors which reoccur in more than one cluster. For example, the participation of both internal staff at different managerial levels and external stakeholders is important, during this process. Further, knowledge bears a significant importance and appears throughout different clusters. We can pinpoint that from information acquisition, e.g., through conducting research (Delphi method, consumer research), through maintenance of the soft “core” skills, to challenging and developing (inquiry, relearning) scenarios, knowledge plays a crucial role in long-term forecasting. Further, we can highlight that continuous monitoring and evaluation is also a key success factor during strategic planning. In several clusters such as enhancing competitiveness, environmental forecasting, participative management, and strategic flexibility, constant assessment serves as a base for future decisions.

## 4 Sentiment analysis

### 4.1 Approach

In this part of the research, we retrieved posts from LinkedIn to understand the factors related to the strategic planning in business discourse. The posts on LinkedIn display the opinion and sentiment of industry experts towards strategic planning. We used LinkedIn because it’s one of the most popular social networking sites for professionals and gather professionals from different areas under one umbrella. The





search term “strategic foresight” OR “strategic planning” was used to obtain the posts from LinkedIn. A total of approximately 640 posts related to strategic planning were collected from LinkedIn. Further, we will examine the retrieved posts using the sentiment analysis and network analysis to understand the critical success factors of strategic foresight.

## **4.2. Findings**

This section aims to give an overview of the results of the sentiment analysis whose goal was to identify success factors related to long-term strategic planning within the business discourse.

Most of the data retrieved consist of types of job announcements for positions in financial management, HR management, marketing management, sales management, and supply chain management. The task of strategic planning is part of all of the job profiles and one of the future responsibilities of the applicants; however, the “long-term planning” is rarely mentioned. When it is brought up, though, the timeframe for strategic planning is not mentioned.

The most job announcements advertise finance-related positions (CFO, Financial Analyst, Accountant, etc.) which underpins the tight relationship between finance and planning. As the data shows, managers believe that strategic planning must start with a clear financial overview and that financial planning should serve as a cornerstone for strategic planning. The data also consists of posts about a “CFO checklist”, whereby it is the CFO’s responsibility, among others, to have long-term vision and roadmap.

All the other units which were mentioned in the data – i.e., job announcements for marketing manager, supply chain manager, and sales manager – are requested to work together and communicate during strategic planning. The role of the HR management regarding strategic planning is highlighted when it comes to hiring forecasters. These results resonate with the content analysis whereby the efficient internal communication and information flow is crucial.

Only a handful of posts are about companies that work as external partners and offer their services in, among others, forecasting and strategic planning.

Although not the majority, it is worth mentioning because it shows the possibility of outsourcing strategic planning and forecasting.





Scenario planning was mentioned a few times in the data, and mostly was listed among the tasks of financial management. One post approached scenario planning differently and explained it as “beyond the traditional forecasting methods”. Here, three major approaches were highlighted: involving diverse groups of stakeholders, using artificial intelligence and data analytics, and the reverse scenario planning. In this form it partly resonates with the content analysis and highlights the benefits of scenario planning in the long-term design.

## 5 Summary and synthesis

Through the content analysis, the nine clusters which emerged from the bibliometric analysis, became refined and were reduced to seven clusters: Methods and tools for strategic planning, Environmental forecasting, Management, Strategic flexibility, Organizational learning, Enhancing competitiveness, and Organizational culture.

Methods and tools for strategic planning was divided into two subclusters, those were the scenario development and traditional tools, and it was highlighted that co-design is an important success factor by both subclusters. Environmental forecasting emerged as the second cluster whereby, next to monitoring the environment and considering the pressures it can carry, embracing uncertainty was identified as key success factor. Management is pivotal for directing and leading the long-term planning process. Throughout its subclusters - participative management, financial management, technology management, HR management, communication, and marketing - it became clear that despite the several different departments, the organization should work as one entity reaching strategic goals. Starting from the selection of the right employees (HR department), seeking and identifying new emerging technologies (technology management), gathering market-based knowledge and conducting consumer research (marketing), and setting clear financial goals (financial management), the organisation ought to work together and be led by a future-oriented management. In this coordination process, communication plays an important role which ensures the information flow among internal partners and to external stakeholders. The above-mentioned process also requires an organizational culture (the last cluster) which is based on values, trust, empathy, and creativity.







Strategic flexibility is an important success factor, just as maintaining and challenging soft skills and visions in organizational learning.

The sentiment analysis proved to be complementary to the qualitative content analysis insofar as it confirmed many of its findings. It shows that the discourse of strategic planning in business blogs (LinkedIn) mostly puts the task of strategic planning on to the financial management's shoulder. However, not clarifying the time frame for future planning also signals the lack of the "long-term" in the discourse. This also entails that companies believe that long-term planning starts with financial forecasting and having a clear overview of the companies' assets. Further, some similarities can be recognized with the content analysis when it comes to describing HR and Marketing managers job responsibilities. The data analysis shows that HR management is important regarding strategic planning, when hiring forecasters, and marketing management's responsibilities vastly relied on gathering market-based and consumer knowledge. The data from the sentiment analysis also resonates with the content analysis in that sense that job responsibilities prompt future employees to work together with different departments. Here, we can again realize that communication, information flow, and knowledge dissemination play just as important roles as it was shown by the content analysis. Overall, we can conclude from the sentiment analysis that long-term foresight is still a novel phenomenon among business practitioners. Not specifying the time frame for planning, the lack of "long-term" in the discourse, and highlighting mainly the importance of financial planning also allow us to draw the conclusion stated above.

## References

Bruun, H., Hukkinen, J., & Eklund, E. (2002). Scenarios for coping with contingency: The case of aquaculture in the Finnish Archipelago Sea. *Technological Forecasting and Social Change*, 69(2), 107–127. [https://doi.org/10.1016/S0040-1625\(01\)00134-2](https://doi.org/10.1016/S0040-1625(01)00134-2)

Bryson, J., Berry, F., & Yang, K. (2010). The State of Public Strategic Management Research: A Selective Literature Review and Set of Future Directions. *American Review of Public Administration* - AMER REV PUBLIC ADM, 40, 495–521. <https://doi.org/10.1177/0275074010370361>





Burt, G., & Nair, A. K. (2020). Rigidities of imagination in scenario planning: Strategic foresight through 'Unlearning'. *Technological Forecasting and Social Change*, 153, 119927. <https://doi.org/10.1016/j.techfore.2020.119927>

[Cambria, E., Poria, S., Gelbukh, A., & Thelwall, M. \(2017\). Sentiment analysis is a big suitcase. \*IEEE Intelligent Systems\*, 32\(6\), 74-80.](#)

Castañeda, L., Viñoles, V., Concannon, F., Pedersen, A., Al-Hmiedat, P., & Lobato, N. (2023). The CUTE CANVAS: Developing a design tool for planning strategic actions for institutional of digital competencies. *Journal of Decision Systems*, 0(0), 1–23. <https://doi.org/10.1080/12460125.2023.2167274>

Critelli, M. (2005). Back where we belong. *Harvard Business Review*, 83, 47–54, 152.

Das, S., Dutta, A., Medina, G., Minjares-Kyle, L., & Elgart, Z. (2019). Extracting patterns from Twitter to promote biking. *IATSS research*, 43(1), 51-59.

David, M. E., David, F. R., & David, F. R. (2021). Closing the Gap between Graduates' Skills and Employers' Requirements: A Focus on the Strategic Management Capstone Business Course. *Administrative Sciences*, 11(1), 1–16.

Diamantidis, A., & Chatzoglou, P. (2011). Human resource involvement, job-related factors, and their relation with firm performance: Experiences from Greece. *The International Journal of Human Resource Management*, 22, 1531–1553. <https://doi.org/10.1080/09585192.2011.561964>

Fallah Haghghi, N., Mirtorabi, M. S., Bijani, M., & Valizadeh, N. (2021). Appropriate strategies to establish knowledge-based companies: Evidence from Iran. *International Journal of Finance & Economics*, 26(4), 6375–6389. <https://doi.org/10.1002/ijfe.2124>

Fernandes, C. I., Veiga, P. M., Ferreira, J. J., Rammal, H. G., & Pereira, V. (2022). Assessing strategic leadership in organizations: Using bibliometric data to develop a holistic model. *Journal of Business Research*, 141, 646-655. <https://doi.org/10.1016/j.jbusres.2021.11.067>

Fleener, M. J., & Barcinas, S. (2020). Futurists' relationships with the future: A study of anticipatory meaning-making of ecosystem builders. *Foresight*, 22(5/6), 633–642. <https://doi.org/10.1108/FS-04-2020-0039>

Garber, L. L., Dave, D. S., & Evans, M. R. (1999). Consumer-Based Strategic Planning in the Nonprofit Sector: The Empirical Assessment of an Arts Festival Audience. *Journal of Professional Services Marketing*, 20(1), 115–134. [https://doi.org/10.1300/J090v20n01\\_09](https://doi.org/10.1300/J090v20n01_09)

Germano, M. A., & Stretch-Stephenson, S. M. (2012). Strategic value planning for libraries. *The Bottom Line*, 25(2), 71–88. <https://doi.org/10.1108/08880451211256405>

Gummesson, E. (1987). The new marketing—Developing long-term interactive relationships. *Long Range Planning*, 20(4), 10–20. [https://doi.org/10.1016/0024-6301\(87\)90151-8](https://doi.org/10.1016/0024-6301(87)90151-8)







Guyadeen, D., Henstra, D., Kaup, S., & Wright, G. (2023). Evaluating the quality of municipal strategic plans. *Evaluation and Program Planning*, 96, 102186. <https://doi.org/10.1016/j.evalprogplan.2022.102186>

Haarhaus, T., & Liening, A. (2020). Building dynamic capabilities to cope with environmental uncertainty: The role of strategic foresight. *Technological Forecasting and Social Change*, 155, 120033. <https://doi.org/10.1016/j.techfore.2020.120033>

Hafeez, K., & Aburawi, I. (2013). Planning human resource requirements to meet target customer service levels. *International Journal of Quality and Service Sciences*, 5(2), 230–252. <https://doi.org/10.1108/IJOSS-04-2013-0020>

Hanif, N., Arshed, N., & Farid, H. (2022). Competitive intelligence process and strategic performance of banking sector in Pakistan. *International Journal of Business Information Systems*, 39, 52. <https://doi.org/10.1504/IJBIS.2022.120368>

Horst, S.-O., Järventie-Thesleff, R., & Baumann, S. (2019). The practice of shared inquiry: How actors manage for strategy emergence. *Journal of Media Business Studies*, 16(3), 202–229. <https://doi.org/10.1080/16522354.2019.1641672>

Hwang, M.-H., & Rau, H. (2007). Design and planning of the balanced scorecard: A case study. *Human Systems Management*, 26. <https://doi.org/10.3233/HSM-2007-26307>

Iden, J., Methlie, L. B., & Christensen, G. E. (2017). The nature of strategic foresight research: A systematic literature review. *Technological Forecasting and Social Change*, 116, 87–97. <https://doi.org/10.1016/j.techfore.2016.11.002>

Kandemir, D., & Acur, N. (2012). Examining Proactive Strategic Decision-Making Flexibility in New Product Development. *Journal of Product Innovation Management*, 29(4), 608–622. <https://doi.org/10.1111/j.1540-5885.2012.00928.x>

Kazaz, A., & Ulubeyli, S. (2009). Strategic Management Practices in Turkish Construction Firms. *Journal of Management in Engineering - J MANAGE ENG*, 25. [https://doi.org/10.1061/\(ASCE\)0742-597X\(2009\)25:4\(185\)](https://doi.org/10.1061/(ASCE)0742-597X(2009)25:4(185))

King, B. L. (2008). Strategizing at Leading Venture Capital Firms: Of Planning, Opportunism and Deliberate Emergence. *Long Range Planning*, 41(3), 345–366. <https://doi.org/10.1016/j.lrp.2008.03.006>

Kloeze, H. J., Molenkamp, A., & Roelofs, F. J. W. (1980). Strategic planning and participation: A contradiction in terms? *Long Range Planning*, 13(5), 10–20. [https://doi.org/10.1016/0024-6301\(80\)90098-9](https://doi.org/10.1016/0024-6301(80)90098-9)

Marinković, M., Al-Tabbaa, O., Khan, Z., & Wu, J. (2022). Corporate foresight: A systematic literature review and future research trajectories. *Journal of Business Research*, 144, 289–311. <https://doi.org/10.1016/j.jbusres.2022.01.097>





- McDougal, E. R., Syrdal, H. A., Gravois, R., & Kemp, A. (2021). Telling the tale: Applying a strategic brand storytelling process for STP planning. *Journal of Strategic Marketing*, 0(0), 1–21. <https://doi.org/10.1080/0965254X.2021.1892803>
- Michopoulou, E., & Buhalis, D. (2008). Performance measures of net-enabled hypercompetitive industries: The case of tourism. *International Journal of Information Management*, 28(3), 168–180. <https://doi.org/10.1016/j.ijinfomgt.2007.07.003>
- Mohammad, S., & Turney, P. (2010). Emotions evoked by common words and phrases: Using mechanical turk to create an emotion lexicon. In Proceedings of the NAACL HLT 2010 workshop on computational approaches to analysis and generation of emotion in text, 26-34.
- Morrison, K. A., & Misener, K. E. (2021). Exploring the conditions for strategic planning in nonprofit community sport. *Sport Management Review*, 24(5), 747–769. <https://doi.org/10.1080/14413523.2021.1906054>
- Nováky, E., & Tyukodi, G. (2010). The responsibility of futurists in strategic foresight—Hungarian examples. *Technological Forecasting and Social Change*, 77(9), 1546–1549. <https://doi.org/10.1016/j.techfore.2010.06.013>
- Öztürk, N., & Ayvaz, S. (2018). Sentiment analysis on Twitter: A text mining approach to the Syrian refugee crisis. *Telematics and Informatics*, 35(1), 136-147.
- Robinson, C. V., Ahmad, F., & Simmons, J. E. (2021). Consolidation and fragmentation in environmental scanning: a review and research agenda. *Long Range Planning*, 54(3), 101997. <https://doi.org/10.1016/j.lrp.2020.101997>
- Sakellariou, E., & Vecchiato, R. (2022). Foresight, sensemaking, and new product development: Constructing meanings for the future. *Technological Forecasting and Social Change*, 184, 121945. <https://doi.org/10.1016/j.techfore.2022.121945>.
- Sisto, R., Fernández-Portillo, L. A., Yazdani, M., Estepa-Mohedano, L., & Torkayesh, A. E. (2022). Strategic planning of rural areas: Integrating participatory backcasting and multiple criteria decision analysis tools. *Socio-Economic Planning Sciences*, 82, 101248. <https://doi.org/10.1016/j.seps.2022.101248>
- Smith, J. (1998). Strategies for start-ups. *Long Range Planning*. [https://www.academia.edu/77043647/Strategies\\_for\\_start\\_ups](https://www.academia.edu/77043647/Strategies_for_start_ups)
- Strang, K. D. (2018). Strategic analysis of CSF's for not-for-profit organizations. *Measuring Business Excellence*, 22, 00–00. <https://doi.org/10.1108/MBE-07-2016-0035>

