Enhancing Knowledge Management and Strategic Foresight through Information and Communication Technologies

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Abstract: Knowledge Management (KM) and Strategic Foresight (SF) are essential for organizational growth, particularly in today's environment shaped by Information and Communication Technologies (ICT). This study conducts a literature review to investigate the effective integration of KM and SF practices with ICT. It addresses two key research questions: How can KM practices be incorporated into SF processes? How can ICT enhance the management of future-oriented knowledge through SF? The increasing complexity of organizational environments and the challenges posed by information overload and future scenario forecasting highlight the importance of this research. ICT serves as a crucial enabler, utilizing tools such as Big Data analytics, Artificial Intelligence (AI), and the Internet of Things (IoT) to optimize KM and SF practices. However, the integration of these technologies encounters significant barriers that require further exploration. The primary objective of this study is to map the current integration of ICT within KM and SF, emphasizing opportunities, limitations, and the potential contributions of AI to these processes. Utilizing a Rapid Review methodology, which streamlines the systematic review process to provide timely insights, the research involved searches in the Scopus database and a snowballing technique, resulting in an analysis of 12 selected articles. Findings indicate that ICT can significantly improve the efficiency and effectiveness of KM and SF processes, particularly in scenario-building and strategic decision-making. The study identifies specific tools and methods, such as collective knowledge systems and IoT frameworks, that organizations can adopt to enhance these practices. Future research should expand on this groundwork by including larger samples and practical studies to validate the proposed hypotheses. This study aims to encourage organizations to adopt ICT-based solutions, fostering sustainable competitive advantages in dynamic business environments.

Keywords: Knowledge management, Strategic foresight, Information and communication technologies, Future-Oriented knowledge management, Rapid review

1. Introduction

In today's dynamic business environment, Knowledge Management (KM) has emerged as an essential instrument for driving growth and innovation (Hijazin et al., 2023). Its importance lies in its ability to exploit and utilize organizational knowledge for strategic decision-making and competitive advantage (Vágner and Bencsik, 2022). However, Implementing KM systems is not quite simple. It presents many difficulties related to problems like information overload, maintenance workload, and how it affects the organization's ability to learn and develop new ideas over time (Hahn and Subramani, 2000). These challenges must be carefully managed to ensure the KM systems work well and last longer.

Implementing the use of Strategic Foresight is another complex topic that organizations have to look through. Many challenges make looking ahead and planning for the future difficult (Wayland, 2015). Industries constantly change, and predicting what will happen outside our control is hard. Traditional strategic management tools often need help to keep pace with structural changes, leaving decision-makers uncertain and ambiguous. As companies struggle with the complexities of KM systems and Strategic Foresight, Information and Communication Technology (ICT) can help make these processes less painful and more accurate (Da Silva et al., 2023). The rapid evolution of ICT has opened new frontiers for enhancing KM practices, with researchers increasingly turning to Artificial Intelligence (AI) for superior insights and outcomes. However, despite its potential, integrating ICT systems into KM processes still needs to be explored (Hahn and Subramani, 2000). With advanced data analytics, machine learning algorithms, and predictive modeling techniques, ICT can empower strategic foresight efforts by providing deeper insights, identifying patterns, and forecasting potential

outcomes more accurately (Wayland, 2015). Embracing ICT as a knowledge and strategic enabler is essential for enhancing the efficacy and resilience of KM process and Strategic Foresight in an ever-changing world.

This work comprehensively explores ICT systems within various domains. We have two main objectives: to reveal the current state-of-the-art literature and to demonstrate ICT's potential in enhancing both KM processes and Strategic Foresight. While existing research has widely examined KM itself (Iskandar et al., 2017), our goal is to integrate ICT into it, thus revealing new opportunities for organizational growth and innovation. This research offers insights for both researchers and managers and is a valuable help in navigating this evolving area of KM. Through a Rapid Review methodology (Cartaxo et al., 2018), we aim to provide practical insights to push organizations toward a future of sustainable success.

Following this introduction, the work is organized as follows: Section 2 provides the background with the necessary content to support this research. Section 3 presents the methodology used in the literature review, and Section 4 describes its results, presenting the answers to the research questions. In Section 5, the results are discussed. Finally, in Section 6, we present our conclusions.

2. Theoretical Background

In this section, we will briefly give some insights on the main subjects of this work: KM and Strategic Foresight.

2.1 Knowledge Management

KM has been widely introduced in academia by Nonaka and Takeuchi, who presented the SECI model for knowledge creation and conversion (Abdillah et al., 2024). This model distinguishes between tacit (unarticulated, non-verbalized, and intuitive) and explicit (articulated, specified by writing, drawing, among others) knowledge and illustrates the ways of knowledge transformation: Socialization (tacit to tacit knowledge, e.g., a chat between colleagues), Externalization (tacit to explicit knowledge, e.g., formalizing a body of knowledge in the form of a document or audiovisual media), Internalization (explicit to tacit knowledge, e.g., translating theory into practical activity), and Combination (explicit to explicit knowledge, e.g., combining, merging existing ideas) (Da Silva et al., 2023). With the increasing utilization of ICT systems, the KM process has become easier and more accurate (Tajudeen et al., 2022). These systems include a wide array of hardware, software, and networks that enable the collection, storage, processing, and dissemination of data and information.

2.2 Strategic Foresight

Futures Research is an interdisciplinary field that uses various methods to explore possible, plausible, and preferable futures (Da Silva et al., 2023). Its activities include the analysis of technology futures and impacts, aiming to formulate and test potential and desirable futures to facilitate decision-making, including analyzing how these conditions may change. Another important aspect of the information gathered from future studies is the increasing need for protection and security, which can be done with ICT (Tajudeen et al., 2022). Communication technology systems are crucial in safeguarding sensitive information through robust security measures, ensuring data integrity, confidentiality, and availability.

Recent research has begun to clarify how KM, Strategic Foresight, and ICT interact and reinforce one another. Existing literature indicates a dynamic interplay where KM processes enable organizations to capture and systematically use insights from Strategic Foresight activities. At the same time, ICT provides essential infrastructure and analytical capabilities to support these practices. Notably, frameworks have been proposed to illustrate how these three areas mutually enhance each other, promoting more informed and responsive strategic decision-making in rapidly changing environments. Additionally, empirical studies have highlighted the role of ICT in integrating internal and external knowledge sources, thus streamlining the translation of foresight into actionable knowledge.

3. Methodology

This section describes how we conducted the literature review. In this work, we used the Rapid Review methodology (Cartaxo et al., 2018), a form of literature review that simplifies the process of a traditional systematic review to produce scientific evidence in a timely manner.

Adopting the Rapid Review methodology is particularly suitable for this study as it allows for the rapid and rigorous synthesis of relevant literature within tight deadlines typical of conference-driven research. This method streamlines specific phases of the traditional systematic review by narrowing the search scope, utilizing focused inclusion criteria, and enabling faster data extraction without compromising scientific rigor.

Consequently, it provides timely insights into integrating ICT, KM, and Strategic Foresight, crucial for practitioners and researchers aiming for prompt and evidence-based decision-making.

Rapid Reviews are a condensed form of Systematic Literature Reviews (SLRs) designed to collect evidence more quickly (Tricco et al., 2015). Unlike SLRs, which may take months or even years, RRs are typically completed in weeks. They achieve this speed by narrowing the research scope, allowing a single researcher to select studies, and sometimes skipping specific rigorous steps found in SLRs, such as synthesizing results or reviewing a broad range of databases (Tricco et al., 2015).

Despite these shortcuts, RRs still adhere to a predefined protocol to ensure academic rigor. Because RR research questions are defined upfront, the process is more efficient and allows for targeted search terms and specific data extraction. This efficiency makes RRs a valuable tool when a faster turnaround is needed in evidence-based research (Khangura et al., 2012).

3.1 Research Questions and Search Process

In order to conduct a thorough review of the literature, we have identified our objectives and followed a protocol that outlines our research methodology. To address gaps in the existing literature, we have formulated two research questions (RQs) that will investigate how recent publications (from 2017 onwards) have characterized the application of ICT systems and KM techniques in the process of Strategic Foresight: how can KM practices effectively integrate into Strategic Foresight processes? (RQ1) How can ICTs be applied to manage knowledge about the future obtained during Strategic Foresight? (RQ2).

We defined the search string by combining terms relevant to the research questions, as presented in Table 1. These terms were in English, and we tested different combinations of keywords to see the range of results they produced. The searches were conducted in the Scopus database, focusing on articles published since 2017.

Table 1: Search string

TITLE (("knowledge management" OR km) AND ((future* AND (stud* OR research)) OR (technolog* AND forecast*) OR (foresight))) OR KEY (("knowledge management" OR km) AND ((future* AND (stud* OR research)) OR (technolog* AND forecast*) OR (foresight))) AND PUBYEAR > 2016 AND PUBYEAR < 2024 AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE, "cp")) AND (LIMIT-TO(LANGUAGE, "English"))

We will also incorporate articles identified through snowballing techniques, specifically focusing on literature review articles found in the original search in Scopus. When conducting systematic literature studies, researchers often use a technique called snowballing. This technique involves using the references cited in a paper (backward snowballing) or the papers that have cited the paper (forward snowballing) to identify additional relevant sources (Wohlin, 2014). By using this approach, researchers can expand their search beyond traditional database searches and leverage existing literature connections. Snowballing is particularly useful for extending systematic literature studies because new studies often cite previously relevant papers or systematic studies already conducted in the area (Wohlin, 2014).

3.2 Selection of Studies and Quality Verification

The first step for selecting articles for this Rapid Review involved using the search string defined in Table 1 in the Scopus database. This search returned 172 documents. The filtering process of the articles is shown in Figure 1.
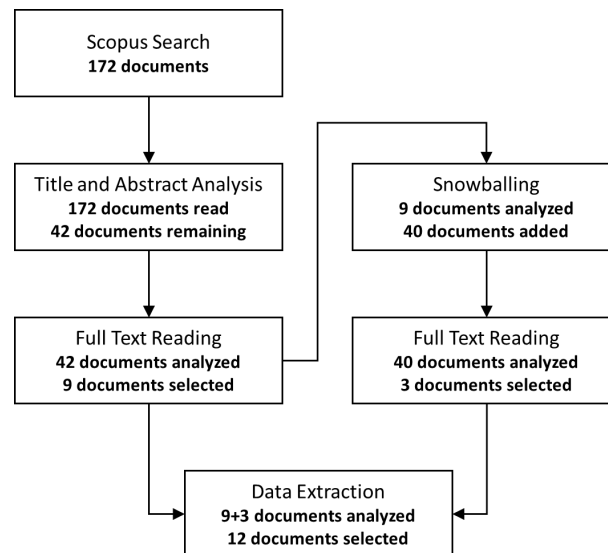
Figure 1: Rapid Review execution

Throughout the entire search process, the following exclusion criteria were used: studies that won't help answer at least one research question, studies written in languages different from English, studies published before 2017, studies not published in peer-reviewed journals or conferences, and studies unavailable for the complete reading step, usually due to some paywall.

From the 172 publications initially gathered in the Scopus search, we analyzed the titles and abstracts with the inclusion criteria, leaving only 42 remaining and 130 documents excluded. We thoroughly read these articles and excluded 33 documents, leaving only nine articles remaining. Then, we used these 9 articles as a source of the snowballing process. The snowballing process considered all the exclusion criteria mentioned and gathered an additional 40 documents. Then, we thoroughly read this new set of 40 documents, excluding 37 and keeping 3. Ultimately, we select 12 articles for data extraction (3 from the snowballing processes plus the other 9 used to gather documents for it) in this review. It is worth mentioning that we excluded 12 articles in the complete reading process due to the lack of access.

3.3 Data Extraction and Analysis

To gather all pertinent information from the selected articles, we employed a data extraction form. We retrieve data from the selected articles, addressing the aspects outlined in the form. Throughout this process, we aimed to determine whether the articles presented KM techniques and established a link between Communication Technology and KM. Additionally, we explored ways to integrate these techniques into the technological foresight process and how communication technology could manage future knowledge obtained in this technological forecasting process. The list of the 12 selected articles and the research questions each article answers is presented in Table 2.

4. Results

This section answers the research questions below, which have been formulated based on the selected articles and the information extracted so far.

4.1 RQ1 - How can KM Practices Effectively Integrate into the Strategic Foresight Process?

The articles selected to answer this first RQ were observed to have a similar approach. Of the 12 articles that came to the final stage of analysis, 8 addressed some relevant points for this topic. They spoke about using KM systems in the foresight process in every particular.

For example, Iandolo et al. (2021) used Collective Knowledge Systems in the Strategic Foresight process of predicting Black Swans, a sudden event with significant impact, frequently justified in hindsight despite its initial unexpectedness. Senaratne et al. (2021) brought to discussion the use of Social Network Analysis to identify knowledge flow, which can be used for companies to understand better how customers relate to each other and, therefore, use this information as leverage for designing new products, what Senaratne also named as Knowledge Network Analysis.

Using a similar approach, Da Silva et al. (2023), Hijazin et al. (2023), and Nascimento et al. (2021) developed the concept of knowledge capture and knowledge feedback serving as essential methods of identifying, organizing, storing, and transferring information obtained from a Strategic Foresight process leading to a better scenario building. Junior et al. (2019) suggest using a SWOT (Strengths, Weaknesses, Opportunities, and Threats) matrix in Strategic Foresight to ensure more effective use of the explicit knowledge obtained through future analysis and contribute to decision-making. Jari & Theresa (2017) use the triangulation logic systematic approach in foresight studies, which is used to expose meaningful information that has remained undiscovered in the data collection process.

Table 2: List of the selected articles

Title	Year	Author	RQs Answered
Identifying Knowledge Management Processes in Futures Research	2023	Da Silva et al.	RQ1
Moderating the Synergies between Business Intelligence and Strategic Foresight: Navigating Uncertainty for Future Success through Knowledge Management	2023	Hijazin et al.	RQ1 & RQ2
Integration of Industry 4.0 technologies and Knowledge Management Systems for Operational Performance improvement	2022	Lista & Tortorella	RQ2
The relationship between the Internet of Things and knowledge management in smart ecosystem development	2021	Ikeda et al.	RQ2
Combining Big Data and Artificial Intelligence for Managing Collective Knowledge in Unpredictable Environment—Insights from the Chinese Case in Facing COVID-19	2021	Iandolo et al.	RQ1 & RQ2
Dynamic interactions among knowledge management, strategic foresight and emerging Technologies	2021	Nascimento et al.	RQ1 & RQ2
Current trends and future directions in knowledge management in construction research using social network analysis	2021	Senaratne et al.	RQ1 & RQ2
Foresight and knowledge management. New developments in theory and practice.	2019	Bootz et al.	RQ1
A UNISON framework for knowledge management of university-industry collaboration and an illustration	2019	Hu et al.	RQ1
Approaching future-oriented technology analysis strategies in knowledge management processes	2019	Junior et al.	RQ1
The Internet of Things: Building a knowledge management system for open innovation and knowledge management capacity.	2018	Santoro et al.	RQ2
Knowledge management and triangulation logic in the foresight research and analyses in business process management	2017	Jari & Theresa	RQ1

Bootz et al. (2019) emphasize the link between KM and Strategic Foresight, highlighting this connection's central role in driving organizations' difficulties. They reinforce how KM practices are essential in generating technological innovation and sustaining competitive advantage in a scenario characterized by rapid knowledge obsolescence and constant innovation demands. Moreover, they argue that foresight – initially focused on cognitive anticipation – has evolved into a field of decision-making and action, focusing on better integration with strategy to prepare minds for change. The authors suggest that integrating thinking and action requires a deeper consideration of the cognitive elements in foresight processes.

Hu et al. (2019) emphasize how important it is for higher education institutions to use technology to manage knowledge effectively. By using ICT tools and platforms, universities can systematically collect, store, share, and disseminate valuable knowledge assets. The UNISON Decision Analysis Framework, combined with auxiliary management mechanisms and the plan–do–check–act (PDCA) cycle, exemplifies how ICT infrastructure can optimize decision-making and enhance productivity. Furthermore, the implementation of online learning platforms, cloud databases, and technology licensing mechanisms demonstrates a commitment to utilizing ICT for knowledge transfer and innovation among university employees and students.

4.2 RQ2 - How can ICTs be Applied to Manage Knowledge About the future Obtained During Strategic Foresight?

From the 11 pre-selected articles, 7 had relevant thoughts to answer the RQ2. Almost unanimously, the articles used Big Data or IoT. Hijazin et al. (2023) use Business Intelligence (BI) systems to provide a framework for utilizing acquired data to support the decision-making process in unpredictable environments, which facilitates building new scenarios. It also shows the correlation between BI and Strategic Foresight, offering an excellent mechanism for increasing companies' capacity to discern potential risks and opportunities. It also shows the powerful connection between BI and KM, highlighting how it could be crucial for organizations to transfer and integrate information. Senaratne et al. (2021) discussed applying Big Data analytics to improve interactions and enhance clusterization with Social Network Analysis. This approach enables the study of customer behavior using knowledge flow.

On the other hand, Nascimento et al. (2021) used a more generic methodology, calling these tools "emerging technologies," which can gather a whole amount of scenarios. He describes it as implying that these technologies impact both KM and Strategic Foresight, enabling a better decision-making process and showing that companies that develop these connections can achieve sustainable competitive advantage. With thorough research, Iandolo et al. (2021) explored the dynamics of utilizing Big Data and AI for collective knowledge applications. Adopting these instruments can help organizations improve their knowledge absorption capacity and combine it in innovative paths for future studies.

Going in the other direction, Santoro et al. (2018) make good use of the Internet of Things (IoT) phenomenon to develop a conceptual model proposing implementations of IoT with KM systems involving the exploration of ICT. This contributes to innovation management, which can increase business development and enable the implementation of disruptive ICTs in several processes, including Strategic Foresight. Ikeda et al. (2021) associated IoT and KM architecture to generate real-time collective knowledge, enabling the company's ecosystem to function in an interconnected and collaborative way. These IoT-associated applications, which are joined with Big Data, can manage information gathered from Strategic Foresight processes and help predict upcoming events.

Lista & Tortorella (2022) discussed the usage of KM combined with Industry 4.0 technologies, which are primarily about IoT enablers. They emphasize that Industry 4.0 plays a role in generating new knowledge during the design process. This concept can be applied to Strategic Foresight, using this fast knowledge acquisition to enhance event prediction.

Integrating the findings presented in sections 4.1 and 4.2 makes it clear that Knowledge Management and ICT play complementary roles in enhancing Strategic Foresight processes. The studies collectively suggest a coherent narrative: KM practices structure the identification, capture, and sharing of foresight-generated knowledge, while ICT provides robust analytical tools and platforms essential for managing and applying this knowledge effectively. Integrating Big Data analytics, Artificial Intelligence, and the Internet of Things into KM systems creates a powerful mechanism that transforms strategic foresight into actionable insights. Consequently, these technologies optimize internal knowledge processes and enable organizations to anticipate market changes and innovate proactively, thus bridging theoretical insights with practical organizational capabilities.

5. Discussion

Based on the results obtained, this section will discuss the most relevant topics for the future use of ICT in KM and Strategic Foresight processes.

5.1 What are the Opportunities for Expanding the use of ICT in KM and Strategic Foresight Processes?

Organizations can expand their ICT systems in KM and Strategic Foresight processes through several key steps. Firstly, they must evaluate their existing capabilities and pinpoint areas where ICT solutions can improve their KM and Strategic Foresight practices. Organizations might need to improve their ICT infrastructure, which could involve actions like investing in cloud computing and analytics platforms (Brandtner and Mates, 2021). AI and machine learning technologies are crucial for developing KM and Strategic Foresight processes, enabling organizations to analyze trends, mine data, and extract valuable insights. Integrating collaborative tools such as project management software and virtual collaboration platforms makes knowledge sharing and teamwork more accessible among employees (Brandtner and Mates, 2021). It's worth mentioning that companies should also invest in human-machine collaboration and Large Language Models (LLMs) to have an even greater improvement in KM and Strategic Foresight research processes, making the most of what AI can give.

5.2   What are the Limitations of the ICT Implementation in KM and Strategic Foresight Processes?

While ICT systems offer significant potential for enhancing KM and Strategic Foresight processes, we acknowledge a few limitations. Firstly, high implementation costs can become a barrier, especially for smaller organizations with limited budgets or in developing countries (Zhang and Huang, 2020). The complexity of ICT systems and the need for specialized workers to effectively utilize them also bring challenges. Many organizations may lack the necessary in-house talent or experience to fully leverage the capabilities of ICT systems in KM and Strategic Foresight (Zhang and Huang, 2020). Also, dependence on ICT systems can generate vulnerabilities such as cybersecurity threats and data privacy concerns, requiring defenses to mitigate risks, which will generate more money investments. In addition, the rapid pace of technological change may cause ICT investments to be obsolete within a short time, necessitating continuous updates and upgrades to maintain relevance.

5.3   The use of AI in KM and Strategic Foresight Processes

The literature reviewed reveals clear commonalities and contrasts in how AI supports KM and Strategic Foresight processes. Commonly, researchers emphasize AI's capability to enhance data analytics, pattern recognition, and predictive modeling, significantly improving organizations' abilities to anticipate future trends and capture strategic insights. However, there is also a notable contrast. While some studies emphasize AI's role primarily in automating knowledge storage and retrieval, others highlight its proactive application in generating innovative knowledge and enabling dynamic organizational learning. Thus, the synthesis of these perspectives suggests AI serves a dual role—both as a sophisticated repository manager and a proactive agent facilitating strategic innovation and adaptability.

Additionally, AI boosts the storage and retrieval of explicit knowledge by organizing and summarizing information from various sources, such as legal precedents or enterprise communication channels. Also, AI supports knowledge applications by providing faster access to relevant information and offering more intuitive interfaces, such as chatbots, for interacting with knowledge repositories, and that helps foresight by enabling organizations to harness the power of data-driven insights for informed decision-making and innovation (Jarrahi et al., 2023).

Other researchers have also addressed some insights on those questions. Yepes & López (2021) state that building on previous knowledge transforms beliefs and patterns, from which they conclude that the more capabilities an organization has, the greater its adaptation to technological changes will be. On the same page, Da Silva et al. (2023) say that organizations that manage their knowledge tend to perform better in Futures Research activities than those that don't because much of the necessary knowledge is already identified and explicit and that Futures Research can help identify, create, acquire, store, transfer, and use organizational knowledge, generating feedback to improve KM processes.

Speaking of ICT, Hijazin et al. (2023) discuss the amalgamation of BI and Strategic Foresight offers organizations a powerful mechanism for enhancing their capacity to grasp their current situation comprehensively, discern potential risks and opportunities, and make well-informed decisions that seamlessly align with long-term strategic goals. Their work also developed the hypothesis that KM plays an essential role in moderating the relationship between BI and Strategic Foresight as it serves as the foundation for Strategic Foresight initiatives by efficiently capturing, organizing, and managing information and also contributing to maintaining a long-term orientation by preserving institutional memory and providing support for strategic planning, while Senaratne et al. (2021), studied the relationship between KM and Social Network Analysis, and after reviewing more than 13,000 articles, brought up the concept of Knowledge Network Analysis technique, which is an extension of the Social Network Analysis with the implementation of Big Data analytics. Nascimento et al. (2021) also validate by introducing how emerging technologies can impact the usage of KM and Strategic Foresight. They say that such technologies can enable better decision-making, performance, and success for companies based on KM and strategic foresight as they can allow an upgrade in the very functions of Strategic Foresight and KM.

6.   Conclusion

While this review highlights important insights from existing research, our analysis underscores the need for a more precise articulation of how Knowledge Management, Strategic Foresight, and ICT integration uniquely contribute to organizational advantage. From our viewpoint, the effective combination of these domains provides organizations with enhanced capability to anticipate future scenarios and leverage foresight-derived knowledge systematically through robust technological tools. Our structured synthesis emphasizes this

integrated approach as essential for organizations that sustain innovation, adaptability, and strategic responsiveness in rapidly evolving environments.

Integrating ICTs into KM and Strategic Foresight processes presents a promising avenue for organizations seeking to tackle the complexities of today's dynamic business environment. ICT systems can use advanced data analytics, AI, and predictive modeling techniques to enhance the effectiveness and endurance of KM and Strategic Foresight practices.

This work aimed to find the state-of-art literature on KM and Strategic Foresight united with ICT implications through a Rapid Review. The results obtained from the analysis clarify the effective integration of KM practices into the Strategic Foresight process and the application of ICTs in managing future knowledge. The findings reveal a common perspective among the selected articles, showcasing various methodologies and tools utilized to enhance KM within the context of technological foresight. Researchers have demonstrated innovative approaches to using information for better decision-making and scenario-building, from exploring collective knowledge systems to utilizing Big Data analytics and IoT. These insights highlight the importance of exploiting emerging technologies and methodologies to navigate the complexities of the future landscape effectively. By embracing these advancements, organizations can enhance their capacity to anticipate risks, identify opportunities, and achieve sustainable competitive advantages in an ever-evolving business environment.

This review makes contributions to integrating KM, Strategic Foresight, and ICT within organizational contexts. Firstly, it provides an up-to-date synthesis of existing literature, offering insights into the current state-of-the-art of this field of study. Furthermore, the review showcases different research approaches for enhancing KM and Strategic Foresight practices by identifying methodologies and tools, such as collective knowledge systems, Big Data analytics, and IoT. Our goal is to be useful for researchers when researching this relationship, to have answers to initial questions regarding ICT integration, and to gather the latest studied information on academia.

Unfortunately, we had some limitations during the work process. First, we highlight the scarcity of articles for the review. Only 12 articles made it through the final analysis on using ICT to improve KM and Strategic Foresight. Another limitation related to the first is the lack of practical studies to test a central hypothesis, with a broader range of studies and a comprehensive use of ICT utilization.

Although the RR has provided valuable insights into the use of ICT for KM and Strategic Foresight, there is an intrinsic limitation to this approach. RRs, by nature, have a constrained time frame, leading to a potentially limited scope and incomplete quality assessment. To address this limitation, future research should undertake a more comprehensive literature review, incorporating a broader range of sources, to explore other aspects of ICT applications in KM and Strategic Foresight. This would offer a deeper and more nuanced understanding, contributing to more robust strategic planning and decision-making.

We aim to provide a valuable resource for organizations that rely on KM or Strategic Foresight and are considering implementing new ICTs to improve their operational processes and boost efficiency. We have examined various studies and analyzed how different ICT tools can be integrated into KM and foresight practices. By doing so, we offer insights that can guide organizations in their technology adoption journey, helping them understand which technologies are most effective for their specific needs and how to implement them to maximize benefits. Whether organizations want to enhance collaboration, streamline workflows, or facilitate better data analysis, our work provides a foundational understanding that organizations can build upon. Ultimately, this will encourage more organizations to embrace ICT solutions, leading to improved decision-making and strategic outcomes.

Ethics Declaration: Ethical clearance was not required for the development of this research.

AI Declaration: AI tools such as Grammarly and ChatGPT were used solely for language revision. The authors' analysis and interpretations are their own.

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