# Supporting the implementation of AI in business communication: the role of knowledge management

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**Abstract**

**Purpose** – *Although the use of artificial intelligence (AI) has been estimated to be up to 56% in the last decade, the adoption rate of AI for communication activities is still low. The lack of in-depth literature on the subject, and the limited sharing of the experience gained by companies, limits the creation, dissemination and consolidation of understanding in this area. The purpose of this study is to solve the problem of the absence of knowledge, identification, skills development and introduction of an innovation (such as the AI in the business communication) in the company, with the principles of knowledge management (KM).*

**Design/methodology/approach** – *This study adopts the perspective of KM to provide guidelines for the definition of standards and facilitate the introduction of AI in business communication.*

**Findings** – *To the best of the authors' knowledge, this study is the first to relate the perspectives of business communication, AI and KM, activating a virtuous circle between KM and AI. At the centre of the proposed model are people, processes and technologies, based on which KM represents the ideal perspective to define the implementation of AI. This is primarily from the perspective of augmented intelligence, owing to the inability of AI to completely replace humans in the business communication processes, as it lacks, among others, emotional intelligence.*

**Research limitations/implications** – *This study finds in KM a possible strategy to solve the problems faced so far in applying AI in business communication processes, providing a model capable of transforming and adapting itself to the context, thanks to the open approach.*

**Originality/value** – *This study contributes to the literature by linking the introduction of emerging technology (AI) in a specific process, such as business communication, from the KM perspective.*

**Keywords** *Artificial intelligence, Knowledge management, Business communication, AI adoption, AI diffusion*

**Paper type** *Viewpoint*

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## Introduction

Over the last decade, the focus on artificial intelligence (AI) has significantly increased (McKinsey, 2020). In the research context, the number of scientific articles on the subject has more than doubled, and the number of PhD students undertaking this specialisation is constantly growing. On the entrepreneurial side, companies are ready to hire PhD doctors and further invest in implementing AI in their processes. Researchers are willing to find start-ups and lead innovation in AI. In the last decade, 56% of organisations interviewed by McKinsey (2021a, 2021b) confirmed the adoption of AI (in at least one company function). It has notably impacted firms' behaviours and performance (Porter and Heppelmann, 2014) and relevant value creation for companies in different disciplines and fields (Shoham, 2018).

Despite this favourable context, when vertically focusing on AI adoption in communication management field, the results are completely different and show a modest degree of AI

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implementation in organisations (Zerfass *et al.*, 2020). Some authors relate the causes of this phenomenon to the characteristics and resources of organisations (among others, communication structures and processes and lack of staff skills; Baccarini *et al.*, 2004). Others relate the cause to the configuration of their macroenvironment (e.g. infrastructure technologies and government regulations), and others to the scepticism of professionals who evaluate an unfavourable cost–benefit ratio for their category because they believe there could be a devaluation of skills and competencies recognised in their role (Makridakis, 2017; Tredinnick, 2017).

The way AI creates value for companies is profoundly connected with workers in terms of AI usage and AI contribution to their personal value (Ransbotham *et al.*, 2022). In the communication field, there needs to be more in-depth literature on AI in communications (Zerfass *et al.*, 2020), while the interest of communication scholars in reaching a better understanding of this evolution is continuous (Rogers, 1986).

Additionally, organisations learning to gain an advantage from AI implementation do not share the experience gained so far, intentionally hiding the knowledge requested by others (Connelly *et al.*, 2012). This behaviour is often reiterated in competitive fields (Caputo *et al.*, 2021), preventing the creation, homogenisation, dissemination and consolidation of AI practices in business communication (Pironti and Iaia, 2022a, 2022b). This lack of knowledge significantly impacts the perception of AI by organisations, industry professionals and consumers, as it is linked to the awareness and understanding of the AI concept (Chen *et al.*, 2022).

To a problem based on the absence of knowledge, the identification and development of skills and the introduction of an innovation in the company, the managerial literature responds with the principles of knowledge management (KM) (Del Giudice and Cillo, 2022; Fait *et al.*, 2022).

Even if a conceptual relationship between business communication and KM is recognised, the link between these issues has not been studied in the literature (Cidade *et al.*, 2022; Saladrigas *et al.*, 2016), and emerging technologies are still less. Therefore, this research aims to fill the gap identified thus far and facilitate the effective and efficient adoption of AI technology in business communication processes through KM, which allows the creation, standardisation and transfer of knowledge. Additionally, KM represents the link between the strategic management of employees and organisational learning, which is fundamental for AI from the perspective of open collaboration.

### *Digital transformation of business communication: introducing artificial intelligence*

In any historical period, the introduction of new technology has taken place with profound transformations, which alter its paradigms and dynamics. This has also occurred in business communication, where technological innovations have evolved means and tools, modifying their dynamics (Lalić *et al.*, 2020). Digital transformation continues to contribute to the organisation's evolution, owing to the ability of digital technologies identified with Industry 4.0 to improve innovation and competitive processes (Ardito *et al.*, 2022).

Among the so-called *disruptive technologies*, Panetta (2018) highlights the enormous potential of AI. Kaplan and Haenlein (2019) defined AI as "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation".

Business communication refers to the study of oral and written communication and all the activities of management and orchestration of communications in the workplace aimed at various audiences (Van Riel and Fombrun, 2007). Therefore, the implementation of AI tools and technologies (among others, *machine learning*, *natural language processing* and neural networks) able to imitate human behaviour (Huang and Rust, 2018) in the communication processes has led to several transformations regarding two main aspects (Kopalle *et al.*, 2022). The first aspect is the evolution of the internal work processes, which

moved from paper-based communication to a *paperless* one and is now searching for a good compromise for an automated one. The second aspect relates to the integration of digital channels and media into their communication processes, marketing and public relations activities. This digital transformation continuously encourages the identification of new competencies and skills, along with the creation of new jobs linked to the use of these new digital tools to achieve an organisation's purpose of being competitive and innovative (Anshari and Hamdan, 2022).

AI supports the development of business communication through a triple adaptation process (to the user, context, or message), simplifying and automating communication (Reeves, 2016) and the related social processes that depend on it (Gehl and Bakardjieva, 2016). Implementing this technology has led to improvements in the efficiency and effectiveness of communication processes and teams due to the support, mediation and facilitation activities that AI can provide (Hancock *et al.*, 2020).

The compelling aspect of the application of AI in communication is its ability to carry out activities and cover roles that have historically been performed by human beings in the discipline of communication, altering the balance of human beings (Guzman and Lewis, 2020). Introducing AI and its communicative dimension in communication processes have redefined the advanced human–machine dynamics, raising the doubt that communication activity could not be an exclusive prerogative of the human being, as technology can play the roles of mediator and communicator (Guzman, 2018).

### *Business communication and artificial intelligence: Looking for correct relationship*

Owing to the digital transformation of various companies, business communication and communication departments have witnessed an increase in the tasks and functions to be performed, becoming an even more complex and significant area for companies (Brockhaus and Zerfass, 2022). This department is responsible for processes of absolute importance for the company's survival. This includes managing any image crisis, internal communication and involvement of employees, in addition to all initiatives that concern engagement initiatives through various corporate channels with the public (Cidade *et al.*, 2022). For this reason, correct AI implementation, which will automatise selected activities occurring in potential bias if not well built, is becoming increasingly strategic for companies (Moore, 2018).

New technologies and media represent enormous potential for organisations, and communication scholars aim to better understand the dynamics of these aspects (Rogers, 1986).

The first focus born: old or new paradigms? Moving from this interest, at the beginning of AI implementation, communicators adopted the anthropocentric paradigm reiterated by studying traditional media rather than the definition of new paradigms (Gunkel, 2012). This did not allow for the full exploitation of the potential of new technologies, outlining the perspective of pure mediation instead of a novel form of communication.

However, further investigation has considered new technologies in communication processes as a social actor, trying to understand the interactions between humans and computers (Sundar, 2008). The nature of AI devices configures them as real communicators or mechanical subjects *with which* and not only *through which* people create meaning. This challenges researchers and practitioners for a rethinking and experiment with the theories used to investigate previous technologies for the newest because the role of AI should not be restricted to a mere channel of mediation for people (Guzman and Lewis, 2020). AI technologies have been shown to mediate, contribute and even create oral and written communication. Furthermore, when they act as communicators, they vary their functioning according to the role of interpersonal interlocutors or content producers. For instance, Alexa responds vocally to questions and requests, chatbots can intervene in textual discussions simulating human interaction, and some journalistic articles are written by *ad hoc* editorial software, which tries to make themselves indistinguishable from those

written by a reporter. These technologies have automated some traits of communication and related social aspects, creating new spaces for innovative dynamics as functionality has increased. The dynamism of interactions between devices/software and humans depends on the exchanged messages and context and the data entered into the program. Other AI technologies can be reactive, learning from their partners in the communication exchange and regulating interactions, requiring increasingly complex design and operation. Considering AI in its human-machine role and the interactions developed between them allows technology to be assigned multiple roles within the communication. This stimulates alternative ways of thinking about the design of technology, its function, how people perceive and interact and a new understanding of the possible interactions between humans and machines (Spence, 2019; Peter and Kühne, 2018).

Another challenging trait comes from a theoretical and applicative point of view, as human–machine interaction based on AI implies a dual role. The role sees the machine assisting human beings and the human beings assisting the machine (Wilson and Daugherty, 2018) in a symbiotic support relationship (Kaplan and Haenlein, 2019). This is particularly relevant as AI is increasingly capable of carrying out tasks traditionally conducted by human beings, allowing an increase in human capabilities in terms of cognitive and physical aspects (Kopalle *et al.*, 2022). In business communication, these AI characteristics are shaping a new way aimed at simplifying and improving team communication processes and corporate collaboration (Webber *et al.*, 2019; Fleischmann *et al.*, 2021), through the use of several tools dedicated to (Getchell *et al.*, 2022): communication and team meeting, augmented writing, text synthesis, oral communication evaluation and automated communication assistance (conversational agents).

Despite the multiple potentials AI represents for business communication, companies need help in implementing AI in the internal communication processes of companies (Makridakis, 2017; Tredinnick, 2017). It is known that the main criticism concerns the distrust of professionals towards technology owing to the belief that AI can appropriate the work of employees and the lack of skills on the part of employees, which complicates its implementation, effectiveness and efficiency. A further element can be found in the attention-based theory (Ocasio, 1997). It allows us to hypothesise that a manager's attention tends to focus on the machine, leaving out the complex process of acceptance, adoption and use of technology that employees must face and the impact of the adoption of AI on the entire organisation. This should be considered a huge mistake, as the value creation of AI is based on its link with the entire organisation, how employees use AI and how AI contributes to their value (Ransbotham *et al.*, 2022).

### *Looking for perspective: knowledge management for solving critical point for the artificial intelligence implementation in business communication*

KM is the process that concerns the accumulation, dissemination and effective use of knowledge (Davenport, 1996) or the resource that allows the company to differentiate itself and achieve a sustainable competitive advantage over its competitors (Caputo *et al.*, 2019; Mahdi *et al.*, 2019).

KM is the ability to generate and exploit internal and external knowledge aimed at supporting decision-making, encouraging innovation and achieving superior organisational performance (Ashok *et al.*, 2021; Hlupic *et al.*, 2002) and acting as an accelerator of innovation (Anshari and Hamdan, 2022). One of the most important roles of KM is its ability to engage employees so that they feel supported and assisted in effectively using available resources and information and improving process efficiency (Anshari and Hamdan, 2022; Grimsdottir and Edvardsson, 2018).

To respond to the lack of information on the implementation of AI in business communication processes, KM can direct the needed information to the task to perform or a problem to solve, to support its development so that work performance can be improved by introducing new technology and with the hope of generating innovation (Temel and Durst, 2020; Haamann and Basten, 2019; Del Giudice and Cillo, 2022; Fait *et al.*, 2022).

In this sense, the KM is essential because it solves the problems encountered in implementing AI in business communication differently. Firstly, the KM allows companies to be explicit about the knowledge that would otherwise remain tacit, providing useful information that could be included in the decision-making processes. In the specific case, KM for the implementation of AI would allow the rise of practices in the use of AI for communication processes that would consolidate processes and practices and improve the work of the entire organisation. In addition, KM leads the information flow created within the organisation and preserves trust among workers (Černe *et al.*, 2017).

The second consideration concerns the ability of the KM to improve skills and efficiency. In this sense, the application of KM to emerging technologies has great potential. Open innovation encouraged by KM (Anshari and Hamdan, 2022) makes it possible to collect, share and store data, information and knowledge from inside and outside the organisation. More importantly, it stimulates collaboration between talents, maximising the potential of employees and creating a competitive advantage (Grimsdottir and Edvardsson, 2018). The goal is to encourage the disclosure and sharing of knowledge. This is so that the organisation that is implementing AI and other organisations that would like to introduce it in its business communication processes can define appropriate routines and processes to facilitate the introduction of new technology or to continuously improve the efficiency of the process (Al-Husseini *et al.*, 2015), contrasting knowledge hiding (Caputo *et al.*, 2021).

Finally, KM could help improve the organisational performance of the companies involved, owing to the management, acquisition, sharing and archiving of knowledge. An important aspect of business communication is the involvement of different teams that interface with the communication department, which needs to integrate its information and those belonging to other areas of the company and external audiences (Cidade, *et al.*, 2022).

### *Proposal of model from perspective of knowledge management*

Therefore, what should be triggered within organisations to implement AI in business communication is a real learning process that allows the technology and the people involved to align themselves to generate and grasp new opportunities (Fisk, 2017). Simultaneously, implementing AI and KM in business communication processes would activate a virtuous circle of efficiency improvement through disseminating knowledge, skills enhancement, an open-source approach, new technologies and personalised content (Anshari and Hamdan, 2022).

Anshari and Hamdan's (2022) model aims to read KM from an Industry 4.0 perspective, according to which KM should focus on the search for a strategic balance based on three factors: people, processes and technologies. This study provides a reading of KM for these elements to facilitate the introduction of AI in business communication processes.

Understanding the *human component* of KM (*people*) in business communication would mean identifying the transversal and complex skills needed to implement AI and knowing how to use the resulting information. The main interest concerns the identification of current and future skills of the human factor for existing and forthcoming jobs (Holford, 2019). KM can achieve this objective through a learning process based on the successes and failures occurring and from the experience of employees in other company locations; using crowdsourcing (Dimitrova and Scarso, 2017), allows the capitalisation of knowledge useful for improving skills and processes for searching new solutions.

Opening a dialogue with employees makes it possible to discover the so-called "hidden innovators" (Dimitrova and Scarso, 2017), emphasising the value of working on talents and developing skills that can evolve. Adopting an evolution of the definition of AI that regards *augmented intelligence*, the essential role of humans has emerged. Augmented intelligence is assumed to be a design approach and implementation of AI that improves human intelligence as it expands human information processing capabilities (Crigger and Khoury, 2019). In a recent

evolution of this concept, Pironti and Iaia (2022a, 2022b) identified augmented intelligence value as follows:

$$A^2(Artificial\ x\ Augmented)\ \ Intelligence\ \ Value = \int_{past}^{future} f(Humans\ \ capabilities)$$

Therefore, the second factor, linked to company *processes/procedures*, provides that KM can guide and standardise the business communication processes that adopt AI to improve efficiency and effectiveness. In this sense, Sadiku *et al.* (2021) proposed a cycle consisting of five phases: the first is *Understanding*, in which the systems derive meaning from the data entered; the second is *Interpretation*, in which the system compares the previous data and tries to interpret the new data; the third is *Reasoning*, which is the output created by the system for the new data set; and the fourth is *Learn*, in which the human being is called to intervene because of the characteristics that AI does not possess (Amabile, 2020; Galloway and Swiatek, 2018; Botega and da Silva, 2020), such as creativity, the ability to innovate, problem-solving, critical thinking, emotional intelligence and intuition, judgement, evaluation and decision-making, service orientation, negotiation and cognitive flexibility. Therefore, at this stage, an employee's task will provide feedback on the output by which the AI system will adapt itself. The last phase is *Assure*, in which blockchain or AI technology guarantees the security and compliance of the developed solutions.

In imagining this process, KM can ensure the reorganisation of work and enhancement of skills that facilitate adopting and implementing AI in business communication.

The last factor considered in the proposed model is that of (*emerging*) *technologies* that support KM in knowledge-sharing activities, in the firm belief that the output provided by AI consists of providing forecasts, while the decision-making role is entrusted to human beings as the result of a forecast evaluation process. Therefore, the output of AI is configured as a behavioural guide and not as a decision maker (Agrawal *et al.*, 2017).

To speed up the understanding and implementation of AI in business communication and to define and disseminate knowledge and skills useful for the sector, the open approach already experienced by small and medium-sized companies can support this process, improving performance (Manfredi Latilla *et al.*, 2019). This path, and the open innovation approach, could lead to the definition of a standard, much sought after in the field of AI, for the transfer of knowledge, starting a dialogue with other companies and professionals in the communication sector and with the AI community, working for the advancement and evolution of technology (Jacobides *et al.*, 2021).

## Conclusions

Therefore, even in business communication, the current question concerns the management of artificial (and augmented) intelligence to fully grasp the potential made available to organisations. Therefore, KM, in its process of acquiring, using, transferring, developing and storing knowledge, which aims to make knowledge transparent and accessible to both the organisation and employees, represents the ideal perspective to define AI implementation in business communication processes.

From an academic point of view, for the first time in literature, this study relates the perspectives of business communication, AI and KM. At the centre of this model, there are *people*, *processes* and (*emerging*) *technologies* based on which KM is able to: assist employees, promoting the disclosure of tacit knowledge, dissemination, practice and the skills necessary to implement AI in communication processes; accelerate the introduction of AI in organisations, stimulating innovation; standardise the communication process based on AI, allowing its replication in other companies and sectors; and stimulate the emergence of new skills by the employees who use it, also thanks to the comparison with the AI community, with a view to an open learning organisation.

From a managerial point of view, this study highlights a significant change in the traditional paradigm of communication studies. Researchers are now trying to understand emerging technologies with a new paradigm, launching challenges that require further exploration and in-depth study to understand the role and applications of this technology in business communication (Holford, 2019). The upper level of challenge concerns the identification of new jobs. Future skills will be required and/or taught to employees, as the AI characteristics lead to an assignment of tasks according to which humans perform tasks related to feelings, while AI serves as a tool for allowing human beings to make better decisions, considering the high criticality that business communication entails. It should not be overlooked that the introduction of AI in business communication involves challenges not known yet (Getchell *et al.*, 2022) and concerns related to privacy, biases and inaccuracy of the data used by AI (Loureiro *et al.*, 2021; Manyika and Sneader, 2018).

For all of the reasons presented above, KM's perspective responds to the current need to develop up-to-date communication standards for leaders, teams and professionals in a manner that will continue to be more pressing as the implementation of AI increases in business communication processes.

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## Further reading

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Marco Pironti was a Visiting Scholar at the Center for Computational Research and Management Science, MIT, Boston (MA), at the Institute of Management, Innovation and Organisation, Haas School of Business, Berkeley, and at the CEBIz of Columbia University and a Visiting Professor at Westminster Business School (UK). He is a Professor of Innovation Management and Entrepreneurship at the University of Torino – Computer Science Department, the Dean of ICxT Interdepartmental Innovation Center and a Member of Scientific Committee of PhD program in Innovation for the Circular Economy. He is an Author of more than 100 articles and other publications. His main research interests are relating to strategy, innovation management and business modelling and planning. He was the Deputy Mayor of Innovation, Smart City and information and communication technologies Systems of the City of Torino. He was carrying out the strategy of innovation and digitisation of the ecosystem of Torino. His vision for the territory is to turn into a laboratory for testing frontier innovations open to the world, but especially an administration vision that is always looking to citizen participation. A cutting-edge city vision is based on Torino City Lab, an initiative-platform aimed at creating simplified conditions for companies interested in conducting testing in real conditions of innovative solutions for urban living. Promoted by the City of Turin, it involves a vast local partnership of subjects from public and private sectors interested in supporting and growing the local innovation ecosystem and frontier innovation.

Cinzia Genovino received PhD degree in Management and Information Technology from the University of Salerno, Italy, in 2016. She is a Research Fellow with the School of Law at the University of Salerno, Italy. She also teaches Business Management at the University of Salerno and Marketing Management at the Giustino Fortunato University of Benevento. She is skilled in entrepreneurship and innovation and heritage management. Since 1998, she has been working as a Managerial and Financial Consultant for various organisations, particularly in the finance and banking sector.