ARTIFICIAL INTELLIGENCE AS SUPPORT FOR COMMUNICATION IN DISTRIBUTED TEAMS

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Abstract: *The development of modern technologies, intensified by the global COVID-19 pandemic, has perpetuated the hybrid work model. For many organizations, creating an inclusive work environment for employees from different time zones and cultures has become crucial. For highly complex tasks, traditional telecommunications tools such as email and instant messaging often failed to deliver the expected results. Communication support for distributed teams is increasingly being provided by AI solutions, implementing AI in live meeting translation, preparing meeting summaries and analyses, utilizing email and instant messaging assistants, process automation, and reducing information noise. With the implementation of AI, concerns also arise regarding data processing, data security, and potential job losses. The primary objective of this article is to: a) review current state of AI solutions adopted in enterprises, specifically examining how artificial intelligence applications support internal communication processes, b) assess whether AI can serve as a catalyst for collaboration in international, distributed teams. A key recommendation is to ensure that AI is implemented in organizations as a tool that supports, rather than replaces, human workers.*

Key words: *artificial intelligence, modern technologies, communication, hybrid work, distributed team*
JEL codes: *O33, L86, L96, J22, M54*

1. Introduction

In the knowledge-based economy model, closely linked to the concept of the information society, the key resources are knowledge, information, and ICT technologies. These concepts began to gain importance in the 1970s - with the development of telecommunications and computerization, information began to be perceived as a key economic good. The 1980s and 1990s brought an intensification of these processes and the development of global networks, thanks to which the use of modern telecommunications technologies became widespread. Information became a commodity and a source of comparative advantage (Balcerowicz-Szkutnik & Sroka-Lacković, 2023).

The concepts of a knowledge-based economy and an information society should be considered foundations for the development of flexible employment, among other things (Bosch-Sijtsema, 2011). The growing reliance on intellectual property and human capital has shifted the emphasis from physical input to intangible assets - knowledge and information - resulting in an increasingly flexible labor market. Remote work has filled a market gap and become a response to the challenges of the 21st century. 2020 proved to be a particular test, bringing a global pandemic, isolation, and a push for further, more intensive development of telecommunications. In the realities of a global economy and international, distributed teams, effective, and above all, fast and clear communication has become critical.

This article contributes to the growing body of literature on AI-enabled organizational communication by providing an empirically-grounded review of artificial intelligence applications specifically designed for distributed team collaboration. While existing research has examined remote work challenges and AI capabilities separately, this study bridges these domains by categorizing AI communication tools and evaluating their impact on international team performance in the post-pandemic hybrid work environment. The research offers three key contributions: first, it presents a structured review of AI solutions across meeting transcription, live translation, and process automation, filling a gap in the fragmented literature on communication technologies; second, it provides a balanced analysis of both opportunities and limitations, addressing critical concerns around data security, job displacement, and organizational trust that have been underexplored in prior studies; and third, it delivers actionable implementation guidelines grounded in the principles of ethical AI adoption, emphasizing human-centric design rather than technological replacement.

The main purpose of this article is to review the current state of AI solutions adopted in enterprises, as well as present the application of AI in internal communications. Furthermore, the article assesses whether AI can catalyse collaboration in international teams. It serves as a starting point for further research related to critical analysis of tensions between AI efficiency and human connection in distributed teams.

2. The development of artificial intelligence and its role in communication

In 2026, we can look back on the pandemic with perspective. The question arises: how has the rapid increase in employment flexibility affected organizational structure? It has certainly perpetuated the hybrid work model (Yang et al., 2022). Consequently, many organizations have prioritized creating an inclusive work environment for employees from different time zones and

cultures. Traditional telecommunications tools, such as email and instant messaging, often proved insufficient for effective communication in highly complex tasks.

Many solutions are provided by the implementation of artificial intelligence, which supports the communication of distributed teams, among others, by: translating live meetings, preparing summaries and analyses of meetings, using email and instant messaging assistants, automating processes, and reducing information noise.

The year 2020 and the global pandemic have led to the rapid expansion of remote work across many sectors, and working in distributed teams has become a dominant trend. The definition of a distributed team refers to a group of individuals or employees with complementary competencies, pursuing a common goal, but who are geographically distant from each other (Janik et al., 2023). They are united by a common organizational framework, such as culture, country, or time zone. A distributed team, often referred to as a virtual or remote team, is associated with a remote or hybrid work model and relies on digital communication tools such as instant messaging, video conferencing, and project management platforms (Hinds & Bailey, 2003). It can be both local - for example, for employees residing in a similar area of a city or metropolitan area but working hybrid or entirely remotely, and global - for international teams whose collaboration occurs entirely through digital communication channels. Thanks to the interaction between individual team members and technology, distributed employees are able to pursue specific, common goals (Cheshin et al., 2013).

Artificial intelligence is becoming a key factor supporting communication in remote teams. It's worth emphasizing that the implementation of AI solutions isn't gradual. It's a highly dynamic trend, developing in real time. Artificial intelligence is introducing revolutionary changes not only in professional and work-life terms, but also in many other aspects of everyday life.

The term "artificial intelligence" was first introduced in 1955 by John McCarthy - winner of the Turing Award, awarded for outstanding achievements in computer science. McCarthy defined AI as *"the process of constructing machines whose behavior could be said to be similar to human manifestations of intelligence"* (Różanowski, 2007, p. 110). In the 1980s, references to attempts to create "thinking computers" appeared. (Haugeland, 1985). Subsequently, in the 1990s, attempts were made to further define the specific areas developed by artificial intelligence. Ray Kurzweil (1999) associated AI with knowledge bases, expert systems, image recognition, automatic learning, natural language understanding, robotics, etc.

More contemporary definitions, such as the terminology cited by the European Commission (2018), refer to AI as systems designed by humans that *"exhibit intelligent behaviour by analysing their environment and taking actions to achieve specific results. The actions taken by these systems can be largely autonomous"* (Resolution of the European Parliament of 3 May 2022 on Artificial Intelligence in the Digital Age, 2022).

All of the definitions presented above focus on the creation of computer solutions modeled on the human brain. The system is capable of observing its environment and drawing conclusions. Using available information, it analyzes, plans, and takes actions to achieve a programmed goal (Ilnicka, 2024).

Due to the multiple forms of AI use, the focus of this article was narrowed to the role AI plays in organizational communication. Particular attention was paid to communication within distributed teams.

3. AI in Meeting Summarization and Analysis

A prime example of AI's use in improving communication efficiency is automated meeting transcription. Tools like Microsoft Teams, Otter.ai, Fathom, Fireflies.ai, and Sembly AI, for example, offer transcription and voice recognition capabilities. This significantly improves the accuracy of recording agreements, key decisions, and post-meeting tasks.

For example, Otter.ai can sync with Google or Outlook calendar and automatically connect to the meeting. Then, when recording is started, the tool will begin real-time transcription, automatically distinguishing participants' voices. After the meeting, notes will be shared in the " Summary" tab and can also be exported to a text or PDF file.

In the past, note-taking was typically done by a single person, who focused primarily on meticulously preparing notes during the meeting, then editing them and distributing them to participants. This meant that the note-taker's active participation in the meeting was limited and required additional time afterward. Furthermore, absentees could only refer to the email summary (if provided). Current solutions are much more effective - notes are precise, leaving no room for interpretation. Another benefit is the time savings and the ability to review the full transcript at any time.

4. AI in translation and bridging language barriers

One of the key applications of artificial intelligence is the use of live meeting translation systems. This feature is available in MS Teams Premium and Worldly AI Translation Agent,

among others, which enable simultaneous translation of conferences or workshops without the need for additional resources such as a translator.

A significant advantage is undoubtedly the reduced costs of hiring an additional interpreter, mitigating risks related to availability or the human factor (e.g., sudden indisposition). Translation is available in real time and can also be recorded, and AI can prepare summaries, notes, and plan next steps after the meeting. For internationally dispersed teams, one consequence is improved collaboration within the team, reducing the risk of misunderstandings, and creating an inclusive work environment.

For example, MS Teams Premium can prepare a real-time transcript, including the exact time and presenter. When recording is initiated, transcription begins automatically. Teams can automatically detect whether meeting participants speak the same language. In the event of a discrepancy, Teams sends a notification to the organizer, co-organizer, or the person who enabled transcription. The original language and the translation language can be changed in the settings. The transcript, along with the translation, can be downloaded and shared with participants after the meeting.

The Worldly AI Translation Agent can be used in various messaging platforms, such as Zoom, Teams, Google Meet, Webex, and live meetings. A link to a specific Worldly session, or a QR code that participants can scan, allows them to select their preferred translation language. This eliminates the need to download additional apps. Furthermore, the Worldly platform offers users personalization - with vocabulary related to a given industry or organization, and even the addition of specific product names. This makes translation even more transparent and understandable.

5. Chatbots and virtual assistants in communication management

Artificial intelligence is also frequently used in the form of virtual assistants or chatbots. For example, email and messaging assistants such as Copilot and Clara support email analysis and prioritization and are also capable of automatically categorizing messages. Additionally, AI assistants offer features such as scheduling meetings (including finding a convenient time for all participants, sending invitations, and preparing an agenda) and document searches. Tools can be personalized by learning user preferences, for example, with respect to a group of recipients - the assistant will suggest contacts based on the frequency of a given person's correspondence. Another interesting solution is the use of so-called project assistants, such as

Monday.com, which streamline project management through status updates, deadline reminders, and more.

As Yevhenii Bombela (2025) points out, chatbots and assistants integrated with platforms such as Slack, MS Teams, or Jira are key tools for streamlining communication flows in distributed teams. Their main benefits include providing immediate access to information and automating routine processes.

A summary of the presented solutions is presented in Table 1.

Tab. 1 Examples of AI applications in organizational communication and meeting management

AI application area	Example tools	Main functionalities	Organizational benefits	Limitations/Challenges
Automatic transcription of meetings	Microsoft Teams, Otter.ai, Fathom, Fireflies.ai, Sembly AI	Real-time transcription, speaker recognition, summary generation, note export, calendar and communication platform integration	Time savings, greater accuracy of notes, the ability to fully participate in the meeting, easy access to the archive of arrangements	Risk of speech recognition errors, privacy and data security issues
Analysis and summary of meetings	Microsoft Teams, Otter.ai, Sembly AI	Automatic identification of key decisions, tasks and next steps, creation of post-meeting reports	Improved knowledge management, easier monitoring of task implementation, reduced risk of omitting arrangements	The possibility of oversimplifying the context or misinterpreting the statement
Live meeting interpretation	Microsoft Teams Premium, Wordly	Simultaneous meeting interpretation, multilingual transcription, online and in-person conference support	Reducing translation costs, supporting international teams, and increasing the inclusiveness of communication	Possible translation errors, limitations in translating specialized vocabulary
Personalization of translations	Wordly	Adapting industry, organizational,	Greater precision of translations, better	The need to configure and update specialized dictionaries

		and product vocabulary	understanding of messages by participants	
Virtual communication assistants	Microsoft Copilot, Clara	Message prioritization, automatic meeting scheduling, agenda preparation, document search	Automation of routine tasks, improvement of work organization, faster flow of information	Dependence on the quality of integration with organizational systems
Project and organizational assistants	Monday.com	Project status updates, deadline reminders, task management support	Better project coordination, greater process transparency, and reduced administrative work	The risk of excessive automation and limited work flexibility
Integration of chatbots with communication platforms	Slack, Microsoft Teams, Jira	Automatic access to information, handling user queries, supporting communication in distributed teams	Shortening response times, increasing information availability, and improving collaboration	The risk of chatbots having limited understanding of complex problems

Source: Own study

6. Opportunities and limitations

As can be seen from the analysis of the solutions and functionalities presented in the article, the support of chatbots or virtual agents based on artificial intelligence is associated with a number of improvements, such as:

- Automatic transcription,
- Preparation of meeting notes, summaries, analyses - extraction of key decisions, tasks,
- Live meeting translation,
- Automation of processes related to, for example, arranging meetings, searching for documents, etc.
- Saving time spent searching for information,
- Support with the onboarding of new employees through easier access to information.

As a consequence, artificial intelligence influences work culture and efficiency by:

- Eliminating cultural and linguistic barriers,
- Reducing the risk of isolation and confinement in remote teams,
- Precise recording of findings - saving time,
- Reduction of information noise,
- Reduction of repetitive tasks,
- Process automation.

Despite the numerous benefits of using AI in communication, concerns arise regarding data processing and its security (e.g., the spread of disinformation, the creation and reproduction of false information, data theft, etc.). Alvarez et al. (2024) demonstrate that while generative AI can enhance accessibility and efficiency in science communication, it also raises concerns about accuracy, appropriate use, and the potential for miscommunication when AI-mediated content lacks proper human oversight. There are also concerns about potential job losses resulting from process automation - one in five employees fears that the widespread use of AI will result in a significant portion of human-held positions being eliminated (SD Worx, 2024). There is also a risk of notification overload in poorly optimized solutions. Consequently, AI may reduce trust within teams and disadvantage employees with lower levels of technological advancement or a greater aversion to change.

7. Critical Analysis: Tensions Between AI Efficiency and Human Connection in Distributed Teams

The implementation of artificial intelligence in organizational communication stands in contradiction with the technical considerations presented in the previous paragraphs. While AI evidently enhances operational efficiency through automated transcription, real-time translation, and intelligent task management, it also introduces structural tensions that may undermine the human connections critical for effective collaboration. This section discusses critical tensions that organizations must navigate when implementing AI-mediated communication systems in distributed teams.

Artificial intelligence solutions streamline communication for measurable outcomes: speed, accuracy, and productivity. As presented on example of tools such as Otter.ai or Sembly AI, decisions and action items can be captured with extraordinary precision, however it is worth to mention that some dimensions of effective team collaboration resist quantification e.g. emotional resonance or interpersonal trust.

Microsoft Teams or Fireflies.ai excel at automatic meeting summaries: tools can extract key decisions instantly, or within few seconds after the meeting, but they lack filter on critical social information: e.g. the hesitation before someone agrees to a deadline, the laughter that signals psychological safety, or the passionate disagreement that strengthens consensus. Such elements serve essential functions in building trust and enabling innovation (Hinds & Bailey, 2003).

AI-based communication shifts interaction patterns from relationship-oriented to transaction-oriented. There is high exposure to risk that over time, communication becomes functionally effective but emotionally neutral, which may be particularly challenging to distributed teams with very limited face-to-face interaction.

With regards to eliminating linguistic barriers, AI translates mostly a high-context - it neutralizes culturally significant communication style. As a result, teams may lose the perspective-taking and enhanced problem-solving that cultural diversity enables. Moreover, AI solutions are English-centred. Most AI translation tools reflect linguistic patterns from dominant global languages (mostly English). Team members from non-dominant cultures may experience their communication styles as constantly "corrected," which may lead to disengagement. As Choudhury (2023) notes, this 'language problem' in generative AI stems from fundamental asymmetries in training data availability and representation, making truly equitable multilingual communication through AI a persistent technical and ethical challenge.

Another issue, which is worth reviewing is transparency vs surveillance infrastructure paradox. As described in the article, one of the main benefits of AI implementation for distributed teams is real-time meeting transcription. For instance, Microsoft Teams automatically transcribes every meeting with precise timestamps. The transcription serves also as a permanent record of every statement. Reality in which every word is recorded, shapes the way people communicate. Teams avoid difficult conversations, withdraw from authentic dialogue, avoid creative controversy and shift towards self-censorship. Moreover, email and messaging assistants not only analyse communication patterns, but also monitor interaction frequency, response times, and content patterns. It may be perceived as a thin line between transparency and surveillance.

AI drastically automates routine communication tasks. It creates efficiency in terms of scheduling meetings or preparing messages, but also significantly impacts how we communicate. For instance, traditional scheduling required direct human negotiation that served multiple functions beyond calendar coordination: it created opportunities for personal

connection, demonstrated respect, and built reciprocity. AI scheduling assistants eliminate many relationship-building micro-interactions, as well as impact decision-making quality.

Delegating cognitive tasks to AI: summarizing information, translating languages and composing messages aims to free human mental capacity for strategic thinking. However, paradoxically, along with increasing reliance on AI, human skills may weaken over time in terms of active listening, language learning motivation or capability to handle tasks without AI support. This concern is reinforced by Nakadai et al. (2023), who argue that AI cannot replace authentic human cognitive processes and perspectives. Their research suggests that over-reliance on AI-generated insights and communication may not only erode human skills but also compromise the quality and authenticity of organizational decision-making that depends on genuine human judgment.

These tensions require thoughtful organizational attention. Organizations need to invest in human communication skill development alongside AI literacy, configure AI to include cultural communication differences and evaluate impact through trust and relationship quality metrics. Success is not only about efficiency but also requires recognizing tensions and designing systems that optimize for both productivity and humanity. Keeping “human in the loop” seems to be universal, strategic motto.

8. Summary and recommendations

This article addresses a critical gap in organizational communication research by examining how artificial intelligence supports collaboration in distributed teams within the post-pandemic hybrid work paradigm. The study makes three main contributions. First, it develops a taxonomy of AI communication tools: automated transcription, live translation, virtual assistants, and process automation. It provides researchers and practitioners with a structured framework for understanding the rapidly evolving AI-enabled communication ecosystem. Second, it offers a balanced assessment that extends beyond technical capabilities to critically analyze implementation challenges, including data security risks, employee concerns about job displacement, the potential erosion of organizational trust, and tensions between AI efficiency and human connection in distributed teams. Third, the research delivers evidence-based recommendations for ethical AI integration, emphasizing phased implementation, comprehensive employee training, and the foundational principle that artificial intelligence should augment rather than replace human workers.

Considering the AI solutions presented in the article in the context of distributed team communication, the thesis about whether AI catalyses collaboration in international teams can be considered accepted. Implementing AI into communication channels positively impacts the fluidity of communication in remote teams, minimizes the risk of linguistic or cultural misunderstandings, and reduces the time required to search for specific information. The findings confirm that while AI serves as a catalyst for international team collaboration, its successful implementation depends fundamentally on thoughtful organizational integration that prioritizes transparency, skill development, and human-centered design principles.

It's worth remembering that implementing AI alone doesn't guarantee improved communication effectiveness (Li et al., 2024). Proper organizational integration - ethical and transparent - is crucial, as is awareness of both the benefits and limitations of AI (Bombela, 2025). Comprehensive employee onboarding and ensuring the consistent development of AI skills are certainly beneficial. This positively impacts building trust in AI, reduces divisions within the team, and strengthens understanding of how specific solutions work. Gradual implementation, involving pilot groups, is also crucial, supporting the identification of language and cultural barriers and minimizing the risk of misunderstandings. The level of automation should also be personalized and tailored to the needs of the organization to enhance the effectiveness of the communication context. Too much notification intensity or too broad access to data monitoring can be counterproductive and lead to increased frustration and a decrease in trust.

In summary, artificial intelligence is becoming a necessity in modern business. It's crucial to implement it into organizations as a tool that supports, rather than replaces, humans.

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