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FROM SCREENS TO SYNERGY: HOW TRUST, COMMUNICATION, AND DIGITALIZATION ENABLE SUCCESSFUL VIRTUAL TEAMS

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Abstract: *The continuous and accelerated development of technology generated a new way of doing business, which is based on virtual teams as well as on digitalization and artificial intelligence (AI). This paper explored 45 reviewed studies and analyzed the elements that contribute to effective functioning of virtual teams. Despite the fact that the members of virtual teams are not located physically in the same location, they can be effective and even outperform collocated teams, provided an effective utilization of the following ingredients: trust, communication and digital tools. Nevertheless, this research found that periodic face-to-face meetings are still needed with members of the virtual teams. To have scalable teamwork within virtual teams, it is needed on one hand to effectively use the digitalization capabilities, included but not limited to secure connectivity, real time data and cloud platforms and on the other hand to exploit the capabilities of AI regarding routine tasks. AI can contribute to increase trust between team members, if clear procedures and explanations are used. Accordingly, it could lead to more transparent and equal workload distribution. This paper proposes a conceptual framework together with seven research propositions.*

JEL classification: M12, M54, M15, O33, D83
Key words: virtual teams, trust, communication, digitalization, artificial intelligence, face-to-face meetings, knowledge sharing, explainability

1. INTRODUCTION

Nowadays we are witnessing a rapid development of technology and managing virtual teams has become part of several managers' activity. Such teams rely on digitalization and artificial intelligence (AI) in their daily activity for carrying on their tasks and for communication. Research has shown that virtual teams represent a group of persons dispersed from organizational, geographical and/or time point of view, but they collaborate together based on different communication and information technologies, in order to achieve different tasks and objectives (Powell et al., 2004).

Hence, despite the fact that the members of such teams are not located in the same office, they have common goals to be achieved as well as a common commitment. In a study by Purvanova and Bono (2009) as well as in a study by Zheng et al. (2024), it was found that if virtual teams are managed properly, they might perform better than face-to face teams. However, managing virtual teams requires a different managerial approach and coordination than collocated teams, because team members are dispersed across distance and/or time (Hertel et al., 2005; Dulebohn and Hoch, 2017).

Research has shown that hybrid work as well as remote work became permanent solutions in several companies. Hence, working remotely modified the manner of communication and of working between employees, making their networks siloed and static. (Yang et al., 2022). Furthermore, hybrid collaboration increased employee retention and the work performance was not affected (Bloom et al., 2024). In a study by Vial (2019) and a study by Verhoef et al.(2021), it is explained that it was an intense digital transformation process across different organizations and now they are moving on to incorporating and integrating AI in daily work, which also includes different generative AI tools leading to increase of productivity (Brynjolfsson et al., 2025). Accordingly, today's virtual team is not connected only by phone or email, but by a socio-technical system in which the following are part of the daily activity: real-time data, cloud platforms and intelligent agents (Seeber et al., 2020; Vuchkovski et al., 2023).

Based on the above mentioned, this paper focused on exploring on one hand the elements that contribute to proper functioning of virtual teams and on the other hand, it reflects the importance of digital transformation as well as the impact of AI in the daily activity of virtual teams. This paper argues that trust and communication are very important between the members of the team, while the infrastructure for supporting the scalability of the team is ensured by digitalization.

The strengths of the team will be significantly amplified with the support of AI, if it is thoughtfully governed and designed.

The research's main objectives are the following:

1. Identify how to develop and to maintain trust in virtual teams;
2. Explore communication's role in virtual teams as well as the periodic face-to-face meetings;
3. Explore the way digitalization provides infrastructure for virtual activity between team members;
4. Explore how AI can contribute to increase trust and improve communication in virtual teams and accordingly, to identify the needed conditions to be achieved.

The current paper aims to connect the following literature streams, that are more often analyzed on a separate basis: research on virtual teams, research on trust, research on digital transformation and research on AI at work. It is shown that previous reviews focused more on virtual teams (Powell et al., 2004; Hertel et al., 2005; Morrison-Smith and Ruiz, 2020) or on AI (Seeber et al., 2020; Webber, 2025), but on a lower extent on how these elements sustain each other. A conceptual framework and several propositions for research to be eventually tested in future empirical studies are presented by the paper by integrating the above-mentioned elements.

The paper has the following sections: Section 2 is related to the methodology of the research, Section 3 aims to review the literature regarding virtual teams, trust as well as communication, Section 4 approaches digitalization as being the infrastructure for virtual teams, while Section 5 explores the role of AI. The conceptual framework, as well as the propositions for the research and the practical implications are presented in Section 6. The paper's conclusions are presented in Section 7.

2. RESEARCH METHODOLOGY

The research is based on an integrative literature review analysis, that is appropriate having in mind that the aim was to connect several research streams and further on to develop a conceptual framework. The secondary data obtained from academic articles that were published in peer-reviewed journals represented the starting point for conducting the research and this enabled the research to have a solid theoretical framework.

Three steps were performed in order to select the sources for the paper. In the first step, the articles were identified based on using different combinations of the following terms: virtual teams, trust, communication, digitalization, artificial intelligence, face-to-face meetings, knowledge sharing, explainability. The screening of the articles was done in step number two, based on the following criteria: a) the publication in a reviewed journal; b) the relevance for the themes of the paper; c) the contribution from conceptual point of view (meta-analysis, review, theoretical model). Also, the empirical contribution was taken into consideration based on sample description. The seminal works were maintained regardless to the publication year, while for other aspects regarding digitalization and AI, the focus was on studies published after 2018. The third step was related to reading the 45 articles and to coding them according to the theme, based on each article's contribution and role for the argument, respectively: condition, risk, enabler or mechanism.

Table 1 below presents the distribution of the sources. It could be observed that most of the sources were published in the year 2018 or later (33 out of 45, meaning 73%). This reflects the recent development of the research in the area of digitalization and AI, while the research regarding trust and virtual teams are relying on older seminal works, such as: Maznevski and Chudoba (2000) or Mayer et al. (1995). It could be observed that several articles were published in different high impact multidisciplinary journals, which provide experimental evidence and large scale on collaborating remotely.

Table 1 – Distribution of reviewed sources according to the theme

Theme	No. of sources	Published 2018 or later	Representative sources
Virtual teams: concept, effectiveness, management	10	4	Powell et al. (2004); Hertel et al. (2005); Ortiz de Guinea et al. (2012); Zheng et al. (2024)
Trust in virtual teams	6	3	Mayer et al. (1995); Greenberg et al. (2007); Costa et al. (2018); Liu et al. (2025)
Communication and face-to-face interaction	9	6	Maznevski and Chudoba (2000); Marlow et al. (2017); Yang et al. (2022); Brucks and Levav (2022)
Digitalization and digital infrastructure	7	7	Vial (2019); Verhoef et al. (2021); Hanelt et al. (2021); Chen et al. (2022)
AI, transparency and ethics	13	13	Seeber et al. (2020); Jobin et al. (2019); Endsley (2023); Brynjolfsson et al. (2025)
Total	**45**	**33**	

Source: Authors' own processing.

The analysis of each theme was performed based on comparing the findings of each study, as well as on identifying the converge elements together with the ones of contradicting each other. The outcome was used for developing the conceptual framework described in Section 6. To be mentioned, that the present paper does not perform a meta-analysis, because analyzed studies use different samples, measures for effectiveness and designs.

3. VIRTUAL TEAMS, TRUST AND COMMUNICATION

3.1 Virtual teams: concept and effectiveness

Research has shown, that in their early stages, virtual teams were defined in opposition to the traditional collocated teams. However, more and more recent studies concluded that virtuality is more like a continuation rather than a dichotomy (Dulebohn and Hoch, 2017). Nowadays, digital tools are being used by almost every team but with a different degree and accordingly, the discussion should not be focused only on the fact that the team is virtual or not, but on other aspects regarding the virtual teams, such as: geographic dispersion, time dispersion and reliance on technology for proper communication. In a study by Powell et al. (2004), it was performed research on virtual teams in socio-emotional processes (relationship building, cohesion, trust), inputs (design, culture, technical skills, training), task processes (communication, coordination, task-technology fit) and outputs (performance and satisfaction). This structure is considered to be still useful, because it reflects the team's outputs depend on the task processes as well as on the socio-emotional processes.

In comparison with the traditional face-to-face teams, the virtual teams provide several advantages, respectively: a) it allows the organizations to have access the best talents regardless of the location; b) it enables the reduction of traveling costs and c) it enables the possibility to work around the clock. In a study by Gupta et al. (2009), it was shown that virtual teams located in different time zones have the possibility to organize their activity and work as "24-hour knowledge factory", based on which tasks are passed from one team member or from one location to another one at the end of each working day. Bloom et al. (2024) argued the hybrid work activity reduced quitting rates by one third and the performance was not affected.

Nevertheless, it should be pointed out that virtuality has also costs associated to the virtual activity. In the meta-analysis study conducted by Ortiz de Guinea et al. (2012) it was shown that virtuality is associated with a negative impact regarding team communication, conflict

management and satisfaction, but the respective negative aspects are considered to be weaker in teams that work together for a longer period of time. Research has shown that there are different challenges regarding virtual teams, which are the result of geographic, temporal as well as the perceived distance, which lead to different barriers in the daily relations between the team members. There barriers are related to coordination, communication as well as to culture, trust and technology (Morrison-Smith and Ruiz, 2020). The positive and negative effects arising of team virtuality were reviewed by Zheng et al. (2024) and it was found, that virtuality by itself is not good nor bad and its effect is directly related to how the team is designed and led by the manager. Due to these reasons, Purvanova and Bono (2009) considered that transformational leadership had a strong effect on how virtual teams perform, in comparison with the effect on face-to-face teams. Furthermore, it was concluded that the manager's role was of higher importance for teams with dispersed members.

In the research performed by Hertel et al. (2005), it was proposed for a lifecycle model to manage virtual teams. The respective model includes: i) preparation of the team; ii) the launch; iii) the performance management; iv) the development of the team and v) the disbanding. Specific activities from the manager's side are required for each type of activity. For example, a kick-off meeting for members to get to know each other is recommended during the launch, which helps also to agree on rules and goals. Managers are recommended during performance management to concentrate on feedback, motivation and knowledge management. In the same time, it is argued that in managing virtual teams, managers should bear in mind that not all team members benefit in the same way from virtual collaboration. Zhu et al. (2024) showed that virtual collaboration's outcome is directly related to the interplay between the expertise of team members as well as to their personality traits, which suggests that the composition of the team must be carefully considered by the managers.

3.2 Trust in virtual teams

Trust is one of the most important elements which is analyzed regarding virtual teams. In a study by Mayer et al. (1995), trust was defined as the openness and willingness of one party to be vulnerable to the actions of another party, based on the other's party expectation that will perform an action important to the trustor, regardless to the ability of controlling that other party. According to the respective model, trustworthiness is perceived based on three factors:

benevolence, ability and integrity. Bearing in mind the limited possibility of monitoring the employees in virtual teams, the manner in which trust is defined based on the above-mentioned definition is relevant, because each member of the team must rely on the other members without seeing what the other colleagues are doing.

Research has shown that trust is a multilevel phenomenon in work teams, that exists at individual level of the team as well as of the organization itself. Hence, team trust develops overtime as emergent state, based on the team members' interactions (Costa et al., 2018). Greenberg et al. (2007) highlighted the fact that there are two forms of developing trust: a) cognitive trust which is based on perceptions, respectively the perception of reliability and competence of colleagues and b) affective trust which is based on emotional bonding between team members. Within the initial stage of composing a virtual team, it starts with "swift trust", which is based on assuming that other members are competent, which is considered to be a fragile form of trust and should be confirmed by actions in fulfilling tasks. Accordingly, managers need to develop working relations based on accountability and reliability, by ensuring that commitments are respected and that team members receive timely answers.

Research has shown that there is an important and direct connection between trust and knowledge sharing. Alsharo et al. (2017) explained that knowledge sharing between virtual teams' members leads to the development of trust and of the entire collaboration, which has a direct impact on the team's overall effectiveness. Choi and Cho (2019) explained that trust affects the collaboration in virtual teams and that its effect depends on the culture of autonomy as well as on the complexity of the tasks. Also, Liu et al. (2025) examined whether intrateam trust and organizational trust can be substitutable and explored their effects on the team's reflexivity, as well as on the engagement and performance, pointing out that it must be considered together the trust within the team and the trust in the organization. Accordingly, managers should focus on developing trust between the members of the team as well as between the team and the organization, especially in the case of multinational organizations where usually team members belong to different entities.

3.3 Communication in virtual teams

Taking into consideration that managing virtual teams is different than coordinating collocated teams, communication is also done in a different manner, based on more usage of digital tools,

in comparison with traditional face-to-face discussions. In a study by Marlow et al. (2017), it was proposed a conceptual framework of communication in virtual teams, based on which they distinguished between communication quality, communication frequency and communication content. It was explained that the quality of communication is more important for performance than its frequency. Also, it was argued, that the effect of communication depends on the degree of virtuality of the team. In a study by Mesmer-Magnus et al. (2011), it was shown that virtuality influences the way in which information is shared in teams and it was argued that sharing knowledge within team members represent a strong factor for performance.

Research has shown that in nowadays global virtual activity, the cultural differences and the language ones have a direct influence on communication (Glikson and Erez,2020) and that there is a climate which emerges within virtual team members based on the shared communication norms and procedures, which contribute in establishing a working climate based on communication, despite cultural differences between team members. In a study by Presbitero (2021) it was explained that cultural intelligence contributes in aligning communication between virtual team members, which means that team members will adapt the manner of communicating with their colleagues and this will lead to improving the effectiveness of interpersonal processes. Sometimes understanding messages by virtual team members depend also on the accent, because misunderstandings might occur and it might not be properly understood how to implement assigned tasks for team members (Szymanski and Brighi,2025). Yang et al. (2022) analyzed the communication methods and manner of more than 61,000 employees within a large technology company and found that the way in which technology is used is also important. Also, it was explained that there was a wide remote work that generated a decrease in synchronous communication and an increase in asynchronous communication, along with lower connections between team members. In this respect, an article by Brucks and Levav (2022) showed that videoconferencing is less effective in generating creative ideas in comparison with face-to-face interactions. It was argued that computer screens narrow the visual focus of the participants. However, it was further argued that the respective results do not mean that virtual communication is not effective, but it underlines the fact that different tools should be used for different tasks depending on the aimed goals to be achieved.

3.4 The need for periodic face-to-face meetings

Virtual teams rely mostly on digital tools in carrying on the daily activities and on achieving the assigned objectives. Nevertheless, research has shown that there is a need for team members to periodically meet so that they can bond and get to better know each other. Maznevski and Chudoba (2000) showed that effective global virtual teams develop gradually a rhythm of interaction within the team, based on which the initial face-to-face interactions with higher frequency of meetings are followed by periods of remote communication, similar to a "heartbeat". It is argued that physical meetings are needed to build relationships as well as for adopting complex decisions, while remote communication is mostly used for coordinating the daily activity. Greenberg et al. (2007) highlighted the importance of initial face-to-face meeting for developing affective trust, which is more difficult to build via digital channels.

Streuber et al. (2026) compared the manner of how collective creativity generation was performed in face-to-face interaction and how it was done in the virtual reality. It was found that heart rate variability synchrony was comparable in virtual reality and in face-to-face conditions, but creative performance was higher in face-to-face conditions underlying that only some benefits of physical presence could be reproduced by immersive technologies. Nevertheless, taking into consideration the results of the research performed by Brucks and Levav (2022) and by Yang et al. (2022), it can be concluded that occasional face-to-face meetings remain important for building affective trust, for bridging different parts of the organization and for creativity.

4. DIGITALIZATION AS INFRASTRUCTURE FOR VIRTUAL TEAMS

In a study by Vial (2019), it was shown that digital transformation was defined as being the process which aims to improve an entity by triggering significant changes to its properties based on combining information, communication and connectivity technologies. Verhoef et al. (2021) distinguished between three phases: i) digitization, which is related to transforming analogue information in digital format; ii) digitalization, which represents using digital technologies to change existing business processes and iii) digital transformation, which refers to changing the business model of the company. A systematic review showed that digital transformation leads to more flexible organizational designs and to organizations, that are connected to wider ecosystems (Hanelt et al., 2021). When analyzing virtual teams, digitalization refers to the fact

that the processes of the team, such as planning, documenting, reporting and decision making are performed through digital platforms. The digital transformation of teams from conventional to virtual was analyzed also by Vuchkovski et al. (2023) and argued that this transition is a technological change, as well as a change of the way in which work is being organized.

In order for virtual teams to be scalable, it is needed to have an infrastructure provided by digitalization through three main pillars: cloud platforms, real-time data streams and secure connectivity.

Firstly, cloud platforms enable the creation of a shared workspace where information is always easily accessible, regardless of the location of the team members. In a study by Chen et al. (2022), it was showed, that the adoption of cloud computing has a positive impact on the organization's performance. Also, Al-Samarraie and Saeed (2018) reviewed cloud computing tools for collaborative work and identified as main advantages the following: a) possibility of simultaneous editing of documents; b) the sharing of resources and c) the communication between users, but also challenges were identified regarding the reliability of the connection and to the skills of the users. For the activity of virtual teams, cloud platforms mean that there is a single version of each document and this reduces the risk of errors as well as the time spent on searching information.

Secondly, real-time data streams offer the possibility for all team members to have the same information at the same time. Morrison-Smith and Ruiz (2020) argued that this is important for the development of a shared understanding of the situation, which is one of the conditions for coordination in dispersed teams. It is also relevant to be highlighted that, the visibility of the work of each member through digital dashboards may contribute to cognitive trust, because members can see that their colleagues respect their commitments, without the need of involving direct control.

Thirdly, secure connectivity is considered to be a precondition of virtual work. Nwankpa and Datta (2023) showed that the cyber awareness of remote workers and the existence of cybersecurity policies contribute to the vigilance of employees working from home. Since virtual teams handle confidential information through digital channels, an incident of security might affect not only the organization, but also it could have an impact on trust between team members and between the team and its clients.

The three elements reduce the friction of virtual collaboration. Nevertheless, digitalization alone does not guarantee, that a virtual team will carry on a successful activity. Gupta et al. (2009) showed that collaborative technologies are important in order to obtain knowledge sharing and accordingly, it the processes of the dispersed team should be adapted to the technology. Within said circumstances, managers should take into consideration digitalization as an enabler of trust and communication and not as a substitute for either of them.

5. ARTIFICIAL INTELLIGENCE IN VIRTUAL TEAMS

5.1 From tool to teammate

The presence of AI changes the role of technology in the team's activity and in the manner of carrying on the daily activities. In comparison with traditional collaboration tools that transmit messages between members, AI can take part in the work of the team. Seeber et al. (2020) proposed a research agenda considering "machines as teammates" and raised questions regarding the design of AI agents, to the way in which they collaborate with humans as well as to the institutional rules that should govern the respective collaboration. Jarrahi (2018) argued that the relationship between humans and AI in decision making should be a symbiosis, based on which AI deals with the complexity of data and information, while humans focus on uncertainty and ambiguity and bring an intuitive and holistic approach. Webber (2025) highlighted the paradox of AI as teammate, because on one hand it can increase the efficiency of the team, but on the other hand it can lead to reduction of the interaction between humans and therefore it could affect the cohesion of the team.

5.2 Automating routine tasks and improving communication

AI has an important role in building the foundation of the virtual team by automating different routine tasks, such as collecting reports, scheduling meetings or answering standard questions. Brynjolfsson et al. (2025) analyzed the possibility of introducing a generative AI assistant among 5,179 customer support agents and found an average increase in productivity of 14%, the increase being of 34% for novice and low-skilled workers. These results show that AI may lead the transfer of knowledge from experienced members to new members, which is particularly important in virtual teams where informal learning by observing colleagues is rather limited.

AI also contributes to improving communication based on different tools like language translation, smart summarization of meetings and messages and writing assistance. Hancock et al. (2020) argued that AI mediated communication based on interpersonal communication in which an intelligent agent operates on behalf of a communicator by modifying, augmenting or generating messages, and in the same time warned that such communication raises ethical questions related to authenticity and to the responsibility for the message. Also, Yue et al. (2024) analyzed AI and focused on the use of AI for internal communication. It was identified both strategies for its use, but also challenges were spotted, such as the loss of the human touch and concerns regarding to privacy and security. In functioning of global virtual teams, automatic translation and transcription might lead to reducing the barriers resulting from language and accents (Szymanski and Brighi, 2025) and might also help members who are not native speakers to participate more actively in discussions. Furthermore, summaries of meetings allow members located in different time zones to stay properly informed without attending all meetings, which supports the asynchronous work described by Yang et al. (2022).

5.3 AI, trust and fairness

When designed and governed thoughtfully, AI can consolidate and strengthen trust by leading to increase of transparency, reducing misunderstandings and by enabling a fairer distribution of workload. Claure et al. (2023) examined the social consequences of machine allocation behavior and explained that the way in which a machine distributes resources between team members influences the perception of fairness, the interpersonal perceptions between members and also their performance. This means that an algorithm which distributes tasks in a transparent and balanced way can contribute to the perception of justice in the team, while an algorithm perceived as unfair can lead to damaging the relationships between colleagues.

However, the relationship between transparency and trust is not a linear one. Hu et al. (2024) identified a paradox of transparency-resistance in algorithmic management: a moderate level of transparency leads to increasing acceptance, but too much information about how the algorithm controls the work of employees can have resistance as an impact. Endsley (2023) explained that in human-AI teams' transparency and explainability should be a support for the situation awareness of the humans, meaning that the information provided by the system must help people to understand what the system is doing, why it is doing it, and what it will do in the

next phase. Hence, the purpose of transparency is not necessary to give as much information as possible, but to give the right information for the decision of the user in a respective situation.

5.4 Governing AI in virtual teams: procedures, explainability and upskilling

In order for team members to properly understand and control the automated decisions, it is required to have clear procedures, explainability and ongoing upskilling. Barredo Arrieta et al. (2020) presented the concepts and taxonomies of explainable AI and argued that explainability is a condition of responsible AI. Jobin et al. (2019) analyzed 84 ethical guidelines for AI and identified a global convergence around five principles, as follows: transparency, justice and fairness, non-maleficence, responsibility and privacy, although the guidelines differ in how these principles should be implemented.

However, clear procedures and explainability alone do not ensure that team members can understand and control the AI-driven decisions; this also requires the continuous upskilling of virtual team members. Zirar et al. (2023) reviewed the literature on the coexistence between workers and AI in the workplace and argued that this coexistence requires the development of new skills by employees, both technical skills and skills related to working with AI. Research explained based on self-determination theory, that technology influences the satisfaction of the basic psychological needs of autonomy, competence and relatedness, and that the design of work should support these needs (Gagné et al., 2022). By applying these aspects to virtual teams, it means that AI should be implemented in a manner that increases the competence of members and does not reduce their autonomy or their relationships with colleagues.

6. DISCUSSION

6.1 Conceptual framework

Based on the reviewed literature, the paper proposes the conceptual framework presented in Fig. 1 below. The framework considers trust and communication as being the foundation of virtual team effectiveness. Trust and communication reinforce each other: the quality of communication and knowledge sharing build trust (Alsharo et al., 2017), while trust makes members more willing to communicate openly and more transparent (Mayer et al., 1995; Costa et al., 2018). Periodic face-to-face meetings support both of them, especially affective trust (Maznevski and Chudoba, 2000; Greenberg et al., 2007).

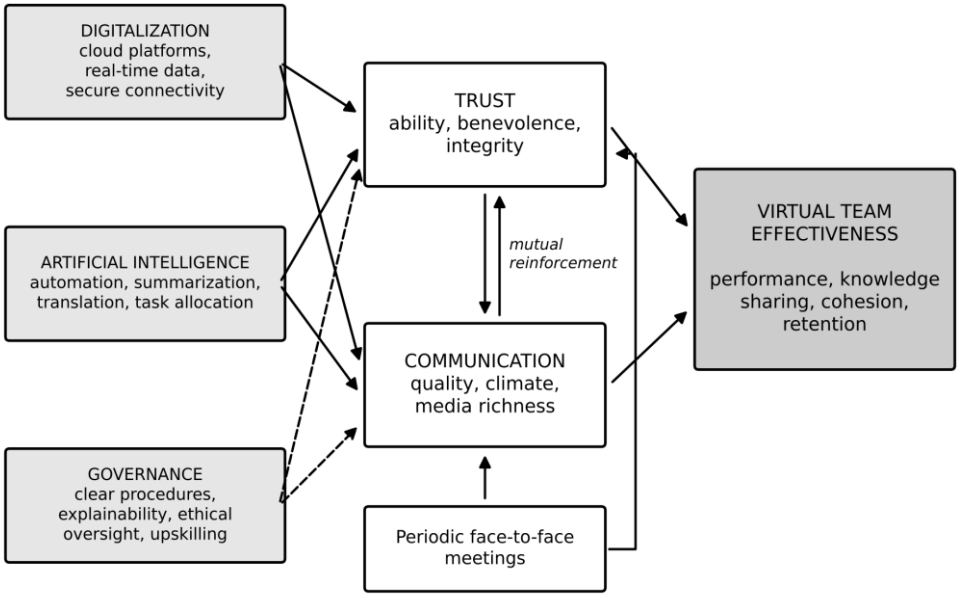


Fig. 1 – Conceptual framework: trust and communication as human core, amplified by digitalization and AI

Note: dashed arrows indicate a conditioning (moderating) role. **Source:** Authors' own processing.

Digitalization and AI act as enablers of the human core. Digitalization provides the needed shared workspace and the visibility of work, while AI leads to reducing the routine load and improves the clarity of communication. Research has shown that governance, the existence of clear procedures, explainability, ethical oversight and upskilling are important for establishing the effect of AI. Without the aforesaid elements, AI can generate the opposite effects, such as resistance, perceptions of unfairness or loss of cohesion (Hu et al., 2024; Claure et al., 2023; Webber, 2025). Table 2 below synthesizes the main contributions, the risks and the managerial implications for each element of the framework.

Table 2 – Synthesis of the elements of the framework

Element	Main contribution to virtual teams	Main risk	Managerial implication
Trust	Allows members to rely on each other without direct control; supports collaboration and knowledge sharing	Swift trust is fragile; lack of reliability destroys it quickly	Keep commitments, give timely answers, make work visible
Communication	Coordinates dispersed work; quality matters more than frequency	Siloed networks, misunderstandings due to culture, language, accents	Establish communication norms and choose the tool according to the task
Face-to-face meetings	Build affective trust; support creativity and complex decisions	Costs and time of travel	Plan a rhythm of meetings: kick-off and key moments
Digitalization	Shared workspace, single version of information, real-time visibility	Cyber incidents; technology without adapted processes	Invest in secure cloud platforms and in cyber awareness
AI	Automates routine tasks; summarization, translation, fairer task allocation	Loss of cohesion, perceived unfairness, resistance to opaque or excessive control	Introduce with clear procedures, explainability, ethical oversight and upskilling

Source: Authors' own processing based on the reviewed literature.

6.2 Research propositions

Based on the framework, the following research propositions are formulated for future empirical research:

P1. In virtual teams, the quality of communication has a stronger positive effect on the team's effectiveness than the frequency of communication, and this effect is partially mediated by trust between team members.

P2. Periodic face-to-face meetings strengthen and consolidate affective trust in virtual teams, which is stronger for teams with high geographic and cultural dispersion.

P3. The use of cloud platforms and shared real-time data is positively related to cognitive trust between the members of virtual teams.

P4. AI tools for summarization and translation increase the participation of non-native speakers and of the members that are located in different time zones in adopting team decisions.

P5. The positive effect of AI on trust in virtual teams is moderated by governance. Hence, it is stronger when the automated decisions are possible to be explained, when procedures are clear and when members are properly trained.

P6. The positive relationship between perceived fairness of algorithmic task allocation and trust between members is stronger in virtual teams with higher geographic dispersion, because members have fewer opportunities to notice each other's workload directly.

P7. Excessive transparency in virtual teams regarding the algorithmic control of work increases the team members' resistance to AI, which leads to reducing their trust in the organization.

6.3 Practical implications

There are several practical implications provided by the research for managers who coordinate virtual teams. First of all, managers should strive to develop working relations based on trust by being reliable, by making the work of the team visible and by giving timely feedback. Secondly, it is needed for managers to establish clear norms of communication, choosing the most appropriate tool for each task: video meetings for discussions, asynchronous tools for information and coordination and face-to-face meetings for creative tasks and for building relationships. Thirdly, managers should balance the virtual activity with periodic meetings of the team members. Hence, they should plan periodic face-to-face meetings, especially at the beginning of the project and in key moments of the team's life. Fourthly, it is needed for the organizations to invest in secure cloud infrastructure and in the cyber awareness of employees. Last, but not least, AI should be gradually introduced together with clear rules and norms regarding its use, with explanations of how adopting automated decisions are taken and with training programs for members of virtual teams, so that people remain in control in adopting decisions which affect them.

7. CONCLUSIONS

This paper analyzed the elements that contribute to the effective functioning of virtual teams, as well as the importance of digital transformation and the impact of AI in this respect. The research explained that although managers and virtual team members are not located in the same place, they should develop working relations based on trust and successful communication, which remain the basis of virtual team effectiveness. It was also explained that communication in virtual teams is done differently than in collocated teams, based on digital

tools, but the quality of communication is more important than its quantity, and periodic face-to-face meetings remain a necessity for members to get to better know each other.

Digitalization provides the needed infrastructure, which makes virtual teamwork scalable and seamless: real-time data streams, cloud platforms and secure connectivity reduce friction and create a shared workspace for the members of virtual teams. AI is a support for going further by automating routine tasks and by improving communication through smart summarization and language translation. When designed and governed carefully, AI can consolidate trust by reducing misunderstandings, increasing transparency and enabling a fairer workload distribution between team members. However, explainability, clear procedures and ongoing upskilling are mandatory so that team members properly understand and control the automated decisions.

Digitalization and AI can lead to amplifying the strengths of virtual teams, while ethical oversight, human judgment and periodic face-to-face connection are considered to become more important than ever.

It is to be taken into consideration, that the paper has several limitations, due to different aspects. First of all, it is relied on a review of the literature and not on primary data and accordingly, framework which was proposed together with the associated propositions must be tested empirically. Secondly, not only that the number of studies that analyze AI in virtual teams is still limited, but many of them are conceptual. Thirdly, the selection of the sources for the paper might be influenced by the databases which were chosen and by the search terms. Future research might take into consideration testing these propositions based on surveys and on case studies in organizations which use virtual teams, for example in banking or in information technology companies, and might examine longitudinally how the introduction of AI changes trust and communication in the activity of virtual teams.

CONFLICTS OF INTEREST AND PLAGIARISM: The authors declare no conflict of interest. The authors declare that this manuscript is original, has not been published previously, and is not currently under consideration for publication elsewhere. Any ideas, data, or text borrowed from other sources have been properly cited and referenced.

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