The Power of Artificial Intelligence in Creating High-Performing Team

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Blăgău Alexandru-Adrian
Scarlat Cezar
National University of Science and Technology Politehnica Bucharest
(alex.blagau@gmail.com)
(cezarscarlat@yahoo.com)

Digital transformation affects the ways in which organizations function and engage with both employees and customers, offering numerous advantages, but also risks. In this context, platforms utilizing artificial intelligence have emerged as indispensable assets for streamlining processes and especially enhancing decision-making systems. This paper describes the conceptual plan for an AI-driven platform for creating high- performing teams, emphasizing the role of AI integration in enhancing the efficiency of human resource management, fostering improved collaboration, and shaping organizational culture.

Keywords: Digital Transformation, Decision-Making System, Artificial Intelligence, High-Performing Team, AI Intercultural Communication

1. Introduction

Industry 4.0 has led to the use of disruptive technologies such as blockchain, Machine Learning, Big Data, Artificial Intelligence (AI) in the daily work of organizations. Digital transformation has become a critical condition for the survival and competitiveness of an organization. In this context, artificial intelligence (AI) has become a critical factor in managing processes, resources and making decisions to achieve the goals of an organization (Munyaka et al., 2023).

The COVID-19 pandemic has highlighted the importance of digital transformation in organizations and has changed the way organizations can conduct their activities by integrating digital technologies. In this context, remote work and the integration of disruptive technologies have become essential for ensuring the continuity of organizations' activities, bringing both benefits and challenges (Kutnjak, 2021).

In this paper, the authors propose the concept of a platform that uses artificial intelligence capabilities that can significantly support decision-making systems in order to form high-performing teams (HPT) and achieve organizational objectives, to respond to current challenges related to digital transformation and the effects generated.

2. Literature Review

Digitization, digitalization, and digital transformation are three interconnected concepts that have led to the emergence of Industry 4.0. Industry 4.0 represents a significant evolution, leveraging advancements from earlier industrial revolutions to transform operational practices within organizations (Andrei et al., 2024). The term digitization has its origins around 1954 and represents the conversion of analog data into digital (Boratyńska, 2019). Digitization is the process of integrating digital services, platforms, and technologies into the activities of organizations (Surender and Goel, 2022). Digital transformation is a broad process of adopting and integrating new technologies into the products, processes, and strategies of organizations (Moor, 2023) that requires a rethinking of the way people and technologies interact (Mitki et al., 2019).

Technological developments have been a catalyst for globalization, facilitating the rapid exchange of information, goods, and ideas on a global scale. This development in information and communication technology has reduced spatial and temporal barriers, facilitating the interconnection of organizations and individuals from different geographical areas, which has led to both the diversification and development of teams (Enny et al.,.). The classification of teams within organizations is presented in Table 1 (adapted from Iorhen, 2019).

Table 1 *Types of Teams (Adapted from Iorhen, 2019)*

Type	Description
Problem-solving teams	Teams formed to share ideas and discuss ways to improve processes and work methods, helping to identify and provide solutions to operational challenges.
Functional teams	Teams formed by employees from different departments, sections, or units, who collaborate to improve work activities and solve problems specific to each department or unit.
Self-managed teams	Teams formed to plan, organize, control and complete work processes with minimal intervention from management and who take responsibility for the entire process from start to finish.
Cross-functional teams	Teams formed by employees of similar levels from different departments, sections or units, created to bring together expertise from various fields to achieve organizational goals.
Cross-cultural teams	Teams made up of members from diverse cultures, countries, or backgrounds.
Virtual teams	Teams formed by employees who collaborate remotely, using digital communication and collaboration technologies.

Managing cross-cultural teams is a complex activity, which brings many benefits to organizations, but also involves a series of challenges that derive from the difference in cultural norms, attitudes, communication preferences and working methods. Among the main challenges to the management of such teams are communication barriers, cultural norms and values, conflict resolution, trust and relationship-building, time zones, and virtual collaboration (Hans et al., 2023). Communication difficulties (differences in accents and fluency, disparities in communication codes and culture-specific communication norms) are another major concern in multicultural settings, especially for virtual teams, as they can generate misunderstandings, reduce team cohesion and increase conflicts (Baptista, 2022).

To achieve goals and achieve performance, organizations need to adopt a strategic, participatory, and continuous development-oriented approach, and the formation of high-performing teams (HPT) is an essential part of this approach. A high-performance team is a group united by a common vision, clear objectives, and accountability for exceptional results. Unlike traditional teams, they function optimally over the long term and with consistent performance, collaborate effectively, communicate well, solve problems quickly and maintain strong relationships (Bakke and Johansen, 2024).

According to the model developed by Tuckman and Jensen, a team goes through five (forming, storming, norming, performing, adjourning) stages of development, with its behavior varying at each stage, influencing its results (Tuckman and Jensen, 1977). These are presented in Figure 1.

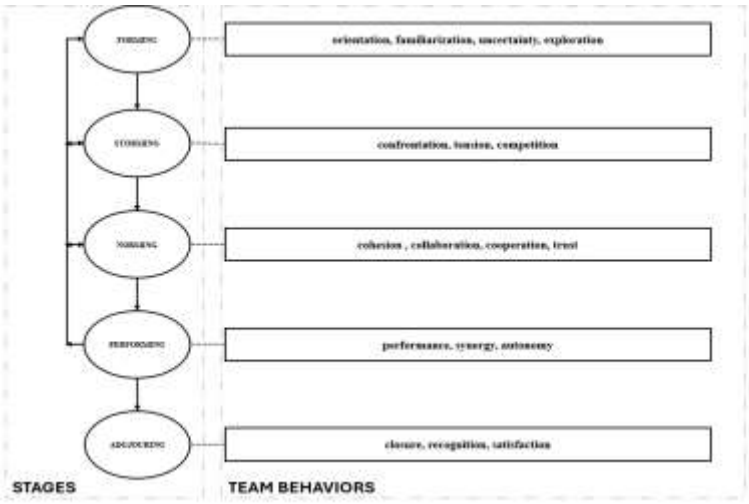

Figure 1 *Stages and Behaviors of Team (source: Authors' Own Contribution)*

Teams are distinguished by a set of characteristics that influence the behavior of members and allow understanding and anticipation of individual behavior, as well as collective performance. Among these characteristics are size, role, status, training, norms and cohesiveness. Table 2 presents these characteristics (adopted from Lunenburg and Lunenburg, 2015).

Table 2 *Characteristics of High-Performing Teams*

Characteristic	Description
Size	Team size influences the effectiveness of communication and coordination. High-performing teams are optimally sized to ensure a diversity of ideas and skills and to maintain rapid communication and close relationships.
Role	High-performing teams have clearly defined roles, with each member knowing their responsibilities and contributions. This clarity reduces confusion, prevents overlap, and increases efficiency and engagement.
Status	Status reflects each member's role in the team and is based on competence and contribution, not hierarchy. Recognizing individual worth increases motivation and respect, strengthening group cohesion and supporting the achievement of performance.
Norms	Norms are rules that guide the behavior of team members. In high-performing teams, they ensure respect, open communication, results, and clearly establish expectations regarding work and conflict resolution.
Training	Training is the level of knowledge, skills, and experience that each member brings to the team. In high-performing teams, training plays a role in ensuring competence and quality of work. Members with adequate training can perform assigned tasks, identify solutions to problems, and contribute to achieving goals.
Cohesiveness	Cohesion is the level of unity, trust, and solidarity among team members. High-performing teams are characterized by increased cohesion, which facilitates effective collaboration, mutual support, and commitment to shared goals. A climate based on trust and respect helps reduce conflict and increase collective performance.

Technological evolution has led to the integration of Artificial Intelligence (AI) in sectors such as healthcare, finance, manufacturing, human resources, etc. This integration has brought a number of significant advantages, contributing to increasing efficiency and reducing operational costs in both private and public organizations (Geetha and Bhanu, 2018).

The integration of AI in human resource management (HRM) has led to improved organizational performance, facilitating the recruitment process by identifying highly qualified individuals who are able to support them in achieving their goals

(Kovach and Cathcart, 1999).The integration of AI in organizations can transform the way they manage their teams, contributing not only to the automation of operational tasks, but also to the improvement of decision-making systems. Among the main applications of AI in HRM are:

- **Recruitment and Selection** - AI can automatically analyze online resumes and profiles to identify the most suitable candidates based on skills, experience, and cultural fit.
- **Onboarding -** AI can personalize the onboarding process for new employees, providing virtual assistance and interactive guides tailored to each employee's role.
- **Training and Development -** AI can recommend personalized training programs based on the needs, performance, and goals of individual employees.
- **Employee Engagement -** AI can measure employee satisfaction and engagement in real time, providing solutions to improve organizational climate.
- **Compensation Management -** AI can analyze performance data and market trends to support fair and competitive compensation and bonus decisions.
- **Performance Management -** AI can evaluate employee performance by analyzing objective data and continuous feedback, providing personalized recommendations for improvement, and supporting the formation of high-performing teams.
- **Employee Retention -** AI can identify patterns that indicate the risk of employee turnover and suggest proactive measures to increase employee retention and satisfaction.
- **Communication -** AI can analyze communication flows to identify potential bottlenecks and facilitate faster, clearer, and more personalized communication between employees and management (Tewari and Pant, 2020).

AI represents a valuable strategic tool for the overall development of organizations, acting as an essential support tool in human resource management, with results such as:

- **Accuracy –** AI helps to increase the accuracy of human resources processes by eliminating human errors.
- **Automation –** AI allows HR professionals to focus on strategic and decision-making activities, increasing efficiency by automating repetitive tasks.
- **Computing power and capacity –** AI enables the management and interpretation of massive volumes of organizational data, providing real-time decision support and improving employee performance.
- **Real-time experience –** AI facilitates real-time experiences and processes, such as instant interaction with employees and rapid data analysis for immediate decision-making.
- **Personalization –** AI offers the possibility of personalizing experiences and professional development programs, adapting training, rewards, and assistance to the individual needs of employees.
- **Time saving and cost reduction –** AI saves time and reduces costs by automating processes, optimizing recruitment, and increasing operational efficiency (Nawaz et al., 2024).

3. Methodology

In this paper, the authors use a descriptive method to propose HPTP (High Performing Team Platform), a modular platform that integrates AI capabilities to optimize member selection to form high performing teams.

HTPT represents an integrated system based on artificial intelligence (AI), designed to support the processes of creating of high-performing teams in modern organizations. Its main goal is to optimize decisions regarding team composition through objective analysis, based on data from multiple sources.

The HPTP should be structured in four modules: data input module, data collection module, ai analysis module, decision support module. HPTP architecture is presented in Figure 2.

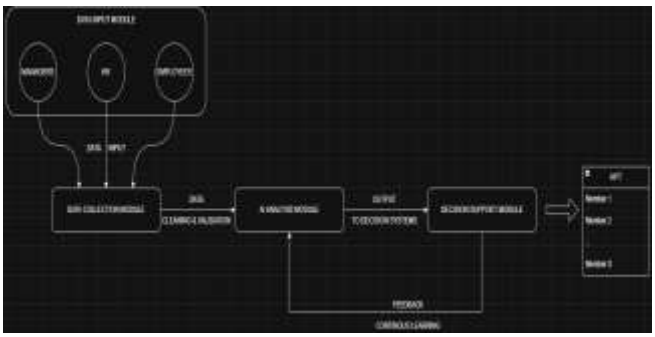

Figure 2 *HPTP Architecture (source: Authors' Own Contribution)*

Within the DATA INPUT MODULE, the interaction between people and the platform is carried out, with the main functionalities being the definition of objectives, the establishment of selection criteria, the introduction of data about members in order to be used in order to identify and form a high-performing team (Mexwell, n.d.). This module plays an important role within the platform, as it allows for the personalization of the decision-making process. Table 3 presents data that can be entered and used within the platform.

Table 3 *Data Sources & Types*

Data Source	Data Type
Managers	• objectives • assessments • recommendations • selection criteria • performance evaluations
Employee	• work preferences • Workstyle • self-assessments • feedback • satisfaction level • motivations • values • goals • availability • moods
HR	• personal identification data • departmental experience • positions held • date of employment • educational level • hours worked • projects managed • overtime hours • sick days • remote work frequency • team size • training hours • promotions • resigned

The Data Collection module ensures the accuracy and consistency required in artificial intelligence processes. By identifying and eliminating errors, duplications and inconsistencies, it provides a database that allows for objective and reliable analyses. It must ensure data quality and integration through the following functions:

- Correlation of obtained data.
- Data filtering.
- Elimination of errors and duplicates.
- Data standardization (create employee profiles).
- Data storage.

Ai Analysis Module is the core of the platform and is designed to integrate AI algorithms and generate a predictive and objective view of the team's potential. This module is designed to perform advanced data analysis and provide relevant recommendations. By applying machine learning algorithms and predictive models, the module assesses the compatibility between members, identifies the optimal balance of skills, and estimates the potential performance of teams. The main functions of the module include:

- Predictive performance analysis.
- Identification of optimal roles.
- Identification of compatibility between members.
- Analysis of intercultural differences and potential barriers.
- Display of analysis results.
- Creating recommendations.
- Identification of team members and visualization.

Decision Support Module translates the technical results provided by the algorithms into clear, accessible and relevant information for decision-makers, facilitating managers to analyze alternative team scenarios, compare the level of compatibility and assess the potential impact of different combinations of members. Through an interactive interface, users have the opportunity to directly contribute to the selection process, adjusting the parameters according to specific organizational requirements. It is designed to support decision systems in identifying high-performing teams through the following functions:

- Scenario generation.
- Identification of risks.
- Overcoming barriers and challenges in intercultural and virtual teams.

- Displaying results.
- Manual team adjustment.
- Team validation.
- Feedback (necessary for training AI algorithms).

HPTP can be designed to optimize the processes of training, evaluating and developing high-performing teams, using advanced data analysis. Among the main functionalities are the collection and integration of information from various sources, such as CVs, human resources databases, management evaluations and employee feedback. This data is then processed and transformed into relevant information for the decision-making process, thus providing a solid and objective basis for analysis.

The platform can support managerial decisions by generating reports and visualizations that allow data interpretation and selection of appropriate scenarios. Also, the platform can facilitate the reduction of bias, increase objectivity, optimize collaboration and maximize performance at team level, while supporting the development of an organizational culture oriented towards data, equity and innovation.

The continuous learning function can also allow the system to gradually update its performance, using the results obtained and feedback from users, which makes the platform adaptable and change over time.

4. Expected Results and Further Research

Using HPTP for creating high-performing teams can bring significant benefits, both at the organizational and individual levels. By integrating AI capabilities to analyze member data (values, experience, behaviors, etc.) the platform can identify combinations of members that can contribute to creating high-performing teams.

HPTP can support task automation with AI to increase organizational efficiency. Algorithms take over repetitive tasks, reducing time and costs, and managers can focus on strategic decisions. Thus, the platform can optimize internal processes and provide a competitive advantage through speed and accuracy.

Data sources play an important role in the platform, contributing to a holistic assessment of member skills and performance. Feedback is one of the most valuable data sources, whether it comes from managers or teammates, providing a contextual perspective on each member. AI can analyze and identify organizational requirements and available skills, eliminating subjective selection. HPTP also contributes to eliminating bias through objective analysis, conducted exclusively on data relevant to compatibility and performance, replacing subjective perceptions.

HPTP can facilitate collaboration within virtual and cross-cultural teams by identifying communication differences, cultural values, and potential interaction barriers, artificial intelligence supports the adaptation and integration of members from diverse backgrounds to form high-performing teams.

The platform can offer AI intercultural communication feature. By using natural language analysis and cultural context, HPTP can be able to identify differences in perception and interpretation between people from different cultural backgrounds. The terms, expressions and tone of a message can be perceived differently depending on the values and norms specific to each culture, which can lead to possible misunderstandings or tensions within the team. In this way, AI can generate personalized recommendations regarding the tone, structure and style of communication to reduce the risk and occurrence of misinterpretations between members and strengthen cohesion between them. Thus, the platform can contribute to the development of intercultural competences of members. The results of the platform can contribute to the development of cohesion, trust, and professional satisfaction, and can reduce intercultural conflicts and misunderstandings.

The platform can also help mitigate time zone issues by analyzing members' availability, personal calendars, and workflows. AI can identify optimal collaboration times and propose flexible work schedules, assign roles based on each member's availability. This paper may open new research directions on the integration of AI in the management of intercultural teams. Given the complexity of interactions in multicultural contexts and digital usage, the need for further research on the role of AI in intercultural communication is emphasized.

Particular attention should be paid in future research to the implementation of cybersecurity measures within the platform. The use of blockchain can significantly strengthen the integrity and traceability of data used within the platform, eliminating the possibility of unauthorized modification and ensuring data authenticity. Through smart contract mechanisms, HPTP could automate the validation of member certifications, skills and performances.

5. Conclusion

Building and managing high-performing teams are important for organizations operating in increasingly digital and global settings. In this paper the authors proposed AI-driven platform that can assist managers by offering data-driven insights and predictive analyses for creating high-performing teams. The use of AI tools allows managers to gain a clearer understanding of team dynamics, recognize suitable combinations of skills and personalities, and anticipate collaboration issues, particularly in intercultural and virtual situations. HPTP has the potential to serve as a catalyst for organizational transformation, leveraging cultural diversity as a competitive advantage and enhancing team performance within complex, digital, and global contexts.

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