

THE INFLUENCE OF THE HUMAN FACTOR ON THE EFFECTIVENESS OF ORGANIZATIONAL CHANGE MANAGEMENT AND THE SUCCESS OF TRANSFORMATION PROJECTS

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ABSTRACT	KEYWORDS
Modern organizational transformation is characterized by a high degree of technological, organizational, and managerial complexity. Despite significant advances in project and organizational change management methodologies, a significant portion of transformation initiatives fail to deliver the expected results. One reason is the insufficient attention to the human factor, including leadership, employee engagement, readiness for change, communication quality, organizational culture, staff competence, and resistance to change. The purpose of this study is to systematize scientific understanding of the role of the human factor in organizational change management and to develop a conceptual model of its influence on the success of transformation projects. The scientific novelty lies in new approaches—based on an analysis of classical and contemporary research—to consider the human factor not as an auxiliary element, but as an independent determinant of transformation results. The hypothesis is substantiated that the human factor has a direct positive impact on the effectiveness of organizational change management, and the effectiveness of change Management, in turn, positively influences the success of transformation projects. A hypothesis is also proposed regarding the direct influence of the human factor on project success and the effectiveness of change management. The formulated model allows for the integration of research on human behavior, leadership, organizational readiness for change, and project success into a single research construct. The article proposes a methodology for subsequent empirical testing of the model using a questionnaire survey and structural modeling.	Human factors, organizational changes, change management, transformation projects, digital transformation, resistance to change, employee engagement , leadership, organizational readiness, project success.

Introduction

Today, companies and organizations operate in a constantly changing technological, economic, and competitive environment. The digitalization of business processes, the implementation of artificial intelligence, changes in organizational structures, the transition to new business models, automation, and the development of flexible management methods require organizations not only to implement

new technologies but also to significantly transform human behavior, management practices, and organizational culture.

Under these conditions, a transformation project cannot be viewed solely as a set of technical measures. The formal implementation of a new information system, changes to the organizational structure, or the development of a new business model alone does not guarantee the achievement of the planned result. Real impact occurs only when employees understand the goals of the changes, accept the need for transformation, possess the necessary competencies, and utilize the new processes and tools in their daily work. This problem is reflected in the evolution of scientific understandings of change management. While earlier approaches primarily focused on planning, control, and sequencing of management actions, modern research increasingly views organizational change as a socio-technical process in which technological, organizational, and human elements are interconnected.

The human factor is particularly important in this context. In this study, it is defined as a set of individual and collective characteristics of an organization's management and employees that determine their ability, readiness, and desire to embrace, support, and implement organizational change. These characteristics include leadership support, employee engagement, organizational readiness, competence, communication, trust, culture, attitudes toward change, and resistance to it.

The relevance of the study is supported by modern systematic reviews. For example, Lykourantzou et al. (2025) analyzed 183 academic publications from 2014–2023 and proposed considering the human factor as an independent, fifth element of the digital transformation project success model, alongside traditional categories of factors. However, a research gap remains. Much of the existing literature examines either individual components of the human factor (e.g., change resistance, leadership, or communication) or general factors of digital transformation success. Insufficient attention has been paid to an integrated model in which the human factor is considered both as a direct source of transformation project success and as a factor influencing the outcome through the effectiveness of organizational change management.

In this regard, new studies aimed at developing and theoretically substantiating a conceptual model of the influence of the human factor on the effectiveness of organizational change management and the success of transformation projects are becoming relevant.

The human factor in managing organizational change. Organizational change affects not only structure and technology, but also the interests, habits, competencies, and behavior of employees. Therefore, changing organizational systems inevitably involves changing human behavior.

In the classical sense, organizational change can be viewed as the process of transitioning an organization from its current state to a desired one. However, this definition is insufficient to explain why identical management decisions can lead to different outcomes in different organizations. Research on resistance to change has made an important contribution to understanding this problem. Oreg (2006) views resistance as a multidimensional construct and shows that employees' attitudes toward change are linked to both individual characteristics and the organizational context. A study of 177 employees demonstrated a link between personal and contextual factors and attitudes toward large-scale organizational change, while attitudes toward change, in turn, were associated with job satisfaction, organizational commitment, and intention to leave the organization.

This means that resistance cannot be viewed solely as a negative individual employee reaction. It develops through the interaction between the individual and the organizational environment. If an

employee doesn't understand the reasons for the change, doesn't trust management, lacks the necessary skills, or fears a deterioration in their position, the likelihood of resistance increases. Consequently, the human factor has both an individual and an organizational dimension.

The individual dimension includes: employee readiness for change; motivation; competence; digital skills; personal perception of the benefits and risks of change; adaptability; level of trust in management; subjective sense of security.

The organizational dimension includes: leadership style; top management support; organizational culture; quality of communications; employee involvement; availability of learning mechanisms; fairness of management decisions; degree of employee participation in the project.

Thus, the human factor is not a single variable, but a complex of interrelated characteristics.

To systematize the proposed research design, it is advisable to present the main variables of the model, their content and the expected role in the transformation mechanism.

Table 1. Main constructs of the conceptual research model

Construct	Contents of the construct	Main components/indicators	Role in the model
Human factor	A set of individual and collective characteristics of managers and employees that determine the competence; trust; communication; ability and readiness of an organization to perceive and implement changes.	Leadership support; involvement ; readiness for change; organizational culture; resistance to change.	Independent variable (X)
Organizational readiness for change	A collective state that reflects the perceived need for change and the organization's confidence in its ability to implement it	Perceived need for change; collective capacity; availability of resources; employee confidence; readiness to act.	Mechanism for the formation of human readiness; potential intermediary factor
Effectiveness of organizational change management	The degree of effectiveness of management actions aimed at preparing, implementing and consolidating changes .	quality ; employee engagement; resistance management; training; management support; consistency in change implementation	Mediating variable (M)
Success of the transformation project	The degree to which project, user, organizational and long-term transformation results are achieved.	On-time and budget compliance; goal achievement; user satisfaction; adoption ; business results ; sustainability of change; development of organizational capacity.	Dependent variable (Y)

Note: The table was compiled by the author based on a theoretical analysis of studies by Oreg (2006), Weiner (2009), Dempsey et al . (2022), Lykourantzou et al. (2025), Chang and Chen (2025) and Gaile et al. (2026).

Organizational readiness for change. One of the key concepts for explaining an organization's behavior during transformation is organizational readiness for change. Weiner (2009) developed a theory of organizational readiness that defines readiness as the overall state of an organization, reflecting the extent to which its participants perceive the need for change and the organization's ability

to implement the necessary actions. The theory emphasizes the importance of two components: the perceived value of change and the organization's collective ability to implement it. This approach is directly relevant to the proposed model. Even the availability of financial resources, modern technologies, and a formally developed project does not guarantee its success if employees do not believe the changes are necessary or lack confidence in the organization's ability to implement them. Organizational readiness is shaped, in particular, by the following factors: leadership quality; communication; past change experience; trust; competence; resource availability; employee engagement; and perception of the need for transformation. Therefore, organizational readiness can be viewed as one of the mechanisms through which the human factor influences the effectiveness of change management.

The human factor as an independent factor in transformation success. Particularly relevant to this study is the systematic review by Lykourantzou, Apostolopoulos, Dabić, Liargovas, and Tekavčić (2025), published in the journal *Technology in Society*. The authors analyzed 183 scientific publications indexed on the Web of Science, Scopus, and Sage, covering the period 2014–2023. The goal was to determine whether the existing factor model is sufficient to explain the success of digital transformation projects or whether it is necessary to identify the human factor as a separate category. The study resulted in the proposal of a five-factor model, in which human factor is considered as a separate factor, comparable in importance with other categories of success factors. This work is fundamental to the proposed study, as it confirms that human factors have independent explanatory value. It also demonstrates the need to move beyond simply listing human factors to exploring the mechanisms by which they influence project outcomes.

In other words, the question is not only whether the human factor influences the organization, but also through what management mechanism it is realized. The model proposed in this paper answers precisely this question: the effectiveness of organizational change management is considered as such a mechanism.

Chang and Chen (2025) examined the critical success factors of digital transformation based on the People – Process – Technology (PPT) model. The empirical base of the study included 212 key users of digital technologies at Taiwan's largest software services company. PLS-SEM was used for the analysis. Innovation and integration success, as well as their impact on organizational outcomes, were considered as success indicators. The importance of this study lies in its demonstration of the need to simultaneously consider people, processes, and technology. Technology alone does not determine the outcome of a transformation. Its impact depends on the extent to which people are able to use technological solutions and the extent to which they are integrated into organizational processes. For the purposes of this study, this means that the human factor should not be viewed as an alternative to technological or process factors, but rather as a central element in their integration.

Relationship Research between Change Management Practices and the Success of Organizational Projects, published in *Brazilian Business A* 2025 review directly links organizational change management practices to project success. The authors used a quasi-experimental design and structural modeling. The results showed a higher degree of change management practices in the experimental group compared to the control group. Thus, the study provides empirical evidence for the hypothesis of a positive relationship between change quality and project success. management and the success of organizational projects. These results directly support the second hypothesis of this study: **the**

effectiveness of organizational change management positively influences the success of a transformation project.

However, the study in question focuses primarily on change practices. management, whereas in the model we propose, the emphasis shifts to the prerequisites for the effectiveness of change management, among which the human factor occupies a central place.

Of particular interest is the study by Gaile, Zaumane, Stibe and Kivipõld (2026), published in Review of Managerial Science. The study is based on data from 191 respondents from Latvia and uses the PLS-SEM method. The authors identified four groups of factors: change management processes, communication, people-related factors, and crisis preparedness. Factors directly predicting change success included implementation practices, systematic analysis, employee experience, and communication. Leadership support and multi-level planning had an indirect effect.

Crucially, this study demonstrates the multilayered nature of human factors' influence. For example, leadership may not necessarily directly determine the success of a change, but it may influence intermediary variables that shape organizational readiness and employee acceptance of the change.

A systematic review by Dempsey, Geitner, Brennan, and McAvoy (2022) identifies a broader set of change management success and failure factors. The authors identified 38 success factors and 23 failure factors based on the literature from 2006 to 2021. A frequency analysis identified four of the most significant success factors: communication; setting a vision and communicating the change; early, active employee involvement; and senior management support.

Key factors for failure included resistance to change, over-standardization of approaches, and the perception of the initiative as a short-term undertaking.

These results suggest an important conclusion: factors traditionally attributed to the human dimension can contribute to both the success and failure of change. For example, communication can reduce uncertainty and resistance, while its absence can increase employee negativity. Similarly, employee participation can enhance a sense of ownership, while employee exclusion from decision-making can generate resistance.

Leadership and the Human Dimension of Project Management. The connection between project management and the human dimension of change has already been explored in classic studies. Griffith-Cooper and King (2007) conduct difference between change control and change leadership. Change control refers primarily to the control of changes in the technical and process dimensions of a project, whereas change Leadership influences the human aspects of change. The authors emphasize that these dimensions are distinct but interdependent, and both are necessary for the project's success.

This idea is important for the proposed conceptual model. A project can have a high-quality management structure, schedule, budget, and set of technical requirements, but still fail to achieve the expected result due to a lack of leadership support and employee acceptance of change. Levasseur (2010) also emphasizes the importance of "people" skills for project success. The author examines organizational development and change management as areas that allow us to take into account human problems that can determine the success or failure of even technically well-designed solutions.

Thus, the human competencies of project managers and change leaders should not be viewed as additional soft skills, but as a management resource directly related to the likelihood of achieving project goals.

The success of a transformation project as a multidimensional category. A separate issue is defining the very concept of "success of a transformation project." The traditional approach links project success to meeting deadlines, budgets, and performance requirements. However, this approach is insufficient for large-scale organizational transformations.

Shenhav , Levy , and Dvir (1997), after studying 127 projects, proposed a multidimensional approach to assessing project success. In addition to project implementation effectiveness, the authors identified impact on the customer, immediate business results, and the organization's preparation for the future. Subsequent research by Shenhav and Dvir expanded the model to five dimensions: project effectiveness; impact on the customer; impact on the project team; business and immediate results; and preparation of the organization for the future.

This approach is particularly relevant for transformation projects. For example, the implementation of a new ERP system may be completed on time and on budget, but the project cannot be considered fully successful if employees do not use the system, productivity has not increased, and the organization has not achieved the expected business effect. Therefore, it is advisable to determine the success of a transformation project through several groups of indicators: **project effectiveness** - adherence to deadlines, adherence to budget, achievement of planned results; **user effect** - employee and customer satisfaction, degree of use of the new solution, and the result's compliance with user needs; **organizational effect**: improvement of business processes, increased productivity, achievement of strategic goals; **transformation effect**: sustainability of changes, development of new competencies, increasing organizational adaptability, and creating new opportunities for future development. Thus, in the proposed model, project success is a multidimensional dependent variable.

Based on the analysis conducted, the following logic of relationships is proposed:

human factor → effectiveness of organizational change management → success of the transformation project.

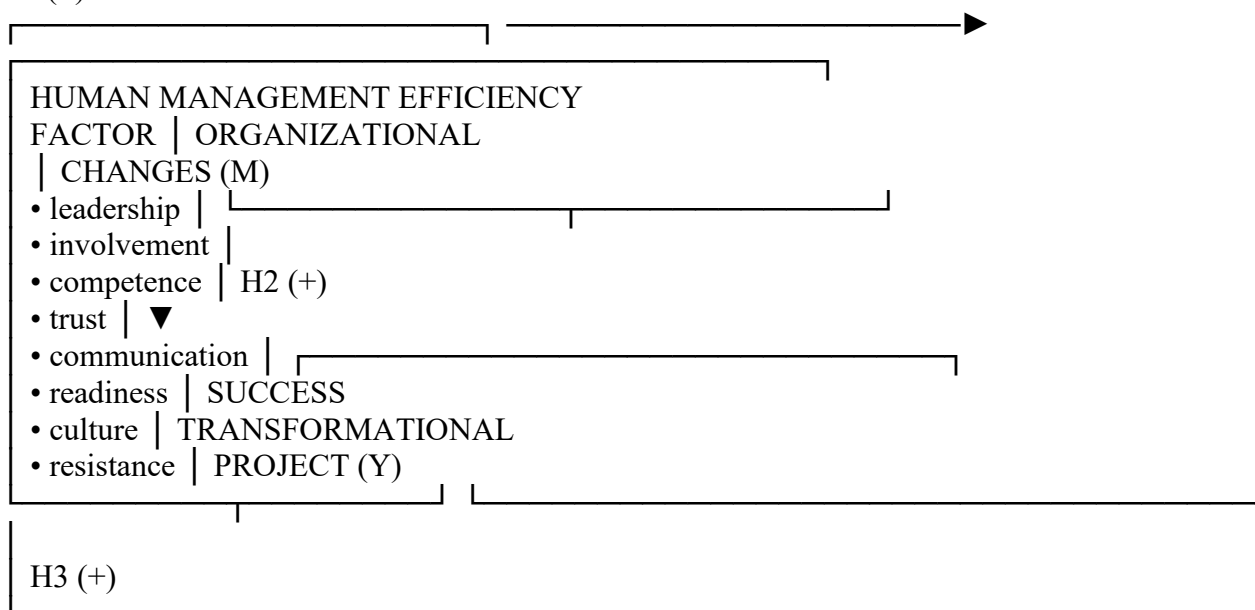
At the same time, the presence of a direct connection is assumed:

human factor → success of the transformation project.

Thus, change management effectiveness is considered as a potential mediating variable.

Conceptually, the model can be represented as follows:

H1 (+)



H4 - mediating effect

X → M → Y (indirect influence)

The proposed model suggests that the human factor influences project outcomes in two ways. The first is direct: competent, engaged, and motivated employees directly increase the likelihood of achieving project results. The second is indirect: a positive human context facilitates more effective change management, which, in turn, increases the likelihood of successful completion of a transformation project.

At the same time, it is important to take into account that the quality of change management depends on the extent to which managers are able to form an understanding of the need for transformation, ensure communication, engage employees and create conditions for learning. Research Oreg (2006), Weiner (2009), Dempsey et al. (2022) and Gaile et al. (2026) demonstrate the importance of human behavior, context, readiness, communication, and leadership for change success. Based on this, the following hypothesis is proposed (**H1**) : The human factor has a positive impact on the effectiveness of organizational change management. It is assumed that increased employee engagement, leadership quality, trust, communication, competence, and readiness for change lead to increased change implementation effectiveness. management .

It's also important to consider that an organizational project doesn't exist independently of the organization. Its implementation requires changes in behavior, processes, and management practices. Relationship Research between Change Management Practices and the Success of Organizational Projects provides direct empirical evidence to support the hypothesis that change management practices have a positive impact on project success. Therefore (**H2**), organizational change management effectiveness positively influences transformation project success. It is hypothesized that more effective change management leads to higher levels of acceptance of project results, reduced resistance, increased adoption of new solutions, and, ultimately, the achievement of business goals . on digital transformation suggests a direct link between human factors and project outcomes. et al . (2025) propose to include human factor as an independent factor in the success model of digital transformation projects.

Chen, Sun, and Liu (2025), using a sociotechnical perspective, also show the high significance of organizational and people-related factors, in particular managerial support and team competence. Therefore, (**H3**), the human factor has a positive impact on the success of a transformation project. The most significant theoretical contribution of the proposed model is related to the assumption of a mediating mechanism. If the human factor ensures the readiness, involvement, and ability of employees to support the transformation, and change Since management translates these characteristics into specific management actions, the impact of the human factor on project outcomes can be partially realized through effective change management. In other words, having qualified and motivated employees is not enough. Human potential must be transformed into a manageable process of organizational transformation.

Based on this, **H4 is formulated** : organizational change management effectiveness mediates the positive relationship between human factors and transformation project success. It is hypothesized that after including the mediating variable, the direct effect of human factors on project success may decrease while still maintaining statistical significance.

Conclusion

The analysis conducted allows us to draw several fundamental conclusions. First, the human factor cannot be reduced to employee resistance. Resistance is only one component. A modern understanding must encompass both positive and negative characteristics of human behavior: willingness, engagement, leadership, trust, competence, communication, and resistance.

Secondly, human factors are not entirely independent of the organizational environment. Research by Oreg (2006) shows that employee attitudes toward change are determined by both individual characteristics and the organizational context. Therefore, human factors management should include not only influencing employees but also changing the organizational environment itself.

Third, the human factor is closely linked to organizational readiness. Weiner's theory (2009) suggests that readiness for change is formed as a collective belief in the need for change and the organization's ability to implement it.

Fourth, the success of a transformation cannot be judged solely by completing the project on time and within budget. For transformation initiatives, the adoption of changes, the actual use of new solutions, the organizational impact, and the organization's ability to leverage the project's results in the future are particularly important.

Fifth, contemporary literature increasingly confirms the sociotechnical nature of transformation. Chen, Sun, and Liu (2025) demonstrate that organizational and people-related factors are highly significant in digital transformation projects. Chang and Chen (2025), in turn, demonstrate the need for a joint analysis of people, processes, and technologies.

Thus, the proposed model allows us to combine several areas of research that previously often developed relatively separately:

Organizational behavior → change management → project management → digital transformation.

The theoretical significance of the proposed model lies in several propositions. First, the human factor is viewed as **an independent, standalone variable**, rather than a collection of separate auxiliary characteristics.

Secondly, the effectiveness of change management is proposed to be considered as **a mechanism for transforming human potential into project results**.

Third, the success of a transformation project is defined as **a multidimensional result** that includes not only project effectiveness, but also organizational, user, and long-term effects.

Fourth, the proposed model combines direct and indirect mechanisms of influence:

human factors → project success; and human factors → change management → project success.

This allows us to move from the question “does the human factor influence?” to a more meaningful question: **how does the human factor influence the outcome of the transformation?**

The resulting theoretical principles have direct practical implications for organizational leaders and managers of transformation projects. First, when preparing for a transformation, it is necessary to assess not only technological and financial readiness, but also the readiness of people. Second, diagnostics should be conducted before the project begins. At this stage, it is advisable to assess the level of trust, resistance, competence, engagement, and understanding of the change goals. Third, change management should be integrated into the management of the project itself. Management shouldn't be viewed as a communications function activated after a technical solution has been developed. Fourth, a two-way communication system must be established. Employees should not only

be informed of decisions being made but also given the opportunity to express concerns, suggestions, and comments. Fifth, significant attention must be paid to middle managers. They often act as the link between the strategic decisions of senior management and the day-to-day behavior of employees. Sixth, success metrics for a transformation project should include adoption metrics —the actual acceptance and use of the project's results. Completion of a project does not mean the transformation has been successful if the new system, process, or organizational model is not used in real-world operations.

Contemporary research is gradually moving away from the notion of a transformation project as a primarily technological or process-based initiative and toward viewing it as a complex socio-technical process. A systematic review of 183 publications conducted by Lykourantzou et al. (2025), provides grounds for identifying the human factor as an independent category of factors in the success of digital transformation. Studies by Chang and Chen (2025), Chen et al. (2025), Dempsey et al. (2022) and Gaile et al. (2026) further demonstrate the importance of people, leadership, communication, organizational readiness, and change management practices.

Based on the literature reviewed in this article, it can be concluded that the human factor should be considered as an independent variable, the effectiveness of organizational change management as a mediator, and the success of the transformation project as a dependent variable.

The proposed model helps explain why the presence of qualified and engaged employees alone does not guarantee transformation success. Human potential must be converted into concrete management actions through effective change management. This is why the proposed mediating role of change management is of particular scientific interest.

The practical conclusion is the need to shift from a "technology first, people second" approach to an integrated model in which people, processes, and technology are considered simultaneously. For a transformation project, the human factor is not a constraint to be minimized, but a strategic resource that must be purposefully developed and integrated into the change management system.

References

1. Chang , Y.-W. , & Chen , J. (2025). An empirical investigation of critical success factors in implementing digital transformation. *Technological Forecasting and Social Change*, 217 , 124161. <https://www.sciencedirect.com/science/article/pii/S0040162525001921>
2. Chen, M., Sun, X., & Liu, M. (2025). Critical success factors in Agile-based digital transformation projects. *Systems*, 13 (8), 694. DOI: 10.3390/systems13080694. <https://www.mdpi.com/2079-8954/13/8/694>
3. Dempsey, M., Geitner , L., Brennan, A., & McAvoy , J. (2022). A review of the success and failure factors for change management. *IEEE Engineering Management Review*, 50 (1). DOI: 10.1109/EMR.2021.3130989. <https://ieeexplore.ieee.org/document/9627765>
4. Gaile , A., Zaumane , I., Stibe , A., Kivipõld , K., et al. (2026). Expanding the success factors of change management by incorporating crisis preparedness in the emerging AI world. *Review of Managerial Science* . DOI: 10.1007/s11846-026-00979-1. <https://link.springer.com/article/10.1007/s11846-026-00979-1>
5. Griffith-Cooper, B., & King, K. (2007). The partnership between project management and organizational change: Integrating change management with change leadership. *Performance Improvement*, 46 (1), 14–20. DOI: 10.1002/pfi.034. <https://onlinelibrary.wiley.com/doi/abs/10.1002/pfi.034>

6. Kotter , J. P. (1995). Leading change: Why transformation efforts fail. *Harvard Business Review*, 73 (2), 59–67. <https://hbr.org/1995/03/leading-change-why-transformation-efforts-fail-2>
7. Levasseur , R. E. (2010). People skills: Ensuring project success -A change management perspective. *Interfaces*, 40 (2), 159–162. DOI: 10.1287/inte.1090.0473. <https://pubsonline.informs.org/doi/abs/10.1287/inte.1090.0473>
8. Lykourantzou , M. A., Apostolopoulos , N., Dabić , M., Liargovas , P., & Tekavčić , M. (2025). Assessing the role of human factor in digital transformation projects: A systematic literature review and research agenda. *Technology in Society*, 82 , 102934. DOI: 10.1016/j.techsoc.2025.102934. <https://www.sciencedirect.com/science/article/pii/S0160791X25001241>
9. Oreg , S. (2006). Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology*, 15 (1), 73–101. DOI: 10.1080/13594320500451247.
10. Shenhar , A. J., Levy, O., & Dvir , D. (1997). Mapping the dimensions of project success. *Project Management Journal*, 28 (2), 5-13. <https://www.pmi.org/learning/library/mapping-dimensions-project-success-5378>
11. Shenhar , A. J., & Dvir , D. (2007). *Reinventing Project Management: The Diamond Approach to Successful Growth and Innovation* . Harvard Business Review Press. <https://store.hbr.org/product/reinventing-project-management-the-diamond-approach-to-successful-growth-and-innovation/8002>
12. Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science*, 4 , 67. DOI: 10.1186/1748-5908-4-67. <https://link.springer.com/article/10.1186/1748-5908-4-67>
13. Relationship between Change Management Practices and the Success of Organizational Projects. (2025). *Brazilian Business Review*, 22 . DOI: 10.15728/bbr.2023.1540. <https://www.scielo.br/j/bbr/a/hdfbjZsmQ5TdqKXWsChT7Dc/?format=html&lang=en&ilang=en>