


## Project management and its contributions to the implementation of environmental management systems

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### ABSTRACT

This research, conducted through interviews with industrial managers through an exploratory study with a qualitative approach, analyzed the effects of project management on the implementation of environmental management systems. The managers emphasized the importance of a structured approach to address the complex challenges of environmental management, highlighting project management as a key tool in this process. The data revealed that project management plays a crucial role in the effective integration of environmental management systems into the daily operations of organizations, demonstrated by the emphasis on clear goal setting, efficient resource allocation, environmental risk identification and mitigation, and effective team coordination. In addition, managers pointed out that project management fostered communication and collaboration between different departments and stakeholders, ensuring proper management of expectations and delivery of results as planned. These results highlight the importance of project management as a strategic approach to effectively integrate environmental management systems into organizational operations, promoting a culture of communication, collaboration, and continuous adaptation, which are fundamental for the success of environmental management in a context of constant change.

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## INTRODUCTION

Project management is an essential discipline in any organization that seeks to achieve its goals efficiently and effectively. In the business world, a project can be defined as a temporary effort made to create a unique product, service, or result. Project management, therefore, refers to the set of practices, techniques, and methodologies used to plan, execute, monitor, and control all the steps necessary to achieve the defined objectives within a given timeframe, cost, and quality (PIMENTA; ROSE; PIMENTA, 2023).

In an increasingly competitive and dynamic business world, project management becomes crucial to the success of an organization. It provides a structured approach to dealing with the complexity inherent in projects, allowing for efficient resource allocation, risk identification and mitigation, clear goal setting, and effective coordination of the teams involved (KERBES; SILVA JUNIOR; MARINHO, 2023).

Additionally, project management fosters communication and collaboration among all stakeholders, ensuring that expectations are managed and deliverables delivered according to plan. Thus, by adopting project management practices, organizations can increase their capacity for innovation, improve their agility and adaptability to market changes, and, consequently, achieve greater success in their endeavors (LINK et al., 2020).

Implementing environmental management systems is a complex task that requires a careful and systematic approach. In this scenario, project management plays a key role in this process, providing a framework for planning and executing all the necessary steps to ensure the successful integration of these systems. This includes identifying regulatory and organizational requirements, assessing environmental impacts, developing policies and procedures, implementing sustainable technologies and practices, and conducting audits and performance evaluations (COSTA; QUALHARINI, 2022).

Through the application of project management methodologies, such as the PMBOK (Project Management Body of Knowledge) or PRINCE2 (Projects In Controlled Environments), organizations can ensure a structured and effective approach to the implementation of environmental management systems. This includes clearly setting objectives, allocating resources appropriately, creating detailed plans, continuously monitoring progress, and taking corrective action when necessary (NASCIMENTO; 2020).

Thus, in this context, the objective of this research was to analyze the perceptions of industrial managers in a Brazilian municipality about the contributions of project management to the implementation of environmental management systems. The study was limited to managers of nine industries, thus having a qualitative methodological approach. By understanding such contributions,



it is hoped that this research will provide theoretical and practical subsidies for organizations interested in improving their environmental management and sustainability.

## METHODOLOGY

As for the methodology, it was a fieldwork, carried out through an exploratory research with a qualitative approach. The approach adopted in this research was a qualitative approach, considering that the main objective was to understand the contributions of project management to the implementation of environmental management systems in organizations. The choice of this type of research is justified by the need to explore in depth the perceptions, experiences and practices of the managers involved, in order to obtain meaningful and contextual insights on the topic in question.

The sample consisted of 9 managers of industries located in a Brazilian municipality. The selection of participants was made by convenience, and the only criterion was the companies' adherence to environmental management systems. This ensured that respondents had hands-on experience and relevant knowledge about the subject under review.

Data collection was conducted through semi-structured interviews. First, an initial approach was made to the selected companies, explaining the purpose of the research and requesting the participation of managers. After confirmation of participation, individual interviews were scheduled, which were held in places convenient for the interviewees, such as their offices or meeting rooms.

During the interviews, the managers were asked about various aspects related to project management and the implementation of environmental management systems in their organizations. The questions aimed to address both theoretical and practical aspects. Participants' responses were recorded and later transcribed for detailed data analysis.

## RESULTS AND DATA ANALYSIS

In this section, the results and analysis of the data obtained through the interviews with the managers of industries will be presented and discussed. Initially, managers were asked about their perceptions of the importance of project management in the implementation of environmental management systems in their organizations.

In general, all participants highlighted the relevance of a structured and systematic approach to dealing with the complex challenges related to environmental management. The managers emphasized that project management provides an organized framework for planning and executing the necessary steps, ensuring the effective integration of environmental management systems into daily operations.

I highlight the importance of project management as a tool to plan and execute the necessary steps, ensuring the effective integration of environmental systems into our daily operations (E02).



Project management is fundamental to integrate the environmental management system effectively in our industry, integrating not only our operations and culture, but also all hierarchical levels (E07).

The emphasis given to the need for a structured and systematic approach to address the challenges of environmental management underscores the importance attributed to organization and planning in environmental management. Project management emerges as an essential tool for achieving this structured approach, providing an organized framework for planning and executing the necessary steps.

The emphasis on the effective integration of environmental systems into day-to-day operations reflects the understanding that environmental management is not a one-time effort, but rather an integral part of the day-to-day activities of the industry. Project management is identified as the key to ensuring this integration, ensuring that environmental systems are efficiently incorporated and aligned with the company's objectives.

The observation that project management is not only limited to day-to-day operations, but also permeates the organizational culture and reaches all hierarchical levels of the company, underscores the breadth of influence of this approach. This suggests that project management not only facilitates the execution of tasks related to environmental management but also shapes the mindset and organizational processes more broadly

In addition, the managers pointed out that project management helped in the clear definition of environmental objectives and targets, the efficient allocation of resources, the identification and mitigation of environmental risks, and the effective coordination of the teams involved.

The implementation of project management was crucial to establish clear environmental goals, optimize resources, and minimize risks. The efficient coordination of the teams drove our success (E03).

The importance of project management was to set environmental objectives, allocate resources efficiently, and mitigate risks. The coordination of the teams ensured effective results in our initiatives (E05).

From the managers' reports, the relevance of project management in the environmental context is evident. Implementing this approach has proven to be critical to several aspects of the process, including the clear definition of environmental objectives and targets. This suggests that structuring specific and measurable goals is facilitated by the application of project management methodologies.

In addition, the managers highlighted the importance of efficient allocation of resources, which implies careful management of the means available to achieve the established objectives. This



demonstrates the need for detailed planning and a balanced distribution of resources to optimize environmental outcomes.

The identification and mitigation of environmental risks have also emerged as key elements, indicating a proactive approach in project management to anticipate and mitigate potential adverse impacts on the environment. This underscores the importance of a comprehensive and ongoing risk analysis to ensure the sustainability of environmental projects.

Finally, effective coordination of the teams involved was emphasized as a determining factor for success. This suggests that clear communication, collaboration, and synchronization of efforts are essential to ensure the efficiency and effectiveness of environmental initiatives.

It is also noteworthy that managers also emphasized that project management fostered communication and collaboration between different departments and stakeholders, ensuring that expectations were managed and results delivered as planned.

Project management was essential for strengthening communication and collaboration between departments and stakeholders. This ensured that all expectations were managed effectively, resulting in the timely delivery of planned results (E09).

We highlight that project management has facilitated fluid communication and collaboration between different areas and stakeholders. This was key to managing the expectations of all involved and ensuring the successful delivery of results as planned (E01).

The role of project management in promoting communication and collaboration between different areas and stakeholders is emphasized in the managers' reports. This strategic approach is considered crucial to ensure that expectations are managed effectively and results are delivered as planned. Through project management, departments and stakeholders can be aligned more efficiently, allowing for more fluid communication and more effective collaboration. This is particularly relevant in complex organizational environments where multiple actors are involved in a project.

In this vein, project management provides a framework for monitoring and controlling project progress, which contributes to effective management of expectations. By establishing clear objectives and setting milestones along the way, managers can ensure that all stakeholders are aligned and that the end results are in line with expectations. The timely delivery of planned results is one of the main benefits highlighted by managers, demonstrating the effectiveness of project management in ensuring the efficient execution of tasks and meeting established deadlines.

On the other hand, some challenges were identified by managers during the process of implementing environmental management systems with the help of project management. These included internal resistance to change, lack of adequate resources, complexity of environmental regulations, and the need to continuously adapt to changes in the environmental and market landscape.



## CONCLUSION

In this research, conducted through interviews with industry managers, the impacts of project management on the implementation of environmental management systems were examined. The managers emphasized the importance of a structured approach to address the complex challenges related to environmental management, highlighting project management as a key tool in this process.

Analysis of the data revealed that project management plays a crucial role in effectively integrating environmental management systems into the daily operations of organizations. This is evidenced by managers' emphasis on clear goal setting, efficient resource allocation, identification and mitigation of environmental risks, and effective coordination of the teams involved.

In addition, managers pointed out that project management fostered communication and collaboration between different departments and stakeholders, ensuring proper management of expectations and delivery of results as planned. These aspects are essential to overcome the challenges faced during the implementation of environmental management systems, such as internal resistance to change, lack of adequate resources, complexity of environmental regulations, and the need for continuous adaptation to changes in the environmental and market landscape.

In summary, the results of this research highlight the importance of project management as a strategic approach to promote the effective integration of environmental management systems into organizational operations. Project management not only facilitates the implementation of these systems, but also fosters a culture of communication, collaboration, and continuous adaptation, which are critical to the success of environmental management in an ever-changing world.



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