



CHALLENGES AND OPPORTUNITIES OF THE DIGITAL TRANSFORMATION OF A SHIPPING AGENCY COMPANY

RODRIGO LOPES AVILA

BRAZIL

2025

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INTRODUCTION

The lives of people, as well as the work they perform, have been transformed by technological and digital advancements across the globe. In this regard, companies and organizations need to adapt their people and work groups, redesign their processes, and include new technologies to remain updated and competitive. This Digital Transformation [DT] has led companies to an unprecedented competitive environment, where new opportunities, ways of working, and challenges arise for all types of organizations and companies (Froehlich et al., 2023).

The Digital Transformation is a method that aims to improve a company or business unit by utilizing not only information technologies but also integrating elements such as communication and connectivity, with new “software” and “hardware.” Continuous Digital Transformation demands modifications throughout the Company, from its culture, business strategy, and people, including leadership and work teams (Froehlich et al., 2023).

The breadth to which change is disseminated, as well as its essence, helps explain why innovations and disruptions with past methods are so accentuated nowadays. Furthermore, the speed with which new technologies emerge and are shared is faster than ever, while the technologies and companies that represent these transformations today were not as well-known just a few years ago (Schwab, 2017).

The evolution from a traditional company to a digital company through Digital Transformation is imaginable; however, there is an important element in this context, which is considering people as central and their correct involvement in the transformation, including concerns about what they feel and how they are living, as they are affected in various sectors of life within organizations and personally (Lara et al., 2023).

Several increments and changes are caused by Digital Transformation in various aspects of society, as the need arises to deal with advanced technologies and digitalization. In this sense, investments in the development and qualification of professionals to insert themselves into this model appear as fundamental. Beyond the technological side that is developed for such transformations, Digital Transformation demands that people acquire new knowledge and competencies for those who are inserted in this environment. In order to achieve digital maturity through the promotion of Digital Transformation, the involvement of leaders and transformation agents is essential, in order to break with past business visions, as well as stimulate the adoption of new business models (Dillenburger et al., 2023).

With the advancement of Industry 4.0 and Digital Transformation, several benefits, as well as equally proportioned challenges, will emerge. Such challenges are difficult to quantify, as most people perform more than one role in society, sometimes being a producer, sometimes being a consumer, and innovations and transformations will impact people's well-being both positively and negatively (Schwab, 2017).

This context of Digital Transformation has altered various segments, including the maritime industry, which, despite having a central role in international trade and cargo transport, is not characterized as a precursor in digitalization. Furthermore, the maritime industry faces various

challenges, such as high fragmentation, manual processes, and outdated interfaces between stakeholders, among others. On the other hand, such challenges present opportunities to increase the performance and economic environment of those involved in the maritime industry (Raza et al., 2022).

The involvement of different actors in the maritime industry, such as shipping agents, shipowners, port terminals, and customs authorities, forms the environment of maritime practices, where each uses different infrastructures and systems, making collaboration and interaction more difficult. In this sense, for the maritime industry to remain attractive and competitive, a new digital environment based on data sharing among actors will need to be created, evolving in visibility, agility, predictability, and, at times, a better data-driven decision-making process (Raza et al., 2022).

Based on the above, the present work becomes relevant within the scope of the company in question, since it has been one of the actors in the maritime industry for over 180 years and has been undergoing this process of digital transformation. The general objective of the work is to identify the main challenges faced and opportunities that have arisen for a maritime agency company during its digital transformation process.

METHODOLOGY

For the realization of this study, the qualitative method was chosen, since the general and specific objectives refer to the digital transformation process of the company under study. Furthermore, it is a source with a solid foundation and with details about human processes. The strategy used for this study was a case study analysis, which used open-ended questions to describe a social phenomenon (Nascimento, 2018).

The context of the present study took place in a port logistics operations company operating in the Brazilian market since 1837, which has a business portfolio along the Brazilian maritime coast that includes port terminals, maritime towage, logistics, shipyard, offshore support vessels, and maritime agency, which was the business unit chosen for the realization of this study. The maritime agency business unit began its digital transformation process around 2018; moreover, the study being focused on a single business unit of the group is justified by the author's access to the company's employees. Furthermore, this business unit has an administrative support structure, including Processes and Quality, Market Intelligence, Administrative and Financial, Information Technology, as well as the operational area, responsible for the execution of the end activities and service to the vessels represented by the company (Nascimento, 2018).

For the data collection stage, primary data obtained through interviews were primarily used, conducted using an interview script adapted from that proposed by Nascimento (2018), as per Table 1, with those who had, or still have, involvement in the digital transformation process.

Managers	Non-managers
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How do you understand the digital transformation process in the company? In your opinion, what are the main challenges and opportunities of digital transformation?	How do you understand the digital process in the company? In your opinion, what are the main challenges and opportunities of this process?
In your opinion, what are the impacts and difficulties of the digital transformation process in the company?	In your opinion, what are the impacts and difficulties of implementing this digital process in the company?
In your opinion, has digital transformation changed the relationship between the company's areas? Do you understand that this change in the relationship has brought impacts to your area? If yes, what type of impact can be observed?	In your opinion, has the digital process changed the relationship between the company's areas? Do you understand that this change in relationship has brought impacts to your area? If yes, what type of impact can be observed?
In your understanding, what is the contribution of your area to the company's digital transformation?	In your understanding, what is the contribution of your area to the company's digital process?
What is the impact on the company of the digital initiatives being implemented?	What is the impact on the company of the digital initiatives being implemented?
In your opinion, does digital transformation have any effect on the Company's business model? How do you see the Company's adaptation to this new business model?	In your opinion, does the digital process have any effect on how the company does its business? How do you see the Company's adaptation to this new business model?
In your opinion, what are the next steps for digital transformation in the company?	In your opinion, what are the next steps for the digital process for the company?
What do you understand by digital strategy? And what do you think needs to be considered in preparing the digital strategy?	How do you see management before the start of the digital processes and after the start of the implementation of the digital processes?
How do you see management before the digital transformation process and after the digital transformation process?	How do you see the behaviour of your colleagues before and after the implementation of the digital processes?

Table 1: Interview script adapted from Nascimento (2018)

The selection of the population for this study was based not only on employees who promoted and induced the digital transformation process but also on those whose work was impacted by

it, such that they are familiar with the impacts on their activities. Table 2 presents the employees who were interviewed, whether they belong to the managerial or non-managerial staff, as well as their time with the company under study. Eight interviews were conducted, four with employees belonging to the managerial staff and four with non-managerial employees.

Employee	Role	Time at the Company	Interview Duration
E1	Manager	10y 10m	25min
E2	Non-manager	2y 5m	20min
E3	Non-manager	5y 1m	11min
E4	Manager	9y 10m	25min
E5	Manager	12y 4m	13min
E6	Manager	17y 0m	15min
E7	Non-manager	2y 3m	31min
E8	Non-manager	2y 1m	16min

Table 2: List of interviewed employees

Source: Original research data

For the data analysis stage, the primary data obtained through recorded interviews required some processing; in this sense, literal transcriptions of the audio were made immediately after the interviews concluded for better analysis (Nascimento, 2018). Appendix 1 presents an example of a transcription performed. Furthermore, in the data analysis, an effort was made to divide the responses and content shared by the interviewees according to the objectives of the present study, classifying them into Analysis of the opportunities of digital transformation [DT]; Analysis of the challenges of digital transformation; and finally, Analysis of the impacts of digital transformation, observing the information from both non-managerial and managerial employees of the company. In order to obtain a categorization of the topics discussed in the interviews, the most relevant excerpts from the interviews were grouped together and subsequently categorized according to the type of subject being discussed.

RESULTS AND DISCUSSION

To analyse the results achieved, they were divided into categories according to the objective of the study. Therefore, the results obtained were divided into Analysis of Opportunities, Analysis of Challenges, and finally, Analysis of Impacts. Furthermore, they were divided into analyses of the company's non-managers and managers.

ANALYSIS OF OPPORTUNITIES - NON-MANAGERS

From the perspective of non-managerial employees, digital transformation should be a company initiative, with the goal of remaining updated and competitive in the market and creating opportunities, which include the improvement of operational routines and an increased focus on the quality delivered to the client, through the development of systems and automations. As highlighted by Martins et al. (2023), these digital initiatives are considered essential for the future of the company. Table 3 presents the structure of excerpts and categories that support the understanding of Digital Transformation opportunities according to the interviewed non-managers.

Description: Facilitates the company's updating and employee engagement in new digital practices and processes.	Initiative and Digital Culture
Interview excerpts: <ul style="list-style-type: none">- The digital process has to come from the company, because technology advances more every day, and has to be adapted within the company.- Creation of a digital transformation agenda and dissemination of courses to attract volunteers to specialize.- Because we have a management that believes in digital transformation, which already has a direct link with information technology, IT, it ends up being a motivator for us to evolve in Digital Transformation.- Here we have a very strong culture of having in-house systems, systems that are created by us.	
Description: Adoption of systems and automation to simplify operational routines, increasing efficiency.	
Interview excerpts: <ul style="list-style-type: none">- Improve what we already have and simplify our work.- We simplify processes so that the company has this continuity.	Process Improvement

- Developing systems, developing automation would also help a lot in daily processes.	
Description: Generate value for the client through a more agile service, increasing satisfaction and loyalty.	Customer Focus
Interview excerpts: - And get new clients, go after innovation, which is what everyone wants today. - So having innovation, communication, everything that is aligned with digital transformation in our DNA becomes an opportunity for us to show it as a differential. - Having these systems is an opportunity to show the client what we are doing, that we are striving, show that we are moving forward with digital transformation, and make their life easier.	

Table 3: Analysis of opportunities from the perspective of non-managers

Source: Original research data

In general, from the perspective of non-managerial employees, digital transformation not only improves the efficiency of internal processes but also frees up employees to focus on activities that provide a better customer experience and contribute to the growth and modernization of the company.

ANALYSIS OF OPPORTUNITIES - MANAGERS

For the Company's managers, digital transformation offers a series of significant opportunities for a maritime agency, presenting positive impacts on operational and strategic aspects. Improvements can occur in routine processes, allowing employees to dedicate themselves to other aspects, such as self-development and the quality perceived by clients. Furthermore, it enables more rational management through dashboards and real-time updated data. Similar results were found by Klein and Todesco (2020), who highlight benefits such as operational excellence and company procedures, improved customer relationships through more customized service delivery, and increased customer satisfaction with data delivery according to their preferences. Table 4 presents the structure of excerpts and categories that support the understanding of Digital Transformation opportunities according to the interviewed managers.

Description: Free up time for team training and development, allowing greater focus on service quality.	Operational Excellence
Interview excerpts: - Opportunity, you certainly, with digital transformation, can have more time for teams to develop and train better, free up time for you to serve better, and spend more time on excellence, and not on very routine or unintelligent processes that could be automated. - Automation and digitalization of processes reduce operation time and costs.	
Description: Real-time dashboards for more informed and data-driven decisions.	Data-Driven Management
Interview excerpts: - The use of real-time data allows for more informed decisions, such as the operational panel dashboard. - More focused on data, you start to leverage it more intelligently, and start getting insights from analysed data.	
Description: Use of global systems allows for improvements in interaction and transparency with clients.	Expansion of Digital Solutions
Interview excerpts: - We have the opportunity to be here in Brazil using software developed in Israel that has a market not so similar to ours, but they can perfectly understand our needs. - So, if we don't look outside at what the world is doing, we will be left behind, and we will be swallowed by this wave. - Digital solutions can improve communication and customer service, offering greater transparency and agility.	

Table 4: Analysis of opportunities from the perspective of managers

Source: Original research data

In the perception of the managers, with digital transformation, the geographic barriers that existed until then are reduced, where the adaptation of systems from other regions of the world and other market segments is viable, in such a way that the use of these systems allows for better data analysis, as well as providing digital solutions to clients and perceiving growth opportunities that, in a context of fragmented or outdated data, would not be feasible. Frare et

al. (2022) emphasize that the competence to process data and information is fundamental to predicting market changes, allowing companies to adjust their services to meet customer expectations.

For the interviewed managers, digital transformation is characterized as an opportunity for the growth and optimization of the maritime agency's operations, within the category of "Process Improvement." Improvements are seen in process automation and online data analysis, allowing for more strategic and efficient decisions. Furthermore, as described in the "Customer Focus" category, digital transformation allows for greater attention to the client, with more personalized solutions, optimizing service, and increasing satisfaction.

ANALYSIS OF CHALLENGES - NON-MANAGERS

The human factor was the most highlighted as the greatest challenge for Digital Transformation in the company, whether due to resistance to adopting a new digital culture, where it is necessary to adapt to new systems, technologies, and methodologies for carrying out a process, or due to the difficulty in finding qualified professionals in the market or in developing new knowledge and skills within the company. Digital transformation requires capable people with specific skills to deal with new technologies and systems.

Furthermore, technical issues were also highlighted as challenges to be overcome, given the complexity of the processes inherent to maritime agencies, as well as the adaptation of old systems to new technologies. Still, on technical issues, the management, processing, and storage of an ever-increasing volume of data also emerge as a challenge. According to Oliveira et al. (2023), data can be considered fundamental intangible assets for value creation, such that accessing existing information allows for the exploration of new business opportunities. Table 5 presents the structure of excerpts and categories that support the understanding of Digital Transformation challenges according to the interviewed non-managers.

Description: Employee resistance to new digital systems and methodologies.	Culture Change
Interview excerpts: <ul style="list-style-type: none"> - When someone arrives with a very good idea to implement, to make things easier, but it depends on a system, on a program, there is a certain difficulty in assimilating it. - The challenges are staff adaptation, people's resistance to change. - A challenge is changing the culture, even though this process is very good and helps us, I think the culture is still a problem. 	

Description: Need to find or develop qualified professionals in advanced technologies and systems.	Professional Profile
Interview excerpts: <ul style="list-style-type: none"> - It is finding qualified labour in the market or qualifying the labour that is already within the company, because to make any transformation, we need people capable of doing it. - Lack of qualified professionals in the IT area, someone who understands the business, who understands maritime agency, or who also understands what the client wants and who really understands our systems. - It comes down to the qualification of professionals, because as we are in this digital era, digital transformation, we have people who move along with this change in the flow that is happening, but there are some who don't keep up as much. 	
Description: Difficulty in integrating new systems with legacy systems and in managing large volumes of data.	System Complexity
Interview excerpts: <ul style="list-style-type: none"> - There is this issue of being centennial; there are many very old systems, and they are not close to the new technologies we see. - We have a very large volume of data, an exponential volume of data, so every day that passes, this data grows more, and to manage this data, clean this data, and use it in a more qualitative way. 	

Table 5: Analysis of challenges from the perspective of non-managers

Source: Original research data

The challenges faced by non-managers regarding digital transformation are directly related to the human factor and technological adaptation, with resistance to cultural change, the difficulty in finding and qualifying professionals with the necessary skills, and the complexity of old systems being significant barriers to the success of this transition.

ANALYSIS OF CHALLENGES - MANAGERS

One of the biggest challenges highlighted was changing the culture, both of employees and target markets, such that top management is demanded to be the greatest promoter of this transformation and that middle leadership be multipliers of this transformation throughout the Company; according to Alcantara et al. (2024), the most critical factor for the success of adopting new digital processes is organizational culture. Also within the cultural scope, being a very traditional sector, there is the challenge of promoting the benefits of digital transformation among clients, so that they see value in the Company's initiatives.

Digital transformation requires a critical analysis of the current structure and investments in new infrastructure to overcome existing technical challenges. To achieve the Company's strategic objectives, it is necessary for as many processes as possible to be automated and for data to be well utilized. If the structure does not meet the needs, investments are necessary. Table 6 presents the structure of excerpts and categories that support the understanding of the challenges of Digital Transformation according to the interviewed managers.

Description: Requires top management to promote changes and engage all hierarchical levels for the digital transition.	Organizational Culture Transformation
Interview excerpts: <ul style="list-style-type: none">- The main challenge is making both the people at the top who manage this company, and the people at the front applying these changes, understand its importance.- The difficulty is the issue of the team's culture; to work with digital transformation, you have to start from top to bottom, you have to have this guidance and objective from the board.- As the sector is traditional and conservative, many professionals may resist change, preferring established methods.- The team has to understand the seriousness of this transformation, and we have to be able to apply it in the best way.- You have the team that embraces a dashboard, an analysis, and you have the team that doesn't want to know about that, the team that is still with pen and paper, they want to call you and know, right? So you have to, depending on the scenario, you have to sell internally and sell externally.	

Description: Need for investments in new systems, automation, and technological integration to support Digital Transformation.	Technical and Infrastructure Challenges
Interview excerpts: - The integration of new technologies with legacy systems can be complicated and expensive. - It's about having as many processes as possible running within the systems, and with as much automation as possible and as much updating, utilization, and handling of data and information as possible. Does the structure meet the needs? Does it require investments in structure?	
Description: Requires rapid adaptation and digitalization to meet customer expectations and remain relevant in the market.	Market Competitiveness
Interview excerpts: - We act as intermediaries and with the advancement of technology, it's natural for the client to have much better and greater access to information. - Before, a good part of the services contracted by the Shipowner, whom we represent, were 100%, as a rule, contracted by the agency; today you already see a lot of direct contracting, so, it's as if we were doing a little less and less. - The digital transformation process is necessary, and companies that refuse to make this type of move will eventually be surpassed by all others.	

Table 6: Analysis of challenges from the perspective of managers

Source: Original research data

Digital transformation in a maritime agency presents complex and diverse challenges, given the characteristics of the market, acting as an intermediary between various players such as shipowners, charterers, exporters, and importers. Due to the advancement of technology, clients have easy access to more complete and updated information, naturally changing the dynamic of contracted services and allowing for greater comparison among competing agencies.

ANALYSIS OF IMPACTS - NON-MANAGERS

The impacts of Digital Transformation appear early in its process, as it demands high team engagement for the implementation of new processes and monitoring their adherence and adaptation. Once this initial stage is overcome, the company can begin to reap the fruits of digital transformation, leveraging the benefits of more efficient and technological processes, altering its business model, especially in the commercial department, with the capacity to present clients with detailed and sophisticated analyses obtained through the new systems.

The digital transformation process brings financial impacts for the company, given the volume of resources demanded for the development and creation of new systems, as well as the creation and maintenance of a qualified team for the new systems, in line with Daxbacher et al. (2023), where there is significant financial investment and profound modifications in the organization's processes. Furthermore, such cost is revealed to be higher due to the Company's policy of developing its own systems.

Impacts are also identified in the way the company is managed, as well as expectations about the role of leadership, where managers play a fundamental part in promoting the company's digital strategies, assisting in the implementation of digital processes, and controlling and demanding data quality from the teams. As highlighted by Martins et al. (2023), where leadership has a role as a reference, an incentive, and a legitimizer of the Digital Transformation and learning process. Table 7 presents the structure of excerpts and categories that support the understanding of the impacts of Digital Transformation according to the interviewed non-managers.

Description: Digital Transformation allows for faster and differentiated services, increasing the company's competitiveness.	Business Model
Interview excerpts: <ul style="list-style-type: none">- The company will become much more competitive when it has digital transformation; you have much faster information, much better refined, quality information, much more interesting to be shared with clients.- It makes a big difference, especially in commercial meetings when presenting to clients the way and the analyses we can do.- Today, as we have a very broad view of the market because we have a lot of information, and digital transformation has to do with information, because we have a lot of information, we can capture opportunities, perceptions, market changes.	

- The digital process brings authority to the company, brings security, both for the company acting as an agency and for the client hiring us.	
Description: The digitalization process requires high investments in technology and training. Interview excerpts: - There will be a cost impact; the cost is very high; any type of improvement we have to make in the system is very expensive. - Professionals who are linked to this are not easy to find in the market, not easy to retain; we need more people. - What's worthwhile is creating this in-house system, which is much more expensive, much more laborious, demands a lot of time, demands a lot of effort, than us buying a ready-made platform.	Transformation Costs
Description: The role of managers is essential for the success of Digital Transformation, promoting adherence and efficient use of new systems. Interview excerpts: - Both immediate and mediate management are fundamental for the implementation of these digital processes because many times we have to deal with this human factor. - Today, with the implementation of our systems, I see that the demand is much higher for us to always be reliable. - Managers have a very important role in this phase of transformation, because any change in structure, system, any change whatsoever, has to start from top to bottom. - They have two jobs, the managers, which is first to make people understand how to use it, bring the whole process from manual to digital, which is a difficult job, and also to overcome their own resistance.	Leadership and Management

Table 7: Analysis of impacts from the perspective of non-managers

Source: Original research data

It is noted from the interviewees' statements that the impacts of digital transformation, from the perspective of non-managers, cover different departments of the company, such as operational and financial. The high cost involved, especially due to the development of proprietary systems, and the need for qualified professionals are recurring challenges. Furthermore, the role of leadership is highlighted as essential to guide, incentivize, and ensure adherence to the digital process, being fundamental for the success of digital transformation.

ANALYSIS OF IMPACTS - MANAGERS

For managers, digital transformation is a one-way street, demanding the constant need for business model adaptation. In this pursuit, and for digital transformation to achieve the expected results, strategic alignment among all departments of the Company is necessary, as highlighted by Okano et al. (2019), where Digital Transformation does not truly occur without processes and alignment with the Company's strategy. For this, the role of top leadership in encouraging the use of digital transformation aligned with corporate strategy and the new digital business model is fundamental.

There are employees who do not understand the value of digitalization or resist changes; therefore, these issues must be contemplated in the Company's strategy so that teams are structured that share the Company's vision and objectives. In this context, Alcantara et al. (2024) point out that hiring employees specialized in digital processes and altering the organizational structure with the creation of new roles is fundamental for the success of Digital Transformation.

New employees already arrive with better adaptation to new tools. Furthermore, the training and capacity building of professionals should be considered, so that there is not just dependency on market professionals, in such a way that the strategy needs to include investments in internal training and capacity building, developing the employees themselves who are aligned with the Company's digital strategy.

In the digital strategy, the company's structure with its equipment and technologies needs to be prepared to meet digital transformation, involving investments in robust systems and process automation. The maritime agency's digital strategy focuses on optimizing processes, including the implementation of advanced technologies such as artificial intelligence, which is already revolutionizing how data is managed and analysed.

One of the objectives of the digital strategy is the qualification of effective communication with our stakeholders, which includes charterers, shipowners, terminals, importers, and exporters. Therefore, it is necessary to have efficient communication platforms and data management systems that are well-populated and processed. The quality of data collection and processing is fundamental to ensure that information is accurate and useful for decision-making. Table 8 presents the structure of excerpts and categories that support the understanding of the impacts of Digital Transformation according to the managers interviewed.

Description: Digital Transformation allows access to new markets and the creation of digital services, transforming operations.	Business Model
Interview excerpts: - The impact of this is that it is opening up to the market; when we think about digital transformation, not just of our work, but when we bring digital transformation to the company's strategy, we are opening up to a new market. - You have constant improvements in our market intelligence tools, aiming to make the client's experience better. - Yes, digital transformation can significantly alter the business model, mainly by allowing new digital services and ways of interacting with clients and partners.	
Description: Digital Transformation requires strategic alignment between areas to optimize processes and improve client experience.	Digital Strategy
Interview excerpts: - If the strategy is not aligned with this new business model, seeking this transformation, then conflicts end up occurring. - So I think one of the strategies is to form a team that is moving in the same direction as you; growth is expected when everyone is moving in the same direction. - This includes identifying key areas for digitalization, selecting appropriate technologies, defining processes, and allocating resources for implementation. - These are communication platforms that generate interest from our target audience: charterers, shipowners, terminals, importers, exporters. - Our digital strategy includes all these actions that aim to optimize our internal and external processes, seeking not only optimization but also aiming to create greater value for clients.	
Description: Managers need to be innovative and proactive, promoting digital culture and incentivizing the team.	Leadership Profile
Interview excerpts:	

<ul style="list-style-type: none"> - A wave of very different professionals than in the past; we have been evolving year after year, investing in these new technologies, tools, and the way of working is very different. - A lot depends on the profile of each manager; if you have a curious manager, an attentive manager who wants to understand, who wants to do things differently, this transformation is very welcome. 	
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Table 8: Analysis of impacts from the perspective of managers

Source: Original research data

Within the scope of new managers, it is necessary to have restlessness and curiosity regarding possible improvements in existing processes, profoundly altering the profile of managers. With this, an open and innovative mindset is required, where curious and attentive managers are fundamental to leading this transformation. Along these lines, Marquesani (2020) highlights that Digital Transformation has modified the requirements for leadership styles and characteristics, giving rise to the term "digital leadership," defining the aspects of leadership for conducting the Digital Transformation process and maintaining the organization in a digital environment.

CONCLUSION

This study aimed to identify the main challenges and opportunities of the digital transformation process occurring in a maritime agency through the analysis of the experience of the people who promoted and were impacted by this process. To achieve this objective, a qualitative study was adopted, conducted through interviews with actors who witnessed this process.

Among the main results found in the analysis, the opportunity to improve, optimize, and simplify the processes executed by the company was noted, as well as to increase the quality of services provided to clients. This is followed by the difficulties, among which the human factor of adaptation to these processes stands out, as well as the resistance to changing from a manual to a digital culture.

Regarding the impacts, the costs involved in this digital transformation process can be highlighted, including investment in systems, technologies, and training of current employees, as well as the hiring and retention of new talent. Furthermore, a change in the company's strategy is perceived, aligned with a new business model context and the perception of value by clients.

As a suggestion for future research, studies can be developed with the same theme, covering other maritime agencies that are also undergoing this digital transformation process. Finally, another possibility is the study of other players involved in the shipping market, such as port operators, maritime terminals, importers, exporters, and shipowners.

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