PERFORMANCE APPRAISAL SYSTEM: LIFE CYCLE DISCLOSURE IN THE PUBLIC PORT CONTEXT

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ABSTRACT

The processes for appraising organizational performance have become more complex. However, studies have focused on specific stages in the development of Performance Appraisal Systems, disregarding their completeness. This research seeks to describe how the evolutionary stages of a Performance Appraisal System (PAS) develop in the Brazilian public port context. A one-year case study was carried out, during which time the System went through the stages of the Life Cycle proposed by Bourne et al. (2000). To develop the System, data was collected through semi-structured interviews with the decision-maker of a public port holding company, guided by the Constructivist Multi Criteria Decision Aid (MCDA-C) methodology. The results of this research show how a PAS is designed, implemented, used and updated, offering contributions to the field of research, which is criticized for the lack of evidence demonstrating the complete Life Cycle of PAS. The study also provides evidence on the construction of knowledge generated during the stages of the System Life Cycle. In this way, it was possible to contribute by providing the organization with a model capable of measuring and supporting management activities and decision-making. The combination of theoretical contributions with the knowledge derived from the illustrated empirical results corroborates the area of Performance Appraisal research on the validity of the PAS Life Cycle and contributes to leveraging the organization's performance.

Keywords: Performance Appraisal. Performance Appraisal System. Life Cycle.

1 INTRODUCTION

The evolution of research in the field of Performance Appraisal (PA) has changed the way in which Performance Appraisal Systems (PAS) have been treated, shifting the perspective from just measuring performance to systems that use the information coming from the measurement activity to guide decision-making (Franco-Santos et al., 2012; Okwir et al., 2018). As organizations strive to meet customer needs with better quality and lower costs, it is also necessary to adopt performance improvement programs (Neely, 1999). The wide applicability of the PA, in different contexts and sectors, makes it an important practice for business development (Choong, 2013).

As a result of the advances brought about by Information Technology (IT) and Communication, the amount of information received by organizations is growing and requires rapid analysis and decisions which, if made and supported by poorly designed reports that distort the information presented, can compromise business performance (Yigitbasioglu & Velcu, 2012). In addition, the constant changes that occur in the organizational context, leveraged by innovation, customers and processes, highlight organizational dynamism, making it important to develop Performance Appraisal Systems that keep up with this evolution. For this reason, organizations have been devoting time and resources to developing their PAS, and the PA literature points to the importance of using performance metrics that are aligned and up-to-date so that they continue to portray the specifics of the business. This situation highlights the validity of observing the PAS Life Cycle, proposed by Bourne et al. (2000) and ratified by Ferreira and Otley (2009) and Nudurupati et al. (2011), as a cyclical process made up of four stages: (i) conception/construction (design); (ii) implementation; (iii) use; and (iv) review.

These stages have been explored in theory and practice, seeking to consolidate understanding of the elements that make up each one of them in the System. Despite this, the number of organizations that continuously manage metrics is not significant (Kennerley & Neely, 2002), highlighting that organizations have not always been concerned with keeping the PAS up to date due to internal and external demands (Bourne et al., 2000). The evidence also points to the fact that researchers have paid more attention to specific stages in their work rather than considering the whole System (Matos et al., 2020; Okwir et al., 2018). Pedersini and Ensslin (2020), when reviewing the literature on PA in the public sector, found that although progress has been made in terms of considering the Life Cycle, the work still focuses on the design and implementation of the systems, failing to highlight their potential in terms of their use and review. In the port area, the authors found that few authors consider the information generated by measurement in port management (Pedersini & Ensslin, 2022). This finding results in knowledge gaps with regard to a holistic view (Matos et al., 2020) and restricts understanding of the aspects that interfere with organizational development (Pedersini et al., 2021).

Given the scarcity of studies that approach the PAS from a holistic viewpoint, which analyzes it from its conception to its maintenance, through systematic processes that ensure the evolution of its PA systems, this research problem arises: How does the process of 'maturing' a Performance Appraisal System occur? In order to answer this question, this study aims to describe how the evolutionary stages of a Performance Appraisal System (PAS) develop in the Brazilian public port context. Although the uniqueness of the context must be taken into account in the development of systems, this research focuses on demonstrating the life cycle of the PA System, seeking to exemplify aspects inherent to each of the stages based on an empirical case, but without exploring specific aspects of the sector.

The need for holistic frameworks for Performance Appraisal has been intensified in recent years (Abdel-Halim & Ahmed, 2022). However, Naslund and Norman (2019) point out that there is little empirical evidence on how systems can be implemented, evaluated and improved. Thus, the study contributes by describing how the development of PAS stages took place, highlighting the importance of revising systems to meet organizational changes. There also seems to be a gap

between the academy and the practical field when it comes to PAS, since, despite the growing importance of organizational change, few studies portray this phenomenon by explaining the revision of systems (Naslund & Norman, 2019). By highlighting aspects resulting from the development process, which are reflected on organizational learning, the study also offers practical contributions so that managers can understand the importance of developing PA models according to changes in the decision-making context.

2 STAGES IN THE LIFE CYCLE OF PA SYSTEMS

The organizational environment often undergoes changes as a result of a combination of diverse factors, such as new business models, lean systems, innovation and technological development (Melnyk et al., 2014), indications that the organizational environment is dynamic and volatile. As a result of changing market demands, numerous challenges and opportunities are imposed on organizations that need to implement rigorous improvements in order to compete and develop (Holzer et al., 2019). In this sense, PA systems are viable tools to support decision-making by building, implementing, using and reviewing performance metrics (Bititci et al., 2012; Neely et al., 2005).

Since the work of Johnson and Kaplan (1987), PASs have been studied from different perspectives (Matos et al., 2020), among which there is concern with monitoring the PAS from its idealization to its review through continuous monitoring. One of the first studies that paid attention to this longitudinal aspect is the work of Bourne et al. (2000), who proposed a framework (Figure 1) that categorizes and describes the evolutionary stages that an organization goes through in developing a PAS for continuous improvement, encompassing (i) design, (ii) implementation, (iii) use and (iv) updating. The authors have called this process the PAS Life Cycle.

In order to be able to reflect the organizational context and strategy, the conception (design) of a System requires that the needs of the organization and stakeholders be transformed into appropriate performance metrics (Ferreira & Otley, 2009; Coelho & Simão, 2021; Pedersini et al., 2021). In other words, System design is a cognitive exercise that transforms interests, objectives and needs into performance metrics (Bourne et al., 2000; Pedersini & Ensslin, 2022). According to Neely et al. (2005), a PAS must include individual performance metrics, the set of which enables organizational performance to be appraised. This construction process can be purposeful or emergent (Jwijati et al., 2022). It is considered emergent when there is no intentional initiative to design a concise and comprehensive PAS.

After the actual construction, the System moves on to the implementation phase, where actions are combined to articulate its use. The commitment of all individuals in the organization is essential to collecting, analyzing, interpreting and communicating performance measurement information (Nudurupati et al., 2011; Rezaei et al., 2018). Factors that hinder the use of the PAS can arise at this stage, as there is the involvement of people working throughout the process, with different functions and who need to clearly understand the purpose of the System being implemented. According to Bititci (2015), a lack of clarity results in unintended repercussions that can harm the organization. Therefore, if companies want to be competitive in the long term, they need to implement an appropriate System capable of measuring and evaluating their activities on an ongoing and systematic basis. Papulová et al. (2021) found that 36% of the sample of small and medium-sized investigated companies were dissatisfied with the implementation of the systems. Although this may not seem like a very specific figure, the authors present other studies in which this percentage was higher than 70%. One of the factors highlighted by the study as problematic is the lack of a clear objective for the System.

Simply reporting performance is not enough to improve it (Busi & Bititci, 2006). Linked to the need for more efficiency and flexibility in organizations, as well as greater concern about the consequences of the PAS, attention has turned to the Performance Appraisal process, i.e., the use of information from the measurement activity to guide decision-making (Holzer et al., 2019;

Okwir et al., 2018). As the function of the PAS has ceased to be solely monitoring and controlling, more emphasis has been placed on the behavioral aspects that give meaning to the System's purpose (Pfister & Otley, 2023). Thus, different purposes can be assigned to the PAS, contributing to the balance of organizational objectives (Mura et al., 2021).

Figure 1

Life Cycle Framework of the Performance Appraisal System
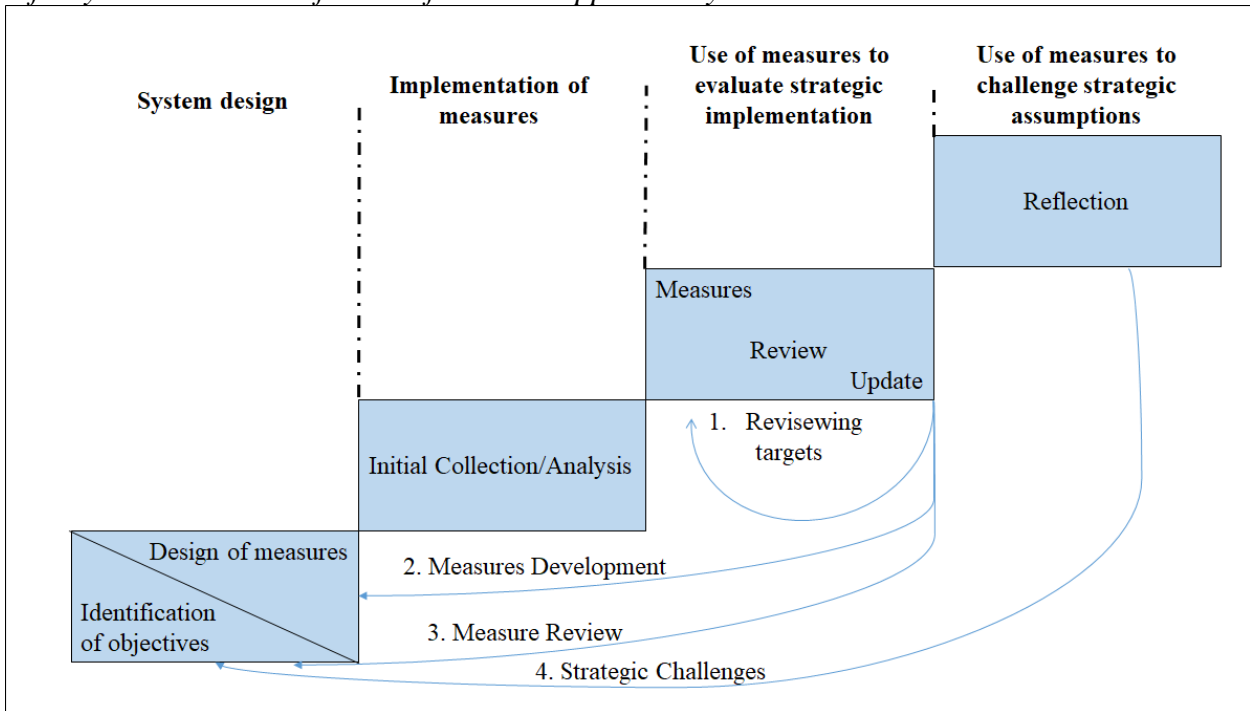
Fonte: Bourne et al. (2000).

One issue that concerns many academics and professionals is whether the implemented systems are sufficient for the purpose for which they are designed (Lucianetti et al., 2019), leading several researchers to question how performance measures should be used to manage the organization's performance. For this reason, Bourne et al. (2000) stress the importance of challenging strategic assumptions. The way in which the PAS is reviewed is an important aspect because, as the knowledge in people is improved, the System once again challenges the organizational strategy (Bourne et al., 2000). Organizations need to evaluate their results in order to see to what extent their objectives have been achieved (Kennerley & Neely, 2003). In this process, attention must be paid to the timeliness and usefulness of the measures, as well as the need to incorporate new measures into the System (Domínguez et al., 2019).

Although few studies have explored all the stages of the PAS Life Cycle, some contributions have been found in the literature. Matos et al. (2019) analyzed the alignment between the theoretical and empirical literature regarding the conceptual elements of each stage of the System Life Cycle, highlighting some points of alignment between the two strands, with a greater focus on the systems design stage. Pedersini and Ensslin (2020), in mapping the characteristics of international literature in the public sector, found that studies are not yet using PAS to the full and benefiting from the potential for alignment and improvement. In the empirical field, Naslund and Norman (2019) developed, implemented, tested and improved a framework for measuring organizational change initiatives. The authors presented a model for change initiatives, going through all the evolutionary stages of the PAS, demonstrating positive results for the cases studied.
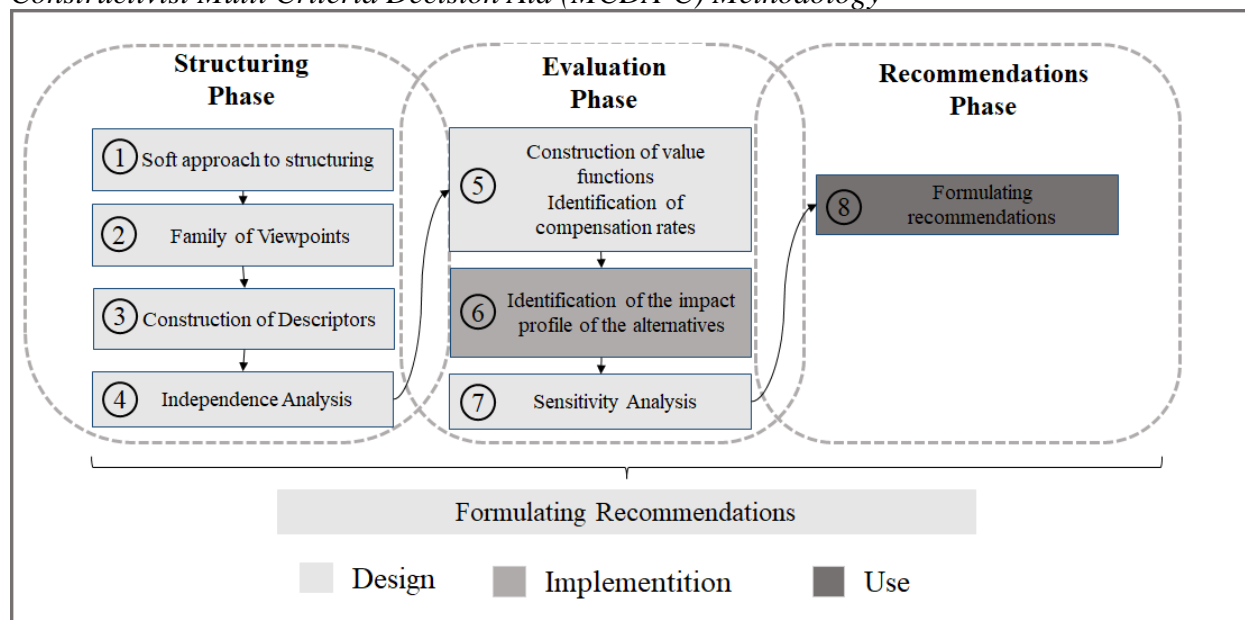
3 METHODOLOGY

This research has a qualitative approach and seeks to describe, through a case study, the process of designing, implementing, using and reviewing a PAS in a public holding company in the port sector. The process of developing the System began with a literature review, which, according to Sampieri et al. (2013), enables the researcher to develop their knowledge of the context in which they work, as well as to provide sufficient allowances to support the research and encourage the decision-maker to reflect. In this sense, the literature review enabled the researchers to improve their knowledge of the holding company context. The development of the model (conception/design stage) began at the same time as the literature review process.

To develop the PA model, we used the Constructivist Multi Criteria Decision Aid methodology (MCDA-C) (Ensslin et al., 2001), which is an integrated approach to Performance Appraisal that seeks to develop knowledge about the context, especially when it is not clear what the evaluation criteria should be (Ensslin et al., 2001; Pedersini et al., 2021). The methodology consists of these three phases: Structuring, Appraisal and Recommendations (Ensslin et al., 2001).

Figure 2
Constructivist Multi Criteria Decision Aid (MCDA-C) Methodology

Source: Prepared by the authors (2023).

The three phases of the MCDA-C methodology were used to highlight the stages of the PAS Life Cycle. In the Structuring Phase, the issue, the objectives and their ordinal measurement scales were identified, with the reference levels (minimum and goal) indicated, resulting in the construction of the qualitative model. In the Appraisal Phase, the qualitative model was transformed into a quantitative model in which, using cardinal scales (value functions), it is possible to identify the level of the organization's performance on a scale from 0 (minimum) to 100 (goal). Because the model has reference levels, performance below zero means being at a compromising level; between 0 and 100 is a competitive level; and above 100 is a level of excellence. These reference levels represent the anchor, not the performance limits. In order to transform this into a quantitative model, it is also necessary to identify the compensation rates for integrating local performance metrics into a global management. At this stage, we used the Measuring Attractiveness by a Categorical Based Evaluation Technique (MACBETH) software (Bana e Costa & Vansnick, 1994) to build the value scales.

In the Recommendations Phase, actions were proposed to improve the performance of the holding company's delegated ports. The development of the model followed the procedures described by Longaray et al. (2019) and Rodrigues et al. (2020).As this is a methodology with a constructivist bias, the model was built with the participation of a decision-maker from the organization (who represented the other agents in the organization), a facilitator (author of the research) and, in the review phase, an expert in the methodology (author of the research).

The research took place over a period of one year and totaled 15 semi-structured interviews for the development of the System, five for the design and implementation, and ten for the revision (restructuring of the model). The decision-maker who took part in the interviews was chosen by the organization because he was directly related to port issues, acting as an intermediary between the researcher and the organization's other stakeholders; eventually, other members of the holding company took part in the interviews. As the interviews took place, the research facilitator developed the stages of the model, each of which was legitimized by the decision-maker as proposed by the methodology used.

In the first interview, the facilitator introduced the decision-maker to the contributions that the model could make to improve the performance of subsidiaries, emphasizing the confidentiality of the research. The interviews were initially aimed at understanding the context under analysis. The port manager was therefore asked to talk about the context in an open manner. Bearing in mind that decision-makers can exhaust their arguments quickly, a set of open questions was used, suggested by the methodology (Ensslin et al., 2001) and adapted for the context studied to guide the port manager's reflection during his speech. The others were outlined based on the analysis of the data from the previous interview.

As a strategy during the interviews, the focus was on getting the decision-maker to express his main concerns about how the holding company should manage the process of standardizing the Management Practices of port activities, as well as which situations would be desirable and which should be avoided. To this end, direct questions that could generate self-reported answers were avoided, and questions were asked that would reveal the port manager's perception and the needs involving the subsidiaries and the holding company. The data extracted from the interviews was interpreted in a detailed and reiterative manner in order to capture all of the manager's concerns, identifying which aspects, in his perception, are necessary and sufficient for the performance and competitiveness of the practices adopted by the delegated ports. The process of interpreting the data took place in a recursive manner between the facilitator and the decision-maker: at each stage, the decision-maker legitimized the information or requested adjustments, and then moved on to the next step. Through the data analyzed, it was possible to identify the concerns that stood out in the decision-maker and, with them, build the model.

According to Sampieri et al. (2013), when conducting a study, researchers should be concerned with maintaining thoroughness in data analysis. In this way, it is important to preserve the reliability, credibility, confirmation and applicability of the research and its results. With regard to the reliability of the data, there was a concern to describe the perception of the decision-maker (Port Affairs Executive) in identifying the problem to be solved and his concerns, including the participation of a specialist in the methodology in the process of reviewing and validating the operationalization of the model construction stages and ratification of the results. With regard to credibility, the decision-maker's preferences were preserved without distorting the interpretation of the data. An example of this is the modifications made to the model based on the expert's intervention in the model review.

Confirmation is reflected in the validation of each stage of the model by the facilitator and legitimization by the decision-maker, in order to ensure that the decision-maker's preferences were maintained and the researcher's (facilitator's) directions were reduced. Finally, with regard to the applicability of the results, we have tried to transcribe, in a detailed and specific way, all the components that were used in the study so that the essence of the work can be applied in other contexts, at least partially.

With the initial aim of developing a self-management model for the holding company to analyze its performance in relation to port management, the design of the model took two months to complete. In this first stage, the organizational problem was identified and the objectives defined, comprising the stages of structuring and evaluating the model (Figure 3). In the next stage – implementation, data was collected to measure and diagnose the organization's performance. These procedures took three months to complete. Data was collected during the interviews for each measurement item, when the decision-maker reported on the holding company's situation. At this point, the model's ordinal scales had already been transformed into quantitative (cardinal) scales, making it possible to establish a performance diagnosis of the manager's performance.

Figure 3
System Development Process
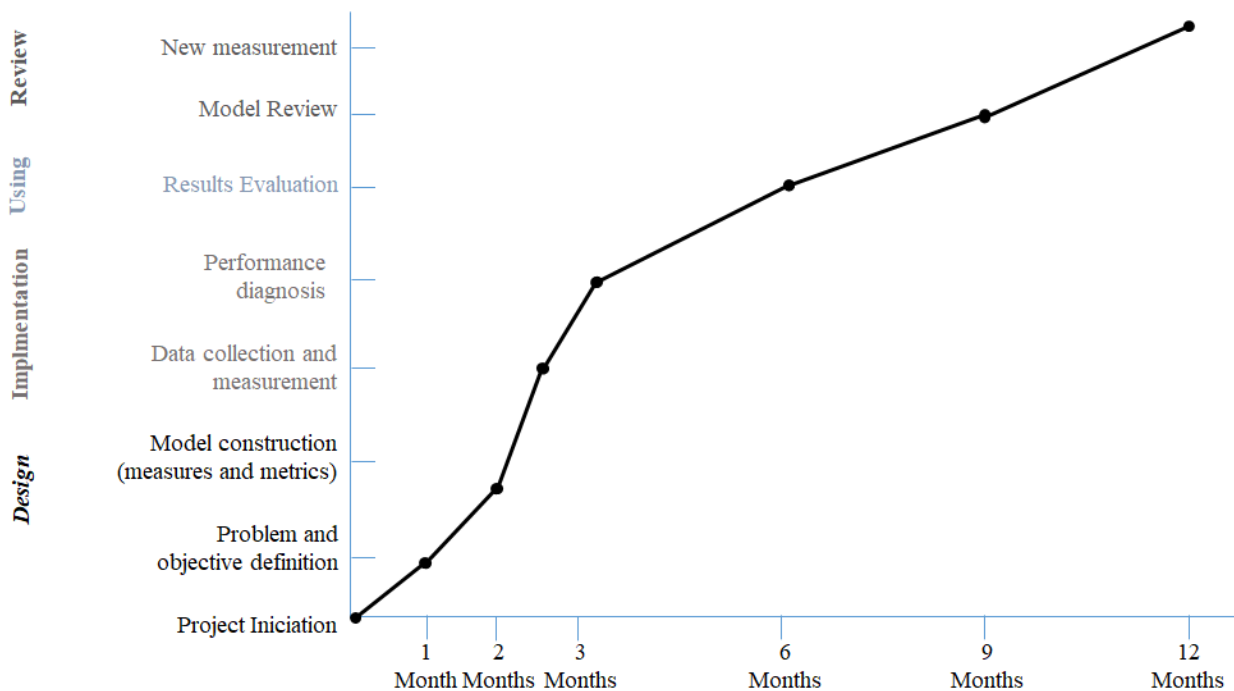
Source: Prepared by the authors (2023).

Subsequently, the usage phase was initiated, and a results evaluation was conducted. With the performance identified, an analysis was made of the overall situation of the holding company and how it should act to improve performance. For this purpose, metrics with performance below the minimum acceptable were identified, as well as those that would yield the greatest improvement with intervention. Based on this, the decision-maker and other members of the organization had the necessary information to consider in which areas they should intervene for improvements. At this point, the researcher proposed some actions in order to assist management in their decision-making, indicating how they would impact organizational performance.

The monitoring of the model by the decision-maker during the following three months (usage stage) allowed for the identification that the model did not exactly meet the initial objectives that triggered its creation. Although its initial goal was self-management to verify its management capacity, by using the System and with the knowledge generated during the model project, it was found necessary, first, to determine whether there was alignment between the management practices of the delegated ports and then to self-assess the performance of the holding company. Thus, the process of revising the System was initiated to adapt it to the organizational needs.

Due to the difficulty encountered in defining the System's objective, an expert was invited to participate in this process, given her experience in management and knowledge of the MCDA-

C methodology. In this review process of the PAS, through an in-depth discussion among the researcher, the decision-maker and the specialist, the entire model was reviewed, from its objective to the developed metrics, resulting in substantial changes to the model to better align with the context.

4 ANALYSIS AND DISCUSSION OF RESULTS

Performance Appraisal (PA) generally has two roles in performance management. The first is to make organizational objectives clear, so that communication disseminates strategy clearly; and the second is to measure the performance of these objectives and provide feedback on the state of organizational performance (Naslund & Norman, 2019). These roles are fulfilled in the design, implementation and use stages of the systems. In the System review stage, PA's role is to verify the need for changes, ensuring that the performance metrics adhere to the decision-making environment (Okwir et al., 2018).

4.1 Aspects of the case study

With the enactment of Law No. 8,630/93, on the Modernization of Ports, on 25 February 1993, the Brazilian port scenario had its structure altered in search of private sector investment in the sector (Sousa et al., 2020). Other important changes in the sector's regulatory arrangements, such as making management more flexible and less bureaucratic, modernizing and expanding structures and increasing cargo handling, were implemented with the sector's development in mind, making ports an important element in the country's economic development (Coelho & Simão, 2021). With the enactment of Law No. 14,047/20, of August 24, 2020, there was also a concern to bring the legal regimes for the exploitation of port leases (public ports) and authorizations (Private Use Terminals – PUTs) closer together.

The studied company works in port management and, despite having the expansion, modernization and construction of ports as one of its priorities, it had not been doing this work effectively until government demands for port management required the holding company to be more participatory. Even though the holding company was interested in getting closer to the ports and making management more effective, it still did not have standardized management practices that met the criteria desired by the local government, and saw PA as an instrument to support management, a means of developing the knowledge necessary for port operations.

4.2 Model design

To design a System, decision-makers should be encouraged to think about their business strategy and ask the following questions: What is the objective to be achieved? How can this be done? (Bourne et al., 2003). Such questions help to gain a clearer understanding of the problem that is to be solved by implementing a PA System. During the initial interviews, the decision-maker mentioned the importance of holding meetings with the subsidiaries (objective) to align certain issues. When asked how these meetings would contribute to management, the answer was that the holding company needs to be aligned with the delegated ports on aspects related to planning, legal and regulatory issues, technical matters, as well as being important for monitoring results to make its management effective. This objective can be achieved through meetings between the Boards so that there is no distancing between the parties. This instigative process took place through the construction of Cognitive Maps that served as the basis for the initial construction of the Hierarchical Value Structure, represented in the upper part of Figure 4.

Naslud and Norman (2019) point out that the perspective of stakeholders is often mentioned as a relevant aspect for building PAS. Although the interviews were carried out with a decision-maker, before starting to build the model, the agents that could cause interference in the decisions made were identified. Bititci (2015) points out that this process is important for

developing organizational learning, as it encourages the cognitive exercise of considering different perspectives when developing models. However, an analysis of studies in the port area by Pedersini and Ensslin (2022) showed that most research replicates indicators taken from the literature, disregarding organizational particularities and stakeholder interests.

Based on the questions asked of the decision-makers in the interviews, it was possible to identify points of concern that helped to define the organizational problem and the organization's objective with the PAS, as well as to obtain a direction for modelling the performance metrics. Jamkhaneh and Ghadikolaei (2022) mention that it is important to design a performance measurement structure within the scope of service provision that identifies, improves and strengthens strengths and weaknesses in order to integrate the different parts of organizational processes. For this reason, the used reflective process was important in determining the main points of attention for building the model.

At this early stage of developing the performance metrics, there were doubts about the role that the holding company should play, mainly due to the lack of benchmarking in Brazil that could guide the construction of the model. All of this uncertainty about performance led to difficulties in defining what was important for the development of port activity and, consequently, how the holding company should position itself in this process, according to reports 1 and 2.

> Report 1: It's difficult to find a structure similar to our [company] for the port area... To what extent does the holding company enter into the operation? There are policies, but what level of policies should it establish for all the subsidiaries? ...
>
> Report 2: There is this doubt now – what kind of decision can our subsidiary make on its own? To what extent are [the ports] free to make their negotiations, their investments, what real autonomy do they have? To what extent does the holding company have to intervene within the subsidiary?

After a long process of discussions and analysis of the context, it was identified that the holding company needed a self-appraisal System to find out if it was prepared for port management, to establish minimum appraisal standards and to identify the requirements that would be demanded. With this initial reflection on the purpose of the appraisal model, work began on designing the model. The design process included the Structuring and Evaluation phases of the MCDA-C methodology.

Initial points of concern were identified which, according to their similarities, were grouped into four areas, called Key Performance Viewpoints: Strategy; Communication; People Development; and Audit and Control. This was followed by the development of the Strategy area, specifically Planning (Figure 4), in which nine metrics were constructed, made up of ordinal and cardinal scales to represent the context. When constructing the metrics, the facilitator asked the decision-maker about the organizational needs, the possible performance levels and the situations to be avoided, i.e., the strategic objectives.

According to Melnyk et al. (2004), metrics act as a link between organizational strategy, execution and value creation, i.e., they have the function of transforming the organization's strategic mission into reality. The metrics were built taking into account the criteria that a metric should contain, as proposed by Melnyk et al. (2014): (i) a verifiable measure; (ii) with qualitative and/or quantitative reference levels; and (iii) defined in relation to a reference point. In addition, in order to construct the scales, the formal mathematical foundations of Stevens (1946) were observed and the empirical foundations of Keeney's Theory of Measurement Scales (1992) were followed, as exemplified in Figure 4. In this way, as proposed by the methodology used and defended by Neely (2005) and Bourne et al. (2000), it was ensured that the used metrics reflected the organizational needs at that time.

Figure 4

Value Model Structure.
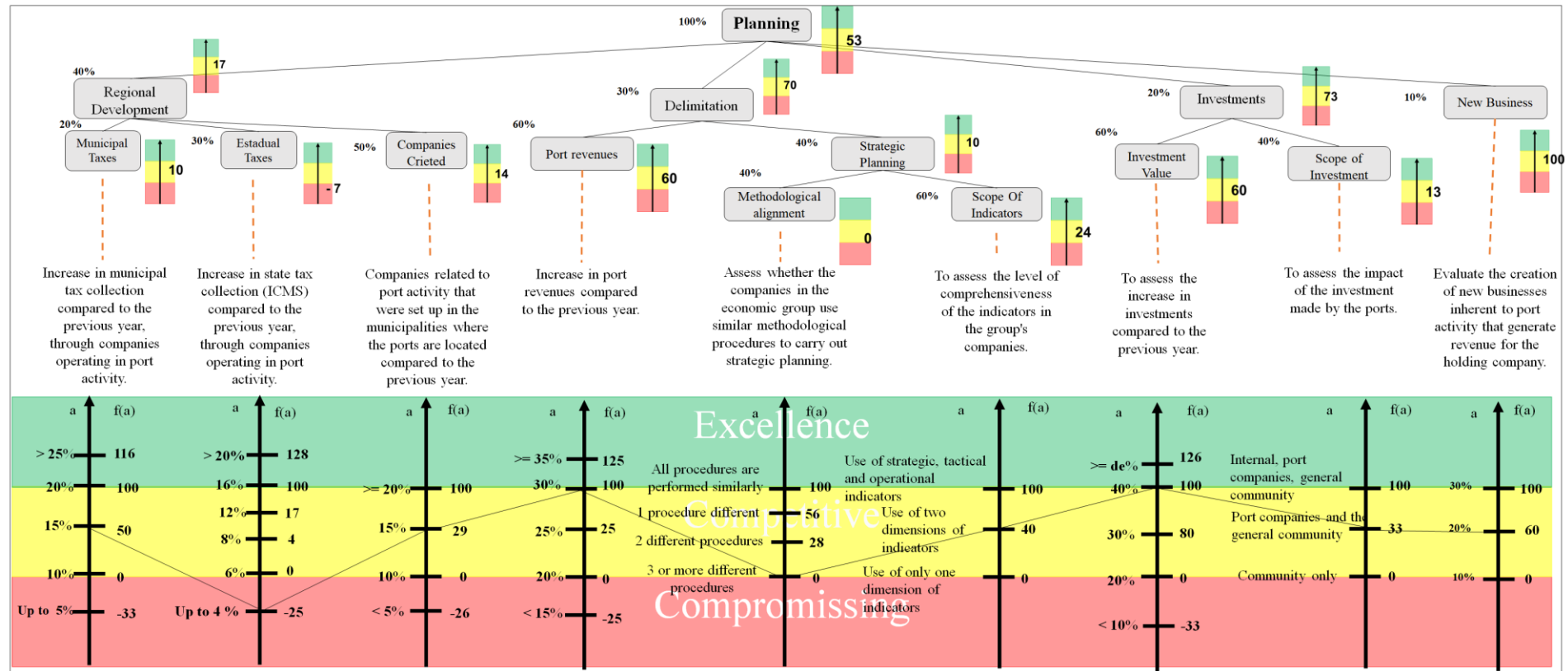
Source: Prepared by the authors (2023).

The participation of the decision-maker, legitimizing each stage of the process, allowed a customized model to be built for the organization, reinforcing the points made by authors such as Otley (2001) and Melnyk et al. (2014) that performance metrics should derive from the organizational strategy and meet the demands of the agents who are part of this context.

4.3 Implementing the model

Implementation encompasses the process of collection, data analysis and diagnosis. According to Papulová et al. (2021), the main issue in this process is to identify which mechanisms should be used and how to use them, because only a well-developed and implemented PAS contributes to improving an organization's performance. The authors mention that failures in the implementation process can lead to the System's failure.

The model was implemented through data collection. As the ordinal scales were transformed into value functions (fa), after collecting the data it was possible to identify the holding company's current impact profile and calculate its score. To calculate the manager's performance, the quantitative performance in each metric was multiplied by its respective compensation rate (%), assigned by the decision-maker's judgment using Macbeth software. In this case, a performance of 53 points places the manager at a competitive level.

Among the model's metrics, it was identified that, in some, the holding company's performance was below the minimum acceptable (less than 0) and, even though it was already taking some actions to improve the management process, there were points where the holding company's performance was below expectations, such as the Methodological Alignment. This diagnosis was communicated to the decision-maker, who already expected this result, as a result of the distance that had existed until then in this port management process. These conclusions indicated that changes needed to be made to the way delegated ports were managed.

During this implementation phase, one of the decision-maker's concerns was how the ports would react to the changes to integrated management, since until then there was no standard of information required from the ports, which had complete autonomy in terms of accountability. The literature highlights this issue, indicating that the way in which individuals react to the implementation of models can be a determining factor in their successful application (Ferreira & Otley, 2009). Naslund and Norman (2019) point out that it is important to understand what states the organization or group will go through to reach the desired result and what aspects need to be managed. In the case under analysis, if the changes were not well received by the ports, conflicts could arise, given that the more constant monitoring, specifying what information and at what intervals it should be presented, somewhat limits the autonomy of the ports, requiring caution in the implementation of corrective measures. Franco-Santos et al. (2012) point out that the consequences of a PAS can be felt both on a personal level and on an organizational level. Communication and the involvement of stakeholders in this process can facilitate implementation and inhibit difficulties. Similar findings were supported in the research by Papulová et al. (2021), showing that positive attitudes towards the PAS are statistically significant for satisfaction with the System.

4.4 Use of the PA System

According to Bourne et al. (2000), the existence of a PAS in an organization is not only characterized by the design and implementation of metrics, but also by their use for organizational Performance Appraisal, and only after effective use can it be said that the organization has a PAS. This stage encompasses the use of metrics to verify the strategy implementation process, as well as to provide feedback to stakeholders to evaluate and improve organizational processes (Naslund & Norman, 2019). This stage encompasses the Recommendations Phase of the MCDA-C methodology, where the information generated by measuring performance is used for the management process, identifying where and how action is needed.

For the MCDA-C methodology, management is seen as the process of suggesting improvement actions to refine performance, identified on the basis of the knowledge generated during the process of identifying, organizing and measuring the aspects considered necessary and sufficient for assessing the context, according to the perception of the decision-maker (Ensslin et al., 2001). Thus, the conception of the metrics at the design stage is confirmed by their actual use. Based on the identification of the manager's performance profile, an overview of the company's current situation was obtained. An initial appraisal was then carried out to see which metrics needed to be addressed in order to improve the management process and, consequently, strengthen the relationship between the holding company and the delegated ports. For these cases, a second appraisal was carried out to identify corrective actions that could be implemented, specifying to the decision-maker the implications they would have on organizational performance.

One example is that one of the metrics in which the holding company did not perform well was Methodological Alignment. This metric was designed to check whether the group's organizations (including the holding company) used similar procedures to carry out strategic planning. The appraisal showed that the methodological procedures used by the organizations were different. As an action, it was suggested that a routine be created for aligning and monitoring strategic planning, providing the necessary support for this standard to be followed and thus standardizing the procedures carried out for strategic planning. It was recommended that every action, before being implemented, must be discussed with the management team of the holding company and the delegated ports, in order to clarify the intentions behind the implementation of each one, avoiding adverse reactions to the change.

4.5 Review of the PA System

The constant changes that occur in the organizational context, both in terms of the environment and the evolutionary process, are caused by a series of factors that require a System that keeps up with these alterations. Kennerley and Neely (2002) point out that, as circumstances change, systems need to be reviewed and modified, ensuring that their evolution takes place. In addition, monitoring metrics throughout the process makes it possible to identify flaws in the strategy design (Bourne et al., 2000). According to Papilová et al. (2021), many systems fail because some decision-makers only identify at the end of the process what really needs to be measured and evaluated in their organization. Although this is the case in this research, the System has been remodeled to suit the context. This process can be carried out by members outside the organization, such as consultants, or by internal members, such as managers and employees (Jwijati et al., 2022). However, Matos et al. (2020) pointed out that this stage has received little attention in the literature, with little practical evidence reported.

Given the methodological design, which follows the constructivist perspective, the use of recursive stages made it possible to generate enough learning to identify that the information contained in the prototype model did not faithfully meet the organizational needs and expectations of the decision-maker, since, at each stage completed, the decision-maker validated the information generated. In the course of using the PAS, it became apparent that the different management practices of ports with varied operations require a standardization of management practices in order to improve the competitiveness of delegated ports, necessitating an adjustment to the model.

When adjustments were made by reviewing the metrics, the decision-maker was asked if the self-appraisal really reflected the aspects needed to standardize the procedures carried out for the integrated management of delegated ports. In this process, there was a more pronounced interaction, considering the need to redesign the model, given the complexity and uncertainty regarding the manager's performance in relation to port activity. During the interactions, the decision-maker was asked by the expert about the strategy for building and evaluating performance, whether it wouldn't be more appropriate for a model to evaluate the ports instead of

the holding company, to see if its objectives were aligned with the objectives of the ports and thus identify how the holding company could act in this process.

The debates were key to realigning the organizational objectives. As the interactions progressed, it was found that some modifications were necessary due to changes in the perception of the organizational problem, resulting from flaws in the initial design of the strategy and caused by a lack of established knowledge about its performance. Although self-evaluation is a factor that should be appraised, it was necessary to align other perspectives first. As stated by Kennerley and Neely (2002), as circumstances change, every PAS needs to be revised to ensure the evolutionary process.

Thus, the model underwent a restructuring, where changes in the understanding of the problem meant that the initially conceived metrics did not reflect the most urgent organizational objective of port management. The problem that first needed more attention was the management practices used to create an environment in which the search for efficiency is a priority concern for the holding company and its subsidiaries. Some aspects of the initial model were maintained, such as the scope of indicators and the allocation of resources; the other metrics were reorganized and revised, resulting in new initial points of concern, which were grouped into seven performance areas: Strategic Management Practices; Administrative Practices; Organizational Identity; Communication; Information Technology; People Development; and Audit and Control, expanding the model to 26 metrics. The core objective of the System became to focus on the process of standardizing management practices, given that the delegated ports had different performance practices. Thus, the aim of the updated model became to evaluate the delegated ports, identifying in which metrics their performance is satisfactory, verifying the used management practices and disseminating them among the other ports.

According to Busi and Bititci (2006), research with a constructivist bias has the strength of combining existing knowledge, drawn from previous studies, with the experience of the studied organization, providing a more comprehensive understanding of the issue and its implications for the context. From this perspective, it was possible to use the information produced by measuring the holding company's performance to make positive changes to the System and processes, helping to define organizational goals and to share results.

5 FINAL CONSIDERATIONS

The evolution of research in the field of Performance Appraisal has changed the way PAS have been treated, moving from systems that only measure performance to systems that use information from performance measurement to guide decision-making towards established objectives. The changes taking place in the organizational context highlight the dynamism of the market, which makes it important to develop PAS that keeps up with these changes. The literature review found that there is a lack of empirical studies dealing with PAS design, implementation, use and review. As a result, the PAS Life Cycle has been a constant challenge in the literature on PA, as it promotes discussions about organizational learning resulting from reflection on organizational changes. In view of this, the aim of this study was to describe how the evolutionary stages of a Performance Evaluation System develop in the Brazilian public port context. Its motivation stems from the existence of a corporate problem, whose organization needed help to understand the context in which it operates, so that it could carry out port management effectively and with governance.

In this proposal, a PAS for port management was developed and implemented, and its first version was put into use, by measuring performance and proposing corrective actions for aspects whose results were unsatisfactory. However, based on the identification of flaws in the design of the model, the metrics were revised in order to ensure their adherence to the organization. It can therefore be inferred that the process of developing a PAS requires constant monitoring. It is important to monitor the System. As objectives change or goals are achieved, the System must be

updated so that it remains relevant and timely, and can evolve by reflecting on the processes carried out. This process enables the System to respond appropriately to the environment in which it operates and promotes organizational learning.

In view of this, the work offers complementary evidence to the field of research, describing how organizational learning can be seen, even if implicitly, in the System's review stage. Adopting a methodology that follows the assumptions of constructivism made it possible to recognize the subjectivity of the context, since there is no way of ignoring aspects such as the values and culture of the decision-maker/organization. In this sense, the research was able to contribute to a better understanding of the context, by combining theoretical aspects with practical knowledge, as well as providing the organization with a model capable of measuring and supporting management activities and decision-making. Empirical results regarding the PAS Life Cycle are exemplified and, given the scarcity of studies of this nature, there is an important contribution to the research area. It should be noted that the combination of theoretical contributions (PAS Life Cycle associated with the MCDA-C methodology) and the knowledge arising from the illustrated empirical results corroborates the area of PA research on the validity of the PAS Life Cycle, contributing to leverage the organization's performance.

For future research, it is suggested to monitor the use and demonstrate a new round of review of the holding company's PAS in order to verify not only flaws in the strategic design, but also the need to include and/or exclude metrics due to changes in the organization's strategic priorities, which will contribute to identifying barriers that compromise the success of the System. The main limitation is the length of time the System has been monitored, which could also be expanded by future research.

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