

## MANAGEMENT PROCESSES AND MANAGERIAL TOOLS: THE IMPORTANCE OF MANAGERIAL INFORMATION IN A NON-PROFIT TECHNOLOGY-BASED ENTITY

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### ABSTRACT

The aim of this research is to identify the management processes, managerial tools, and the importance attributed to managerial information in a non-profit technology-based entity. To achieve this goal, a descriptive case study with a qualitative approach was conducted. Data collection involved semi-structured interviews with professionals in the controlling/accounting area and managers. The results indicated that, despite the limited interaction with the managerial tools described in the literature, the organization adopts a solid approach in its management processes, with long-term strategic planning and the centralization of strategies by top management, as well as the integration of various subprocesses and the customization of managerial tools to meet its management needs. By aligning with previous research, the study contributes to the Management Accounting literature by expanding the understanding of the use of managerial tools in non-profit entities, while also highlighting how such practices, often analyzed in for-profit organizations, can be adapted and generate impact in a third-sector entity, underscoring their application in decision-making and the relevance of information in management processes.

**Keywords:** Managerial control. Managerial tools. Management processes.

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## 1 INTRODUCTION

Management processes are a set of actions developed by an organization's agents with the aim of guiding them toward the desired outcomes (Dutra & Callado, 2020; Frezatti et al., 2009). Regardless of the degree of formality, which may vary, organizational conduct is shaped by planning, execution, and control activities that enable the achievement of objectives, whether these are perceived as financial or otherwise (Frezatti et al., 2009). This set of components requires a method that can be facilitated by the contributions of managerial control (Dutra & Callado, 2020). Such controls support managers in understanding the most appropriate way to utilize resource sources and provide a foundation for more informed decision-making aimed at achieving better results (Dutra & Callado, 2020).

In this context, management processes require an integrated set of information to support decisions across all managerial areas, which will enable greater organizational efficiency (Cunha et al., 2014) in the most varied types of organizations, from large corporations to small businesses, whether profit-oriented or not (Godoy & Raupp, 2019). A non-profit entity is a third-sector, privately held organization, formally structured, that works for social well-being. Its purpose is not profit generation but rather the promotion of social, educational, cultural, or scientific benefits (Rodrigues et al., 2022).

When it comes to a technology-based entity, its contribution lies in the development and application of innovations and technological processes for society. Although not restricted to non-profit organizations, these entities are free to adopt managerial tools best suited to their needs (Olak & Nascimento, 2010). While these organizations do not aim for profit, achieving positive results (surpluses) is essential for their continuity (Cunha et al., 2014). Moreover, organizations operate in an environment of competition and innovation, where there should be incentives for adopting more advanced managerial tools in management processes (Klein & Almeida, 2017).

The literature has shown that management accounting practices such as budgeting, contribution margin, cash flow, performance evaluation, and strategic planning are widely known and applied by a Brazilian private educational foundation, serving as decision-making support and reflecting a broader use of traditional management accounting practices (Innocenti & Gasparetto, 2021).

Furthermore, studies indicate that the most frequently used traditional managerial tools are budgeting and conventional costing techniques, while modern tools such as benchmarking, Just in Time (JIT), Activity-Based Costing (ABC), and planning have been adopted in a more specific manner (Dutra & Callado, 2020; Veroneze & Kruger, 2021). In addition, Papiorek and Hiebl's (2023) study confirms the positive effect of the quality of management accounting information systems on management control effectiveness. Research conducted with non-profit entities by Godoy and Raupp (2019) observes that the adoption of managerial tools is influenced by the centralization of the organizational structure and employee training.

Although these studies offer important contributions regarding the use of managerial tools in different organizational contexts, there is still a gap in understanding their application in non-profit technology-based entities, given the scarcity of research focused specifically on this type of organization (Godoy & Raupp, 2019). In these cases, the challenges go beyond the mere adoption of these tools, requiring their adaptation to the particularities of the technological sector and the innovation environment, as well as demanding effective integration between strategic and operational areas (Klein & Almeida, 2017).

In addition, little is known about the importance of managerial information not only as support for decision-making but also as a decisive element for alignment with organizational objectives. Therefore, the aim of this study is to identify the management processes, managerial tools, and the importance attributed to managerial information in a non-profit technology-based entity. To achieve this aim, a descriptive case study with a qualitative approach was conducted,

with data collected through semi-structured interviews with professionals working in the controlling/accounting area and managers.

The justification for this study stands out because third-sector entities, particularly those that are technology-based, face management challenges and specificities that demand adaptations to the innovation environment and the use of managerial tools compatible with these demands. The study contributes to the Management Accounting literature by presenting new evidence on management processes and the application of managerial tools in decision-making within a third-sector entity. By engaging with previous research, it expands the understanding of how a non-profit organization uses these tools in its daily operations. This makes it possible to understand how a technology-oriented entity structures its management processes, defines the tools it uses, and attributes importance to managerial information.

The study contributes to the field of controlling and to managers by demonstrating how a non-profit technology-based entity can adapt and customize managerial tools to deal with the complexity of management processes in technology and innovation environments, serving as a reference model (benchmarking) for management and decision-making practices. These findings can provide a foundation for management in different organizational contexts seeking to integrate accounting and managerial information more effectively, promoting decisions aligned with institutional sustainability.

The study also contributes to society by examining a non-profit technology-based entity while simultaneously supporting the advancement of the United Nations Sustainable Development Goals (SDGs), particularly SDG 9, by showing how an organization committed to innovation structures its managerial control mechanisms to ensure its continuity.

The originality of this study lies in broadening the debate on the application of management processes, as well as the use and importance of managerial tools in innovation-driven environments. By focusing on a non-profit technology-based entity, a topic still scarcely explored in this type of organization, the study fills a gap in the literature by demonstrating how such an organization structures its managerial controls to ensure its continuity.

## **2 THEORETICAL FRAMEWORK**

### **2.1 Elements of Management Processes**

Management processes are developed based on three components: planning, execution, and control of activities that enable the organization's objectives to be achieved (Frezatti et al., 2009). The author emphasizes that planning involves deciding in advance the actions to be taken, encompassing various guidelines (Frezatti et al., 2009). Execution occurs through the implementation of the planned actions and represents the operational stage of activities (Frezatti et al., 2009). Control allows the organization not only to monitor the implementation of activities but also to feed back into the entire management process (Frezatti et al., 2009).

As highlighted by Tondolo et al. (2016), transparency in the third sector encompasses everything from accountability to management and organizational results, being crucial for resource mobilization and achieving positive outcomes. The management control package proposed by Malmi and Brown (2008), with its components of planning, cybernetic control, rewards, administrative control, and cultural control, offers a useful framework for understanding how these organizations structure their management processes when facing challenges in maintaining continuity and the need to signal credibility to partner stakeholders (Rodrigues et al., 2022).

In the context of the third sector, these elements not only support internal efficiency but also function as signaling mechanisms, reinforcing the perception of quality, public trust, and reputation (Rodrigues et al., 2022). Planning is essential for defining goals, providing standards, and aligning objectives (Beuren et al., 2018). Planning assists organizations in terms of control, ensuring their continuity and growth (Beuren et al., 2018).

Cybernetic control encompasses feedback stages, which are defined by performance standards for measuring, comparing, feeding back information, correcting, and making adjustments to the systems (Theiss & Beuren, 2020). Rewards and compensations are considered financial and non-financial instruments used by organizations to stimulate and improve the performance of individuals and groups, aligning with the organization's objectives and activities (Theiss & Beuren, 2020).

Administrative control stands out as systems related to regulating employee responsibilities through the organization of individuals and groups (Theiss & Beuren, 2020). These systems consist of: (a) organization and structure design, which organizes individual activities; (b) governance, which enables the monitoring of actions taken; and (c) policies and procedures, which establish tasks and guidelines to be carried out (Beuren et al., 2018). Cultural control is employed to regulate behavior, arising from the social norms of the group (Beuren et al., 2018).

In this way, established planning and control processes must, in some manner, impact the behavior of individuals and groups as well as the overall performance of the organization (Beuren et al., 2018; Frezatti et al., 2009).

## **2.2 Instruments and the Importance of Managerial Information**

One of the main objectives of managerial tools is to influence better decision-making, and they are indispensable for every type of entity (Innocenti & Gasparetto, 2021). In managerial control practices, these tools focus on both financial and non-financial aspects (Innocenti & Gasparetto, 2021). Among the financial aspects are financial statements, cash flow control, cost control, and budgetary control, while non-financial aspects include indicators such as market share, the number of new clients, productivity, and employee turnover, among others (Almeida et al., 2016).

Financial statements are reports generated by accounting to provide users with data regarding the financial, economic, and equity situation of an entity, serving as an overview of the organization for management purposes and presenting concise business information (Almeida et al., 2016). Financial operations also require close attention to performance for the assessment of results and corrective measures (Oliveira et al., 2010). In this regard, cash flow control stands out as a tool for financial planning (Oliveira et al., 2010). It involves the recording and monitoring of all cash movements, including resource inflows and outflows (Oliveira et al., 2010).

In addition, the entity must implement a cost control system appropriate to its activity to reduce general expenses and production costs (Carmo et al., 2012). This control encompasses methods adopted by the organization to monitor its various departments, revealing production costs with the aim of optimizing expenses (Carmo et al., 2012). Cost control not only allows the identification of the organization's actual expenditures but also distinguishes between fixed and variable costs, enabling an analysis of where the main expenses are concentrated. Furthermore, an effective cost control system supports the establishment of more realistic goals, contributes to budget preparation, and serves as a decision-making support tool (Dutra & Callado, 2020).

Regarding budgetary control, Hillen and Lavarda (2021) emphasize that it involves analyzing the achievement of established objectives to evaluate the performance of different sectors of the organization, verifying the implementation of plans and the attainment of goals. It serves as a means to feed back into the planning system, allowing for an understanding of how future results align with the established planning (Hillen & Lavarda, 2021).

Non-financial tools allow for qualitative control of the entity. According to Fernandes (2004), the increase in the number of new clients and the improvement of market position are two indicators directly related, as the increase in new clients suggests the company's growth in the market. This growth reflects an improved perception by customers, which provides a competitive advantage in a highly contested environment.

Productivity indicators are efficiency measures that allow for the evaluation of organizational performance toward success (Castro et al., 2023). These indicators are directly linked to employee turnover rates (Castro et al., 2023). High employee turnover not only implies additional costs related to dismissals and hiring but also undermines the organization's productivity (Castro et al., 2023). This occurs because turnover directly impacts the workforce, causing disruptions in operational functioning (Castro et al., 2023).

It is also worth highlighting the Balanced Scorecard (BSC), which refers to a strategic management methodology that translates organizational objectives into indicators, balancing financial and non-financial perspectives. Its main contribution lies in aligning organizational performance with long-term strategy, providing a comprehensive view that encompasses financial, customer, internal process, and learning and growth dimensions (Souza et al., 2022). This characteristic makes the BSC particularly useful not only for private companies but also for non-profit institutions, as it allows monitoring social impact and ensuring the sustainability of actions (Souza et al., 2022). According to Costa et al. (2019), the BSC serves as a "performance indicator map," supporting decision-making and alignment across different areas of the organization.

Furthermore, artificial intelligence (AI) has become increasingly present in organizational management, with impacts ranging from task automation to the analysis of large volumes of data for more strategic decision-making (Turnes & Melchiorretto, 2024). In various organizational contexts, AI contributes to enhancing operational efficiency, personalizing services, and exploring new market opportunities. However, adopting this technology also requires attention to cultural transformation, employee training, and the implementation of responsible practices, considering aspects such as data privacy and ethics (Turnes & Melchiorretto, 2024).

In this context, the BSC emerges as an important tool to align the benefits of AI with the organization's strategic objectives (Souza et al., 2022; Turnes & Melchiorretto, 2024). By integrating financial and non-financial indicators, the BSC enables monitoring not only of economic results but also of the impacts generated by automation and technological innovation, ensuring that the organization progresses toward its goals (Souza et al., 2022).

Thus, the relevance attributed to the information extracted from these tools lies in the fact that they provide the foundation for decision-making, given their contribution to monitoring the organization's financial and non-financial aspects, enabling appropriate strategic adjustments (Veroneze & Kruger, 2021). However, it is important to emphasize that, despite the great relevance of financial information, it focuses on past events. Therefore, it becomes essential to complement it with non-financial information, which supports the achievement of long-term objectives and strengthens the management process across its planning, execution, and control stages (Beuren et al., 2018; Malmi & Brown, 2008; Theiss & Beuren, 2020).

### **2.3 Previous Studies**

The literature has provided evidence on the importance of Management Accounting tools in both quantitative and qualitative research. The study by Campos et al. (2019) analyzed the factors that influence the use of Management Accounting tools in the 100 largest companies in Ceará. Through a questionnaire, the study concluded that technology and function impact the use of traditional tools such as cost-volume-profit analysis, absorption costing, return on investment, and budgeting, while strategy affects the use of both traditional and modern tools, such as the theory of constraints, JIT, benchmarking, and strategic planning (Campos et al., 2019).

Additionally, Innocenti and Gasparetto (2021) examined whether the implementation of Management Accounting practices in a Brazilian third-sector organization supports the achievement of organizational efficiency, using document analysis and questionnaires. The results suggest that financial Management Accounting tools such as budgeting, cost-volume-profit analysis, contribution margin, projected cash flow, and product profitability are effectively known and used, playing a decisive role in management processes and contributing to efficiency (Innocenti & Gasparetto, 2021).

Papiorek and Hiebl (2023) investigated the impact of the quality of Management Accounting information systems on the effectiveness of control systems, considering process automation, in a study of 125 medium-sized German companies. The results confirmed the positive effect of the quality of management accounting information systems on management control effectiveness (Papiorek & Hiebl, 2023). Veroneze and Kruger (2021) investigated the use of management control tools in incubated startups through questionnaires. Their findings indicated that strategic planning tools are predominantly used by managers during the implementation phase or on an occasional basis (Veroneze & Kruger, 2021). This finding deepens the technological factor discussed by Campos et al. (2019), showing a direct relationship with control systems' performance.

Godoy and Raupp (2019) analyzed the use of Management Accounting tools in a non-profit organization in Florianópolis, in light of contingency characteristics, and found that the adoption of tools such as cash flow, budgeting, volunteer-hour records, management reports, satisfaction surveys, and financial risk assessments is influenced by the centralization of the organizational structure and employee training. This study reinforces the role of internal variables, such as training and structure, complementing the views of Campos et al. (2019) and Innocenti and Gasparetto (2021).

Dutra and Callado (2020) analyzed the relationships between the use of managerial tools and the organizational characteristics of companies in the hotel sector in João Pessoa, using interviews with the person responsible for the management sector. The results indicated that the most used traditional managerial tools were budgeting, budget analysis, and traditional costing techniques (Dutra & Callado, 2020). Regarding modern managerial tools, there was a greater frequency in the use of benchmarking, JIT, and ABC (Dutra & Callado, 2020).

The literature has also highlighted the relevance of the BSC as an appropriate system for performance measurement and the operationalization of organizational strategy. Souza et al. (2022) demonstrated, through a case study in a manufacturing company, how the BSC enables the unfolding of mission and vision into concrete objectives and strategic actions. The study emphasizes that, even in small organizations, the BSC can be an appropriate tool as long as there is employee involvement and adaptation to operational realities (Souza et al., 2022).

In this context, Cruz et al. (2024) reinforce that third-sector entities that participated in management training programs also showed a greater propensity to use tools such as the BSC, even though its adoption did not prove to be dependent on such training. This indicates the need for other contingency or situational variables to explain its use. This conclusion supports Godoy and Raupp's (2019) view, highlighting that training is relevant but not determinant, expanding the discussion on critical adoption factors.

In parallel, recent technological transformations reveal the growing use of AI in organizational decision-making processes, including in contexts where management is constrained by scarce resources or social purposes. Bandeira and Tortato (2024) conducted a documentary study showing how AI has been consolidated as decision-making support through machine learning algorithms, predictive analysis, and decision support systems. Such tools enable the analysis of large volumes of data, even in real time, fostering greater agility (Bandeira & Tortato, 2024).

The introduction of AI marks an expansion of the technological scope observed by Papiorek and Hiebl (2023), revealing that managerial tools are becoming increasingly dependent on automated analytical solutions. Considering the studies conducted in different sectors, sizes, and organizational natures, there is a clear convergence regarding the importance of management processes and managerial tools in improving management, supporting decision-making, and achieving strategic objectives.

### **3 METHODOLOGICAL PROCEDURES**

This research is descriptive in nature, with a qualitative approach to the data, conducted through a case study in a non-profit technology-based entity located in the southern region of Brazil. The case study strategy was chosen because it allows for a detailed and contextualized investigation of the organization's reality (Yin, 2018), fostering an understanding of the phenomena within their practical environment and enabling the exploration of the complexity of management processes, the use of managerial information, and the importance attributed to that information.

The selection of this organization was based on the fact that it is a non-profit entity engaged in the development of technology- and innovation-driven solutions, making it particularly suitable for the objectives of this study. In addition, the willingness of managers and professionals to participate in the research contributed to the feasibility of the investigation. Thus, more than a matter of convenience, this organization represents a relevant case to be analyzed, as it allows for an understanding of how managerial control mechanisms can be structured to ensure sustainability and management effectiveness, even in contexts where profit is not the primary objective.

The entity studied has over four decades of experience in the fields of science, technology, and innovation, with a strong national and international presence. In 2024, it achieved revenues exceeding R\$ 115 million and carried out 70 technological innovation projects in partnership with various sectors. Its technical staff comprises more than 400 employees. The organization operates independently, without profit motives, and mobilizes resources from both private and governmental entities. Accredited as an applied research unit, it offers advanced technological solutions that contribute to business competitiveness and sustainable development. Recognition through national awards and its participation in strategic programs further reinforce its importance within Brazil's innovation ecosystem.

Data collection was conducted through in-person semi-structured interviews with professionals from the controlling/accounting department and managers. The interviewees were intentionally selected, considering both their positions within the organization and their involvement in planning and control activities. The inclusion criterion was a minimum of three years of experience in the organization and direct responsibility for the preparation, implementation, and monitoring of managerial information and decision-making.

These criteria were established based on the understanding that individuals with more experience in the organization and involvement in management-related activities have a more consolidated knowledge of organizational processes. Furthermore, by selecting professionals with direct responsibility for managerial information and the decision-making process, the study sought to ensure that the accounts obtained came from individuals actively involved in management practices.

A total of 10 interviews were conducted, five with professionals from the controlling/accounting area and five with managers, between November 6 and December 6, 2023. The responses were audio recorded with proper authorization, totaling approximately 5 hours and 35 minutes of recordings. The interviews included both controlling/accounting professionals and managers in order to capture different perspectives on management processes and the use and importance of the managerial tools employed.

The selection considered participants who met the predefined criteria and were available to contribute to the research. This diversity of profiles enriched the analysis, allowing for a more critical and comprehensive understanding of managerial tools within the management process of the entity studied. Table 1 presents the positions of the participants, divided between managers and controlling/accounting professionals.

**Table 1**  
*Interviewee Codes*

<b>Código</b>	<b>Managers' Positions</b>	<b>Code</b>	<b>Professionals' Positions</b>
GE01	Superintendent of Operations and Finance	PE01	Controller Coordinator
GE02	Superintendent of Business	PE02	Accountant
GE03	Administrative Director	PE03	Tax Analyst
GE04	Systems Director	PE04	Controlling Analyst
GE05	Director of the Executing Unit	PE05	Accounting Analyst

It is noteworthy that no formal pretest of the interviews was conducted. However, there was a prior discussion among the authors, considering the previously outlined categories, which allowed the alignment of approaches to the main aspects investigated. Given the specific characteristics of the entity studied and the objective of the research, this strategy was deemed sufficient to structure the script and conduct data collection in a coherent and appropriate manner.

Before the start of the interviews, participants were informed about the ethical measures adopted to ensure anonymity, the confidentiality of information, the proper handling of the collected data, and its exclusive use for academic purposes. Participants were also assured of their right to withdraw from the study at any time, without the need for justification.

For data collection, a semi-structured script was used, developed based on three categories of analysis (management processes, managerial tools, and the importance of managerial information), consisting of open-ended questions organized into two sets. The semi-structured interview makes it possible to capture details and subjective aspects that would not be easily accessed through closed instruments, thus broadening the understanding of practical complexity (Mazzotti & Gwandsznajder, 2004).

The first set was directed to controlling/accounting professionals, responsible for preparing managerial information and reports, and is presented in Table 2, while the second set was designed for managers, who use this information as support for decision-making, and is shown in Table 3.

**Table 2**  
*Interview Script for Controlling/Accounting Professionals*

<b>Category</b>	<b>(Q)</b>	<b>Question</b>	<b>Sources</b>
Management Processes	01	How is the financial and accounting management process structured in this organization?	Malmi e Brown (2008), Frezatti et al. (2009), Theiss e Beuren (2020).
	02	In your perception, what role does the controlling/accounting department play in defining and supporting management practices in the organization?	
	03	What is your perception of the integration between controlling/accounting and other departments to ensure the effectiveness of control tools in guiding decisions?	
	04	What are the key factors that influence how management is conducted, considering the technological and non-profit nature of the organization?	
Managerial Tools	05	Which financial and non-financial tools are monitored to support management? How are they produced and made available?	Almeida et al. (2016), Godoy e Raupp (2019) e Innocenti e Gasparetto (2021).
	06	Which tools do you use in your daily activities? Are there any adaptations or customizations of managerial control tools to meet the institution's specific needs?	
	07	What contributions does the controlling/accounting department make in interpreting information from managerial tools for decision-making?	

	08	What are the main challenges faced by the controlling/accounting department in using the tools and generating managerial information?	
Importance of Managerial Information	09	How do you assess the impact of the information generated by control tools on the organization's management and performance?	Veroneze e Kruger (2021).
	10	How do you perceive the effectiveness of managerial control tools in helping the organization achieve its objectives and strategic goals?	

**Table 3**  
*Interview Script for the Organization's Managers*

Category	(Q)	Question	Sources
Management Processes	01	What are the flows and main stages of the accounting/financial management process within the organization?	Malmi e Brown (2008), Frezatti et al. (2009), Theiss e Beuren (2020).
	02	In your perception, what are the key factors that influence how management is conducted in the organization, especially considering its technological and non-profit nature?	
	03	From your perspective, what are the main principles or approaches that guide management throughout the organization?	
	04	How do you perceive the contribution of the controlling/accounting department to the organization's strategic decision-making process?	
Managerial Tools	05	How is the alignment between the use of managerial tools and the organization's objectives and goals achieved?	Almeida et al. (2016), Godoy e Raupp (2019) e Innocenti e Gasparetto (2021).
	06	In what ways do the information and analyses provided by the controlling/accounting department influence your decisions within the organization?	
	07	In your view, which financial and non-financial tools are the most relevant to support decision-making?	
	08	Do you notice any integration or interconnection between the managerial tools used in management? How does this affect decision-making?	
Importance of Managerial Information	09	How do you perceive the influence of information derived from managerial control tools on the strategic direction and overall performance of the organization?	Veroneze e Kruger (2021).
	10	What is your perception of the effectiveness of managerial tools in helping the organization achieve its objectives and strategic goals?	

For data analysis, the initial stage involved the full transcription of the interviews. Subsequently, the content analysis technique proposed by Bardin (2016) was adopted, recognized for its applicability in qualitative research that seeks to interpret meanings within statements, going beyond the mere literal description of messages. Content analysis was structured into three interdependent phases: (i) the pre-analysis, during which a preliminary reading of the material was carried out; (ii) the exploration of the material, in which the data were structured and grouped into the outlined categories, built from the meanings identified in the interviewees' statements; and (iii) the treatment of results and interpretation, a stage that enabled the inference of meanings based on the dialogue between the findings and the adopted theoretical framework.

Finally, it is important to highlight some methodological limitations that may influence the interpretation of this study's results. The choice of a single organization may restrict the generalization of the findings to other entities with different characteristics. Additionally, the purposive selection of participants, although consistent with the qualitative design, may have been influenced by criteria of convenience and access. The subjectivity of the interviewees, as well as possible limitations in recalling and reporting past experiences, also represent potential sources of bias in the responses. These aspects should be considered in the critical reading of the results, reinforcing the importance of future replications in different contexts.

## 4 ANALYSIS AND DISCUSSION OF RESULTS

### 4.1 Category: Management Processes

The decision-making process in the entity begins with long-term strategic planning. Interviewee GE01 highlights that the institution has a strategic program running through 2030, providing guidelines on areas of activity and financial targets. This strategic planning is broken down annually into directives and goals for the following year. This breakdown allows the organization to review and adjust its priorities based on lessons learned and changing scenarios, contributing to more assertive management. This finding reinforces the discussion by Malmi and Brown (2008) and Beuren et al. (2018), who emphasize the importance of integrating planning with other forms of control as a foundation for effective management.

The annual goals cover different areas of the entity, and each goal is quantified and budgeted, providing a basis for monthly monitoring. This monitoring is carried out by the 10th business day of each month, involving a thorough analysis not only of the goals but also of numerous indicators that support decision-making within the entity. This monitoring process involves identifying deviations, which facilitates the implementation of corrective actions and increases the organization's ability to achieve its objectives. This practice demonstrates, as noted by Veroneze and Kruger (2021), the importance of performance analysis as an essential tool for the continuous outlining and adjustment of organizational strategies.

In addition, interviewee GE01 highlights a change concerning the Executing Units (EUs) following the arrival of the new General Superintendent. Previously, the EUs operated as strategic business units, leading their own initiatives. As of 2020, the organization began to centralize its strategies and cascade them down to the EUs, which now function as executors of corporate strategies.

However, Veroneze and Kruger (2021) point out the necessary balance between centralized control and local autonomy. Centralizing strategies can strengthen organizational alignment but also requires the development of cultural and administrative control mechanisms (Malmi & Brown, 2008) to maintain the engagement of the executing units.

Regarding management processes from the perspective of controlling/accounting professionals, interviewee PE01 highlights the existence of three subprocesses: financial, managerial, and accounting, with emphasis on the close relationship between managerial and accounting areas, while the financial area appears to be less integrated. The role of controlling and accounting is emphasized by PE01 as the central point in the process, stating: “[...] today the system is fully integrated. The entries are made by the tax department, and this information is audited and closed by accounting and then passed on to controlling” (PE01). In this regard, Malmi and Brown (2008) stress that integration between cybernetic, administrative, and financial controls is fundamental to ensure that information flows appropriately across the organization's various levels. The absence of such integration, particularly with the financial sector, can represent a weakness in the control chain.

In the integration between departments, most professionals interviewed point out advances in the effectiveness of control tools, as noted by PE03, who stated: “[...] over the last two years, at least, this reliability has increased due to the intensification of this integration.” However, some interviewees mentioned the need for greater integration between sectors, as reported by PE01: “[...] the EUs end up being too divided, and there is no integration among them. [...] In administration, I think the integration is very important, and it is working very well, especially between accounting/managerial, which are working together” (PE01).

As for the key factors influencing management in the organization, both managers and professionals reported a set of elements that guide management processes. These key factors mentioned by the interviewees are presented in Table 4.

**Table 4**  
*Perceptions of Key Factors in Management Processes*

Key Factor	Response
Timeliness of information	[...] are the agility in gathering information, relevant and reliable data, and the competence of the operation [...]. (PE04)
Integration between sectors	I think one of the factors was this issue of integration between sectors, which ended up greatly influencing the way they managed [...]. (PE05)
Reliable information	We need to have reliable information systems. We need to have consistent data, from the base data at the very bottom through the various processes and integrations, so that we can have a set of reliable information. (GE01)
Innovation	[...] for us, innovation means that what we do must somehow reach the market, it must make our client more competitive. (GE02)
Mitigation of innovation risk	[...] every innovation has a risk. You might develop something that is technologically interesting, but it did not find a good business model, and ultimately, it never became a product in the market. So, there is always this risk with innovation. (GE02)
External factors	[...] the main factor I see is the external factors, and these external factors are directly related to the economic situation of the industry. If the industry is not doing well, it will not invest in innovation and technology. (GE03)
Value delivery	[...] I believe we have the vision of being an important pillar of Research and Development (R&D) in Brazil, delivering value to society. (GE05)

These factors, such as the timeliness of information, data reliability, and integration between areas, have direct impacts on management practices, including greater capacity for budget planning, evidence-based decisions, and more appropriate risk management. Godoy and Raupp (2019) also reinforce the need for control tools to be strongly supported by reliable, up-to-date information shared across sectors, which aligns with the interviewees' perceptions of the challenges and advances within the studied entity.

With a perspective focused on management within the entity, managers were asked about the principles that guide decision-making. Table 5 presents the principles that managers keep rooted in institutional management.

**Table 5**  
*Perceptions of Principles and Approaches in Management Processes*

Principles	Response
Transparency	We have the principle of transparency. We do not use concealed systems; we provide a great deal of transparency in information overall. (GE01)
Discipline	We need to discipline ourselves to follow procedures. If we do not follow the established procedures, we will not be able to achieve the desired outcome. (GE01)
Collaboration	Collaboration is another cornerstone. We can only make this organization what it is through collaboration. (GE01)
Integrity	I believe the main principles are ethics, honesty, being consistent with all current legislation, and professional respect for partners, clients, and employees. (GE02)
Fairness	I think principles include fairness between the parties, being as transparent as possible, always aiming for a beneficial result for both sides, client and supplier [...]. (GE04)
Well-established governance	So, the main guide of our current management is having well-established governance from the construction and specification of these projects. This allows us to be very assertive when determining the efforts we will have to apply to develop them. (GE05)

These principles are related to the cultural dimension of management control described by Malmi and Brown (2008), as they establish the shared values that guide the behavior of the organization's members, even in contexts of decentralization or uncertainty. In the question regarding the contribution of the controlling/accounting department to decision-making, the managers indicated that these areas play a significant role in management processes, as stated by interviewee GE05: "[...] accounting/controlling are the guardians of the institution's financial side,

ensuring that everyone shares the same direction and guaranteeing that we do not deviate from what was planned.” This view of accounting/controlling reinforces the point made by Veroneze and Kruger (2021), who identify these areas as key elements in converting strategic guidelines into useful and operational information, acting as mediators between strategic intent and managerial action.

#### 4.2 Category: Managerial Tools

In the process of aligning managerial tools, interviewee GE01 highlights the transformation in the organization that took place in 2020, marked by changes in the management approach. The new General Superintendent introduced a more business-oriented perspective, seeking to analyze the organization based on financial statements and adopting CPC 47, whose implementation triggered a review of procedures ranging from control to project pricing. Interviewee GE01 states: “we changed the way we control projects, the way we budget projects, the way we price projects, the way we define what is cost and what is expense we reformatted all of this here in 2020 and 2021.” This restructuring had the practical effect of standardizing costs and revenues, facilitating comparability between projects and providing greater clarity for managers when analyzing economic performance.

This scenario is similar to the study by Dutra and Callado (2020), which points out the importance of standardizing tools to ensure data comparability and consistency. However, in the case of the entity, it also reveals a customization of the tools, contrasting with the predominant standardization described in the literature and demonstrating a model more adaptable to the particularities of management.

Furthermore, interviewee GE01 notes that, for internal alignment, there was extensive communication of the changes through meetings with project managers, coordinators, administrative units, and directors. The goal was to ensure that all members of the organization understood and adopted the new practices. GE01 states: “these change concepts were incorporated into specific procedures, and we then carried out very extensive communication of these procedures” (GE01).

Regarding managerial tools, interviewee PE01 highlighted those adopted institutionally. PE01 also noted that within the EUs, some specific managerial tools are used, which do not encompass all sectors of the entity. Table 6 presents these managerial tools used in management processes, which include components of cybernetic, administrative, and cultural control.

**Table 6**  
*Managerial Instruments/Tools of the Entity*

<b>Instruments/Tools</b>	<b>Description</b>
Financial Statements	Statements such as Balance Sheet, Income Statement (DRE), and Cash Flow Statement (DFC). Information generated via the management system (ERP) to process and integrate the data provided by all administrative sectors (human resources, purchasing department, accounting, and finance). (PE01)
Channel	Tool for recording hours and monitoring the physical progress of projects. Provides a broad view of the actual execution process of the project. (PE01)
Economic, Financial, and Cash Map (EFC)	The EFC Map is a recently developed managerial tool designed to integrate and compare different informational bases of financial and economic performance, especially regarding the accounting recognition of revenue and cash flow.
Revenue Map	Its main distinguishing feature lies in its ability to reconcile the accrual views (accounting and managerial) with the cash view, offering managers a simultaneous reading of what has been effectively delivered to the client (realized revenue), what has already been received in cash (including advances), and the temporal gap between economic production and financial flow.

Debt Map	This approach is particularly important in institutions that operate with projects contracted through advances, in which revenue is recognized based on delivery (following CPC 47), but payment may occur beforehand. The EFC Map, therefore, provides visibility into the relationship between revenue recognition and cash inflow, a highly relevant element for budget planning and financial sustainability.
Demonstrativo de Evolução de Atividade (DEA)	É dedicada ao planejamento e acompanhamento de projetos. O DEA facilita a alocação e divisão dos recursos humanos em entregas, oferecendo uma abordagem estruturada para análise e acompanhamento do desempenho econômico do projeto. (PE01)
Project Board (QDP)	Tool with parameters similar to DEA, but aimed at managing each project and each unit individually. It highlights indicators such as IMC, project progress stage, dedicated hours, and more. (PE01)
Business Intelligence (BI)	Ongoing project for the development of a BI solution. This tool aims to replace manual processes in Excel. (PE01)
Number of Reference Employees (NCR)	It is a non-financial managerial instrument used in the organization, which defines a standard employee (PS6) to enable team cost comparisons through a feedback process regarding the EU's employees. (GE01)
Cost per Reference Employee (CCR)	From the NCR, the cost per employee (CCR) is calculated, allowing HR analysis for production. The calculation consists of dividing the total cost of the EU by the number of NCR, offering an overview of the average cost per employee. (GE01)
Contribution Margin Index (IMC)	Reflects the operational margin generated by the institution's own resources, especially human capital, and indicates the capacity to generate value after covering internal costs. The IMC is presented by controlling as the appropriate cost without Direct Activity Cost (CDA) divided by the revenue earned without CDA. GE01 demonstrates the following formula for calculating IMC: $\{1 - (\text{Appropriate Cost} / \text{Revenue})\}$ . The CDA refers to the hiring of third parties. Since the hiring is funded by the client, this obligation (cost) is recognized with the supplier and at the same time recognized as a right, considering it as revenue at the same time. These values are excluded from the calculation because they do not reflect the organization's internal cost, since their appropriation occurs simultaneously with the recognition of the corresponding revenue. The indicator is considered a measure of productivity, with an operational target between 30% and 33%, deemed ideal to ensure financial sustainability without compromising delivery capacity. In production, a drop indicates high costs. (GE01)
Gross Result Index (IRB)	The IRB is mentioned as a derivative of the IMC, relating revenue to total costs and expenses, and its calculation is performed only in the institution's overall scenario. GE01 presents its formula as: $\{\text{Revenue} / (\text{Costs} + \text{Expenses})\}$ . An IRB above 1 indicates a surplus, when revenue exceeds the sum of costs and expenses. Conversely, an IRB below 1 means a deficit, indicating that revenue does not adequately cover costs and expenses. (GE01)
Budget	Annual budgeting carried out by the EU. (PE01)

Although the literature, such as Innocenti and Gasparetto (2021), highlights the role of budgeting and financial statements as important control tools, the study reveals that specific tools like the IMC and the EFC Map are the main ones in the entity's reality. This reinforces the need for more flexible and contextualized management control models. This evidence also aligns with the findings of Souza et al. (2022), by emphasizing that tools like the BSC prove to be more suitable when adapted to the organization's operational reality, which appears to be the case in the entity through its own strategic and operational indicators.

Additionally, regarding managerial tools, most of the controlling/accounting professionals interviewed highlighted the adaptation and customization that occur in such tools and in the routines for preparing information, especially the business intelligence (BI) system, which is in the final stages of development for use. Interviewee PE01 emphasizes: "they are all adapted; all the tools we use, we don't use any standard like that. Oh! We have a controlling standard that comes from somewhere no. Everything is adapted for the entity. All of our systems are customized." This scenario demonstrates challenges related to system scalability, dependence on specific internal knowledge, and the constant need for maintenance and staff training.

This customization diverges from the traditional model presented by Dutra and Callado

(2020), which favors more standardized control structures. However, the entity's empirical evidence demonstrates the customization that occurs and is necessary in dynamic, innovative environments with multiple stakeholders, as also suggested by Godoy and Raupp (2019). Additionally, the presence of non-financial indicators, such as NCR and CCR, indicates an alignment with hybrid control models that integrate operational performance into strategy (Castro et al., 2023; Souza et al., 2022).

In interpreting the information, the interviewed professionals generally highlight the consultative and influential role of the controlling/accounting department in supporting EU managers and superintendents, clarifying doubts about decision-support information through technical analyses. Interviewee PE01 notes: “[...] we end up supporting them and answering several questions about why that behavior, that cost, that expense, that revenue, and we end up providing this consultancy so they can better understand their results.”

Regarding the challenges faced by professionals, interviewee PE05 emphasizes the need to process information from all departments in a timely manner to enable real-time decisions. The influence of managerial reports on analyses and goal setting is also highlighted, as well as the role of controlling in ensuring effective project execution. As evidenced by interviewee PE04: “today, it is from managerial that we get the information on cost, expense, productivity, production performance. It is from there that we have the entire issue of budgeting and transactions.”

As for the tools most mentioned for decision-making, managers pointed to the importance of indicators such as revenue, cost, number of reference employees (NCR), and contribution margin index (IMC). Interviewee GE02 highlights that the IMC is a decisive metric for understanding cash health on different scales. Regarding the integration of managerial tools, interviewee GE01 mentions the creation of the Economic, Financial, and Cash Map (EFC), which seeks to integrate economic and financial information.

Interviewee GE01 states: “[...] we created a tool called the EFC Map [...] it is a system to know, from our production, what we are generating in deliveries and what revenue is associated with it, based on production.” This corroborates the findings of Godoy and Raupp (2019), who point out that the intelligent use of managerial indicators is what allows technical data to be transformed into strategic actions. The EFC Map, for example, represents a model of information integration that is scarce in the literature but highly effective in the entity studied.

### **4.3 Category: Importance of Managerial Information**

Regarding the influence of information generated by managerial tools, interviewee PE01 emphasizes that “the data presented today are fundamental for the institution,” highlighting that “the information generated is the foundation of everything” and that “it is impossible to survive without this information.” This dependency reveals that the entity's operation is strongly data-driven, and managerial information has become crucial for planning, control, and decision-making.

This statement corroborates the findings of Godoy and Raupp (2019), who highlight the central role of accounting and managerial information as a basis for strategic decisions in public and private organizations. The consolidation of information use as a pillar of management indicates that the tools cease to be merely operational and begin to directly influence the conduct of strategies.

Interviewee PE03 points out that the impact of information is significant over time. “We started trusting the numbers we provide more than the initial estimate we had in mind.” The interviewee also mentions that the expectation for monthly results is decisive in supporting decisions and optimizing resource allocation. Veroneze and Kruger (2021) also emphasize that increasing trust in information over time strengthens the institutionalization of controls, allowing them to become legitimate elements incorporated into routine decision-making, which seems to be occurring in the studied entity.

Interviewee PE04 highlights the trust in information built over the institution's 40-year history. He relates the effectiveness of information to success stories in the organization's history. Complementing this, interviewee PE05 states that "an entity without managerial control is like a ship sailing without a compass," stressing the importance of information generated by managerial control tools in guiding organizational decisions.

Regarding the effectiveness of managerial tools, interviewee PE02 assures that "accounting information is reliable and transparent," demonstrating confidence in the data presented. However, both interviewees PE02 and PE03 reiterate the need for adjustments in the financial area to improve information effectiveness. "[...] The accounting area is well integrated with the managerial aspect [...]. However, the financial part is still not adequate, but it will improve" (PE02; PE03). Interviewee PE04 measures the effectiveness of the tools by results achieved and subsequent year budgeting, emphasizing the importance of reliable data for management.

Thus, management effectiveness is conditioned on the complete integration of financial data with other departments, being a point of attention to avoid delays, errors, and decisions based on incomplete information. This scenario also converges with observations by Papiorek and Hiebl (2023), who show that the quality of information systems directly affects control effectiveness, reinforcing that failures in subsystem integration reduce the organization's response capacity.

Managers recognize effectiveness in managerial and accounting areas but also highlight the need for improvement in finance (GE01; GE02). They point to recent advances, such as the monthly acquisition of trial balances, but note that there is still room for improvement in efficiency and productivity. Interviewee GE01 states: "[...] so this is working smoothly, there is not much rework, so effectiveness is good, both in managerial and accounting. [...] In finance, work needs to be done to improve efficiency, effectiveness, and productivity" (GE01).

This scenario indicates, in practice, that although the tools are consolidated in parts of the organization, improvement is necessary to achieve excellence in integrated management. Such challenges were also identified by Dutra and Callado (2020), who highlight that control systems' maturity is often uneven across subsystems. Continuous evolution of financial control is essential to ensure that the system functions cohesively as a whole.

Interviewee GE02 highlights the transition in management, adopting a more business-oriented approach. He stresses the importance of this change given the requirements for registry analysis in public notices and calls, emphasizing the need for management closer to that of a company. He states: "as the organization grows, we see the following: the entity needs to mature into more professional management, closer to a company, where you can look at the balance sheet and understand the institution through the balance sheet" (GE02).

Godoy and Raupp's (2019) study discusses the professionalization of management in the public and non-profit sectors, pointing out that this path requires adopting practices closer to the private sector without losing focus on the institutional mission. Furthermore, this managerial stance aligns with Campos et al. (2019), who showed that organizations with greater strategic alignment tend to use modern managerial tools, also observed in the entity through the adoption of CPC 47 and proprietary indicators.

Interviewee GE03 identifies a significant focus on process efficiency, recognizing the need to evolve toward full effectiveness and efficiency. He emphasizes the importance of effectiveness to ensure that strategic managers are fully served, noting that: "when I say it takes 10 business days to have information, we notice that along the way, in the following month, there is a wrong entry. I was effective because I delivered the result, but I was not efficient [...]" (GE03).

Interviewee GE05 corroborates this, highlighting the importance of managerial tools for an organization of their size, emphasizing the need to start correctly from the beginning to ensure competent management, which can be improved with automation. Interviewee GE04 mentions that: "the institution still has a long journey to develop so that this information is adequate and timely for decision-making." It is observed that information maturity is still in process, and its

consolidation is fundamental to ensure timely decisions aligned with strategic objectives.

This organizational maturation process is directly related to the expansion of technological scope, as Bandeira and Tortato (2024) point out when discussing the role of AI in transforming decision-making processes, which may become a future reality in the entity, according to the reports.

Regarding the influence of information on decision-making, interviewee GE01 emphasizes that these data are essential for optimizing budgets and goals, allowing critical analysis to correct directions and adjust targets. He highlights that they are like “management oxygen.” He adds that: “it is decisive for us, first, to learn and optimize budgets. [...] This starts generating a set of information, and the more I work with this information, the more I engage, the more I read, the more I observe, the greater my capacity to make any kind of decision” (GE01).

Interviewee GE02 highlights that information is vital to guide daily actions, especially regarding balancing sales team growth with maintaining sustainable margins. Interviewee GE03 also highlights the direct influence of information generated by managerial tools: “[...] we have already noticed that these data and information from managerial and accounting areas provide us with information that allows preventive actions in finance and cash flow” (GE03).

Interviewee GE05 stresses that this managerial information is decisive to maintaining financial health and accounting transparency. He points out: “I believe that today, in any private entity especially, it is the main pillar [...]. We cannot operate without linking numbers and respecting planning, governance, and accounting transparency processes” (GE05). This implies that the systematic use of reliable information strengthens institutional reputation and compliance with legislation, ensuring operational legitimacy and organizational continuity.

## 5 CONCLUSION

This research identified the management processes, managerial tools, and the importance attributed to managerial information in a non-profit technology-based entity. The main findings indicate that the entity has strategic planning through 2030, broken down into annual goals with monthly monitoring, coupled with centralized governance, representing a structure still scarcely discussed in the literature on non-profit organizations. Furthermore, key factors for management include agility in information gathering, integration between departments, data reliability, innovation, and value delivery. Decision-making is based on principles such as transparency, collaboration, and good governance.

Given the results obtained, this study contributes to the Management Accounting literature by providing empirical evidence on the management processes and managerial tools used in a non-profit technology-based entity, advancing the studies by Godoy and Raupp (2019). The findings allowed parallels to be drawn with existing literature while revealing new perspectives on how these tools are adapted to the institutional reality.

From a management perspective, the main contribution lies in demonstrating that managerial tools can and should be customized according to organizational demands. In this case, the adaptations enabled greater integration between technical and managerial areas, facilitated internal communication, supported the monitoring of strategic goals, and promoted greater agility in decision-making. The use of internally developed indicators, for example, reinforces management’s autonomy in building tools aligned with institutional objectives, enhancing management effectiveness.

The study presents some limitations that should be considered when interpreting the results. Beyond the methodological limitations already discussed, the cross-sectional nature of the interviews is notable, capturing perceptions at a single moment without considering possible changes in management processes over time. It is also important to mention that the small number of respondents, due to the entity’s size, may limit the diversity of perspectives and restrict the

scope of the findings. Although participants held strategic positions, this limitation may have excluded relevant nuances from other organizational areas.

Therefore, it is recommended that future studies consider different temporal slices and increase the number of participants to deepen understanding of management processes and managerial tools in non-profit entities. Additionally, replicating the research in other third-sector organizations may help strengthen the validity of the methodological approach and allow for comparisons across results through multiple case studies in similar or distinct fields within the sector.

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#### AUTHOR CONTRIBUTIONS

Roles	1st author	2nd author	3rd author
Conceptualization	♦	♦	♦
Data curation	♦		
Formal analysis	♦	♦	♦
Methodology	♦	♦	♦
Project administration	♦	♦	♦
Supervision		♦	♦
Validation		♦	♦
Visualization	♦	♦	♦
Writing – original draft	♦		
Writing – review and editing	♦	♦	♦

#### CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding this submitted work.

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