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A strategic planning methodology developed for application in the public sector: the case of IMEG

Abstract

This study focuses on the analysis of a tool dedicated to strategic management within the public sector, presenting a concrete case in which the Dean of Administration (Proad) of the Federal Institute of the North of Minas Gerais (IFNMG) developed the Identification and Measurement of Management Strategies (IMEG). The central question that guides this investigation is: how do IMEG functionalities influence and contribute to the effectiveness in the production of strategic planning? The objective is to present the application of this tool in the practical context of a public institution. To achieve this purpose, Participant Observation was used as a methodology, an instrument that involved the active participation of researchers in the daily activities carried out by the IFNMG Proad. The results reveal that IMEG stands out as a relevant, practical and applicable tool, which allows identifying gaps in public management and offering effective solutions for the preparation of Strategic Planning. This approach not only confirms the relevance of IMEG, but also highlights its fundamental role in optimizing strategic processes in the studied environment.

Keywords: Strategic planning; management; IMEG; IFNMG.

O IMEG como ferramenta de planejamento estratégico para o setor público: o caso da PROAD/IFNMG

Resumo

Este estudo concentra-se na análise de uma ferramenta dedicada à gestão estratégica no âmbito do setor público, apresentando um caso concreto em que a Pró-reitoria de Administração (Proad) do Instituto Federal do Norte de Minas Gerais (IFNMG) desenvolveu a Identificação e Mensuração de Estratégias da Gestão (IMEG). A questão central que orienta esta investigação é: como as funcionalidades do IMEG influenciam e contribuem para a eficácia na produção do planejamento estratégico? O objetivo é apresentar a aplicação dessa ferramenta no contexto prático de uma instituição pública. Para atingir esse propósito, utilizou-se da Observação Participante como metodologia, um instrumento que envolveu a participação ativa dos pesquisadores nas atividades diárias realizadas pela Proad do IFNMG. Os resultados revelam que o IMEG se destaca como uma ferramenta relevante, prática e aplicável, que permite identificar lacunas na gestão pública e oferecendo soluções eficazes para a elaboração do Planejamento Estratégico. Essa abordagem não apenas confirma a relevância do IMEG, mas também destaca seu papel fundamental na otimização dos processos estratégicos no ambiente estudado.

Palavras-chave: Planejamento estratégico; gestão; IMEG; IFNMG**.**

Introduction

Strategic Planning, according to Kaplan and Norton (2004) and Mintzberg (2008), plays a crucial role in efficiency and the achievement of objectives within an entity. For the authors, by focusing management on the integration of people, processes, planning, and control, it is possible to establish a solid foundation for organizational success. In the educational field, as stated by Oliveira, Fonseca, and Ferreira (2023), in entities such as Federal Institutes, the challenges of efficient management extend beyond the teaching core, impacting society as a whole and playing a vital role in the formation of citizens.

For Chiavenato (2000), in the pursuit of quality management, the alignment between people, processes, planning, and control is the backbone of effective Strategic Planning. In this sense, aligned with Sicsú (2008), strategic management in the public service, when implemented holistically, allows for a synergy that enhances institutional performance.

According to Abreu and Gomes (2010), the lack of continuity in policies aimed at improving institutional performance in the public sector may have adverse effects. This is evidenced through strategic changes in government management, such as instability in public policies, adaptation to new paradigms, impact on the workforce, the need for constant training, technological challenges, impact assessment, and discontinuity in projects. These challenges represent significant obstacles to the effective implementation of strategic planning in public entities.

Pascuci et al. (2016), in their research on public managers' perception of strategic planning for educational entities, highlight a consensus regarding the necessity and contributions of professionalization in public management. However, they point out that the ambiguity of public policies, excessive regulation, and the complexity of academic organizations are significant challenges to the success of strategic planning practices. Silva and Melo (2013) complement this by indicating the difficulties managers face in adopting strategic management tools, emphasizing the need for simpler and more realistic solutions to meet the demands of public service.

Fonseca and Oliveira (2023) emphasize that the Federal Institute of Northern Minas Gerais (IFNMG), as an autonomous agency of the federal public service, faced challenges in the implementation and definition of its strategies. However, the institution significantly consolidated its strategic policies, demonstrating maturity in strategic planning. This is particularly evident when considering the various actions undertaken, with special emphasis on the Institutional Development Plan (PDI).

The effectiveness of the PDI as the institutional strategic framework of IFNMG, according to the same authors, depends on the active participation of all organizational units (Campuses, Pro-Rectories, and directorates linked to the Rectory) as well as the existence of tactical and operational planning specific to each unit. In the Pro-Rectory of Administration, as a way of consolidating Strategic Planning, a specific tool for strategic application was developed, called IMEG—Identification and Measurement of Management Strategies.

Considering the obstacles and difficulties in carrying out Strategic Planning in the public sector, this study emerges from the following guiding question: How do the functionalities of IMEG, when associated with common difficulties in the execution of strategic planning in public entities, influence and support the effective production of this planning? The main objective is to present the functionalities of IMEG in a real context, using the Pro-Rectory of Administration of IFNMG as a practical case.

This article is divided into four sections, in addition to this introduction. Section 2, which covers the theoretical framework, presents the concepts of strategic planning. Section 3 presents the methodology adopted in this study, through which an immersion study, called Participant Observation, was conducted in the Pro-Rectory of Administration of IFNMG. Section 4 presents the analysis of the results, and finally, the conclusions drawn from these results.

Theoretical Framework

Planning in Management

Educational institutions, in general, are dynamic organisms and are susceptible to social, economic, and political changes. Therefore, it is not plausible for

their management to be carried out without considering their members, internal and external environments, and needs, since management and organizational practices within an educational institution influence everyone from managers to the formation and learning of students (Libâneo, 2005; Luck, 2011).

According to Schultz (2008, p. 49), the manager is expected to be:

> an agent of transformation and development; to play a catalytic role, to anticipate solutions, to understand the conditions of the environment and the actors within the school setting; to inspire, stimulate, guide, and foster a climate necessary for creativity. It is indeed true that the intensity of these transformations will depend on the degree of freedom available to the manager, teachers, parents, and the community.

According to Luck (2011), Management can be understood through the participation of individuals in decisions regarding the direction and planning of their work. Thus, the pedagogical process is democratically strengthened, leading to effective contributions to educational outcomes with greater efficiency.

For Lima, Prado, and Shimamoto (2011, p. 7):

> […] so-called managerial management favors functional participation where individuals “collaborate” and their opinions are partially accepted. Instrumental participation occurs through the acceptance of a prior objective, resembling representative democracy, serving to secure resources and endorse control actions. In this process, beyond technique, the aim is subjection, consensus, and reproduction. Management, by adopting the discourse of partner employees and partner communities, dilutes and weakens the possibilities of emancipation and overcoming the established structure.

In this sense, strategic planning consists of a systemic and continuous process that employs present knowledge and future projections to make decisions and define the activities necessary for execution, while being fed back through periodic measurement of results achieved (Drucker, 1962).

Several stages make up the strategic planning process: analysis and diagnosis of the internal and external environment; definition of mission, vision of the future, and values; strategic objectives; operational plan; goals; and action plans (Luck, 2000).

In this regard, strategic planning may be elaborated using different and complementary administrative tools, all requiring broad involvement of people and a focus on processes. Commonly used tools include SWOT analysis (Strengths,

Weaknesses, Opportunities, and Threats), which relies on scenario analysis by evaluating internal aspects (strengths and weaknesses) and external aspects (opportunities and threats) for decision-making, and the Balanced Scorecard, which, also from a systemic perspective, defines strategic objectives, indicators, and achievable goals within a given timeframe.

The management of educational institutions without planning and driven by crises and immediate problem-solving has limited reach, as it is influenced by trial-and-error tendencies (Luck, 2000).

Business Models for the Construction of Strategic Planning

The public sector has adopted business strategies to achieve competitive advantages in the management of public entities. Pateli and Giaglis (2004) emphasize that the search for sustainable competitive advantages drives new forms of management and business models adapted to the current economy, increasing the complexity of managerial decisions.

Rausch (2012) proposes a business model that considers environmental factors, integrating sustainability, economy, technology, innovation, and political and sociocultural aspects. According to Shafer, Smith, and Linder (2005), this is the architecture through which an entity represents its strategic logic to create and capture value.

Authors such as Casadesus-Masanell and Ricart (2010), Chesbrough and Rosenbloom (2002), Osterwalder and Pigneur (2004), Shafer, Smith, and Linder (2005), and Takahashi and Takahashi (2011) argue that there is no ideal model, but rather a diversity of business models with specific approaches.

Focusing on the objectives of this study, the following models will be considered: Balanced Scorecard, Porter's Five Forces, Business Model Canvas, SWOT Matrix, Razgaitis' Evaluation and Classification Method, and the Intangibles Analysis Method (TVT). Table 1 below presents the concept of each of these tools.

Table 1 - Business Model Tools

Model	Author	Feature

Balanced Scorecard (BSC)	Kaplan e Norton (1990)	A strategic management model designed to evaluate an entity's performance and progress, the BSC is a widely used tool for long-term goals, based on four perspectives: financial, market, internal processes, and learning.
Porter's 5 Forces	Porter (1990)	The rules of competition are encompassed by five competitive forces: the entry of new entrants, the threat of substitutes, the bargaining power of buyers, the bargaining power of suppliers, and rivalry among existing competitors.
Business Model Canvas	Osterwalder e Pigneur (2011)	Model with nine components, whose integration describes the logic of creation, delivery and capture of value by an organization.
Evaluation and Classification Method	Razgaitis (2007)	Method of identifying business analysis criteria by determining weights and scores per evaluated criterion.
Technology Valuation Thermometer (TVT)	Oliveira, J.L.C (2020)	A method for valuing intangible assets that takes into account analyses such as financial viability, innovation, market, and people.
SWOT	Albert Humphrey	Model based on the analysis of 4 elements: strengths, weaknesses, opportunities and threats.

Source: research data (2024).

Understanding and applying business model tools in strategy formulation are crucial elements for successful management practices, as highlighted by researchers such as Porter (1990), Luck (2000), Drucker (1962), Chesbrough, and Rosenbloom (2002). By understanding these tools, public managers have access to a wide range of opportunities that can facilitate strategy development.

Research Methodology

The present study concerns a practical case aimed at examining the tool used by the Pro-Rectory of Administration of IFNMG for strategy formulation. For this purpose, the methodological technique of Participant Observation (PO) was chosen, which, according to Cano and Sampaio (2007), is used to detect and obtain information that is sometimes not captured by other methods.

According to Paterson, Bottorff, and Hewat (2003), Participant Observation is a data collection method originating from the social sciences and derived from ethnography. Its contribution lies in allowing the researcher to gain knowledge through a relationship of trust, which the authors refer to as the “backstage of reality.” Cano and Sampaio (2007) further emphasize that PO requires scientific rigor, which distinguishes it from informal observation.

To achieve the objectives of this research, it was necessary to understand the functioning of IMEG in loco. Thus, PO was conducted at IFNMG, specifically within the Pro-Rectory of Administration (PROAD). The choice of PROAD/IFNMG stemmed from the use of an unprecedented and innovative tool, IMEG. This tool was developed within the Pro-Rectory itself and is aligned with the strategic planning of IFNMG. This study is relevant as it makes IMEG publicly known, enabling its use by other public entities, as was the case with IFNMG.

Regarding PO, the researchers were present at the premises of PROAD/IFNMG from September 10, 2023, to December 15, 2023, following the technical and administrative procedures related to the construction of strategies for the year 2024. The work was planned jointly with PROAD, respecting its ethical and operational standards and procedures, in addition to ensuring confidentiality of information.

Concerning the rigor and systematization of the participant observation methodology, Lüdke and André (1986, p. 25) state that:

> for it to become a valid and reliable instrument of scientific investigation, observation must first and foremost be controlled and systematic. This implies the existence of careful planning of the work and rigorous preparation of the observer.

According to Bechker (1972), helps to clarify issues such as discreet data collection and the production of information that may be applied on a large scale, being comparable, if necessary, with other cases. Such observations by Bechker (1972) align with the objectives of this study in the use of participant observation, since, through this immersion, it was possible to analyze the strategic actions of the last three years—2022, 2023, and 2024—at PROAD/IFNMG.

The methodological timeline comprised five stages:

Documentary survey, signing of the Confidentiality Agreement, and presentation of the work team, both researchers and PROAD staff;

Participation of researchers, as listeners, in PROAD's strategic meetings and gatherings;

Development of knowledge about the team's aspects: language, communication, slang, and important codes used by the group;

Care with subjective relationships between researcher and participants: taking notes focused on the research problem and theoretical framework to prevent researchers' involvement from exceeding scientific objectives; and

Access to IMEG formulation, documents, spreadsheets, and analyses.

Through Participant Observation, it was possible for the researcher to immerse in the PROAD environment. This significantly contributed to the achievement of results, as it allowed researchers to gain a deeper understanding of the IMEG tool, providing valuable insights and data within the contexts of strategic planning in the public sector. Moreover, it enabled, in alignment with the objective of this study, the collection of information in a more genuine and contextualized manner, thereby promoting a robust qualitative approach to the research.

Results and Conclusions

A pro-rectory is an administrative unit within a university or higher education institution, responsible for coordinating and managing specific activities such as research, extension, undergraduate studies, graduate studies, among others. Each pro-rectory is directed by a pro-rector and has competencies defined in institutional regulations (FONSECA and OLIVEIRA, 2023).

According to IFNMG (2024), the Pro-Rectory of Administration is the executive body that plans, oversees, coordinates, promotes, and monitors planning, administrative, budgetary, financial, and asset management activities and policies. The current organizational structure of PROAD/IFNMG includes the following sectors:

Directorate of Administration (DAI): Department of Procurement and Bidding (DCL), Department of Infrastructure (DINFRA), Coordination of Warehouse, Assets

and Transportation (CAPT), Coordination of Procurement, Contracts, and Agreements (CCCC);

Directorate of Budget Planning (DPO): Coordination of Budget and Finance, Coordination of Budgetary and Financial Execution, Coordination of Accounting.

According to the findings, PROAD/IFNMG's IMEG was created in response to the difficulties and challenges of implementing strategic planning faced by the public sector. Thus, PROAD identified points, both in the internal environment and in the literature, that reflected the systematic challenges of developing Strategic Planning in the public sector. Some of the main issues include:

Resistant Organizational Culture: The public sector often has a deeply rooted organizational culture resistant to change. The introduction of new processes and practices required by strategic planning may encounter resistance among employees.

Lack of Bureaucratic Agility: The inherent bureaucracy of the public sector can slow down the implementation of strategic planning. Slow decision-making, complex procedures, and excessive regulations may hinder agile adaptation to environmental demands.

Budgetary Constraints: Budget restrictions often prevent the proper allocation of resources for implementing strategic planning. This can limit the ability to invest in technologies, staff training, and other initiatives necessary for the effective execution of strategies.

Lack of Training: The absence of adequate training for employees is a common challenge. Understanding the principles and practices of strategic planning often requires specific training, and the lack thereof may result in poor execution.

Political Instability: Frequent changes in political and administrative leadership can impact the continuity and consistency of strategic planning. Priorities and guidelines may shift with each new administration, complicating the implementation of long-term plans.

Lack of Community Involvement: The absence of community and stakeholder participation in developing strategic planning may result in plans that do not fully reflect

the needs and expectations of the served population, and therefore are not integrated into routine administrative actions.

Complexity of Decision-Making Processes: The complexity of decision-making processes in the public sector, often involving various bodies and levels, such as in the democratic school management model, can hinder the swift implementation of strategic decisions.

Challenging Performance Measurement: Establishing clear and measurable metrics to assess the outcome of strategic planning in the public sector may be challenging. The multifaceted nature of objectives may hinder the definition of specific, measurable, and relevant indicators.

Resistance to Transparency: The openness and transparency associated with strategic planning may be unwelcome in some public sector areas. Resistance to disclosing detailed information about goals and results may pose an obstacle in institutions without an institutionalized culture of active transparency.

Overcoming these challenges requires coordinated efforts involving effective leadership, open communication, investment in training, and often the revision of bureaucratic structures, from the perspective of continuous process analysis and improvement. Raising awareness of the importance of strategic planning and its long-term benefits is essential to motivating change and overcoming existing barriers. Based on this problematization, the construction of a tool aimed at facilitating the work of public managers in developing strategic planning was initiated: the IMEG.

According to PROAD, the conception of its strategic actions is fully aligned with the Institutional Development Plan (PDI) of IFNMG. Thus, all strategic frameworks follow IFNMG's strategic references (Mission, Vision, and Values):

Mission: To transform people through professional, public, inclusive, and socially grounded education, contributing to sustainable cultural and socioeconomic development;

Vision: To be a reference in a collaborative environment for training, innovation, and the creation of sustainable solutions, through education, science, and technology, promoting social transformation.

Values: Democracy, Ethics, Transparency, Integrity, Inclusion, Equity, Innovation, and Sustainability.

In this sense, IMEG (Identification and Measurement of Management Strategies), developed from models such as Balanced Scorecard, Porter's Five Forces, Business Model Canvas, Razgaitis' Evaluation and Classification Method, Intangibles Analysis Method (TVT), and SWOT Matrix, is the tool that determines PROAD's policy for defining strategic actions each year of management.

According to PROAD, IMEG has the potential to deliver the following:

Analysis of the previous year, attributing success, failure, or partial success to each defined action;

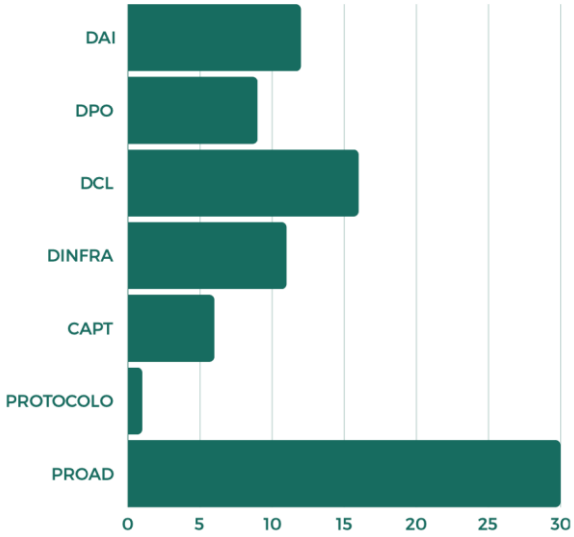
Verification of adherence of the proposed actions to IFNMG's PDI;

Analysis of Strengths and Weaknesses;

Diagnosis of the strategic situation; and Action plan.

Through the use of IMEG 2024, the results will be presented as follows. From the previous year (2023), each strategic action was analyzed, as illustrated in Graph 1 below:

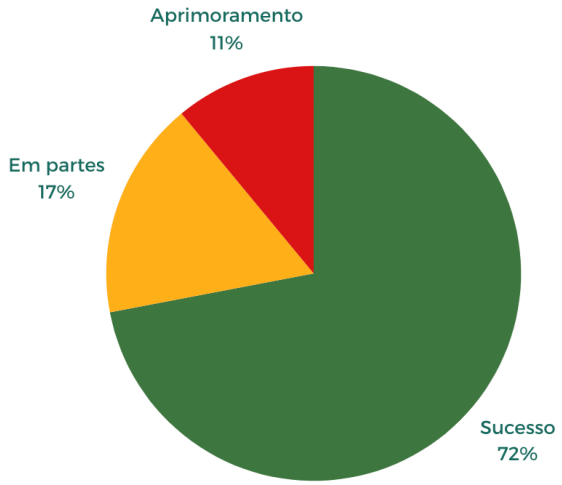
Chart 1: PROAD's strategic actions in 2023



Source: research data (2024).

In 2023, strategic actions were divided among the seven departments, totaling 85 actions. Chart 1 shows that the department with the largest number of actions is PROAD, which encompasses all departments of the Provost's Office. Regarding the success analysis of each action, Chart 2 presents the results:

Chart 2: Analysis of each action



Source: research data (2024).

PROAD, for 2023, achieved 72% of its strategic actions successfully. These actions align 93% with the PDI/IFNMG goals and objectives, representing a strong alignment with PROAD's proposed objectives and the IFNMG Strategic Plan.

Analysis of Strengths and Weaknesses:

IMEG conducts strategic analysis using a classification method adapted to the SWOT matrix. It combines Strengths and Opportunities and classifies them as POTENTIALITIES, while combining Threats and Weaknesses classifies them as WEAKNESSES. Interpretation: POTENTIALITIES: the higher the score, the better. WEAKNESSES: the lower the score, the better.

In practice, each strategy defined for 2024 undergoes analysis by PROAD managers. In this analysis, each action is classified as either a Potential or a Weakness, followed by a score. Scores for each action range from 0 to 100% and are graded from A to D.

A - Above 80% - Strengths are MUCH greater than Weaknesses

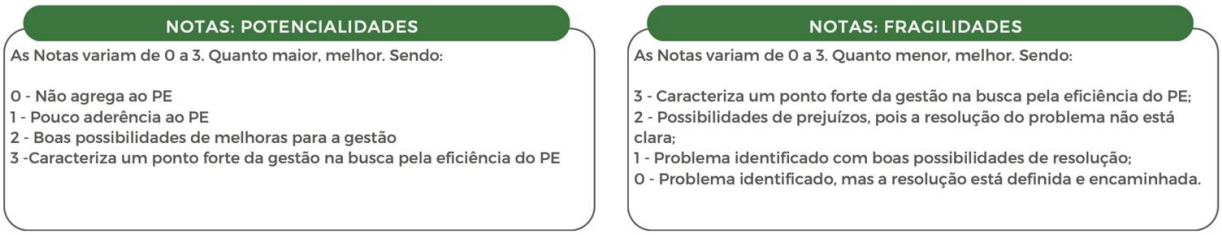
B - Between 61% and 79.99% - Strengths are greater than Weaknesses

C - Between 40.01% and 60.99% - Strengths are equal to Weaknesses

D - Up to 40% - Strengths are less than Weaknesses

The scores are explained in Figure 1 below.

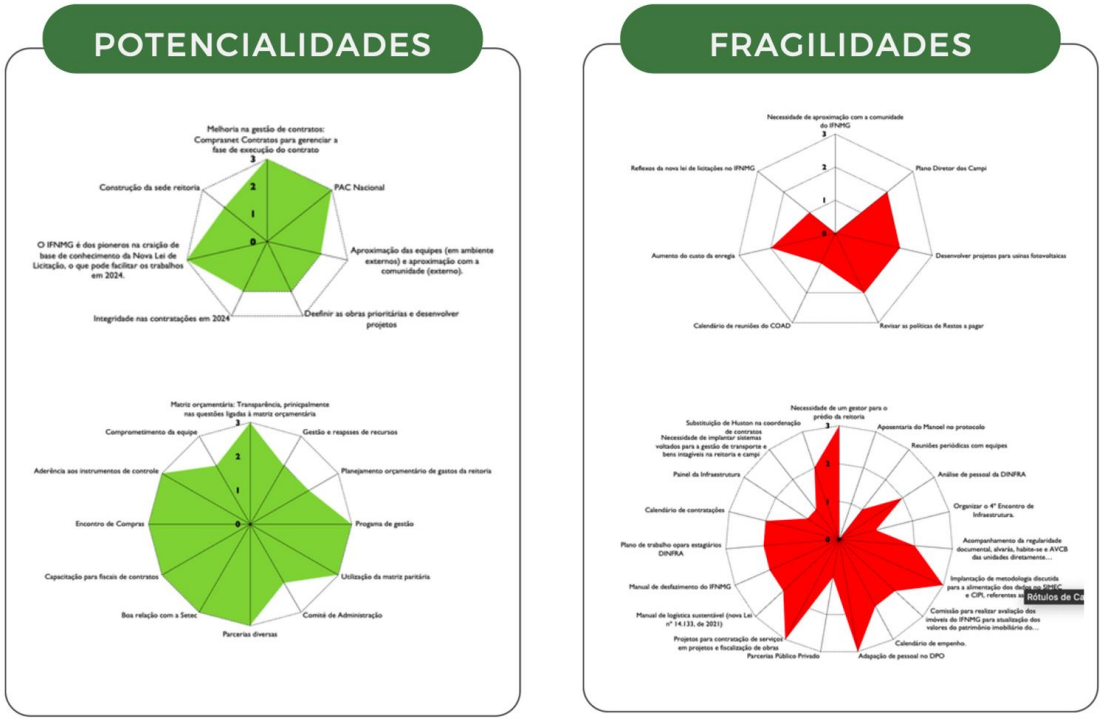
Figure 1: Criteria for assigning scores to actions



Source: The research (2024).

Figure 2 presents the scores for each action, forming a web graph. For Strengths, the closer to the edge, the better. For Weaknesses, the closer to the center, the better.

Figure 2: Scores of actions defined for 2024



Source: The research (2024).

Proad's Global Rating for 2024 was 85% for Strengths, classified as A, and 55% for Weaknesses, classified as B. It can be seen that the greater the number of actions with Strengths, the better, and vice versa for actions classified as Weaknesses. It is important to note that, according to the confidentiality agreement between the researchers and IFMG, strategic actions will not be highlighted; the analyses will be conducted globally, without specifying any strategic action. Therefore, Table 1 presents a summary of the scores for each analysis criterion.

Table 2: Summary of Scores

Rating Global		**85%**	**55%**
Força	*89%*	**a**	**b**
Oportunidade	*81%*		
Ameaça	*48%*		
Fraqueza	*61%*		

Source: The research (2024).

With this information in hand, IMEG provides the following diagnosis, Table 3.

Table 3: Analysis of PROAD by IMEG

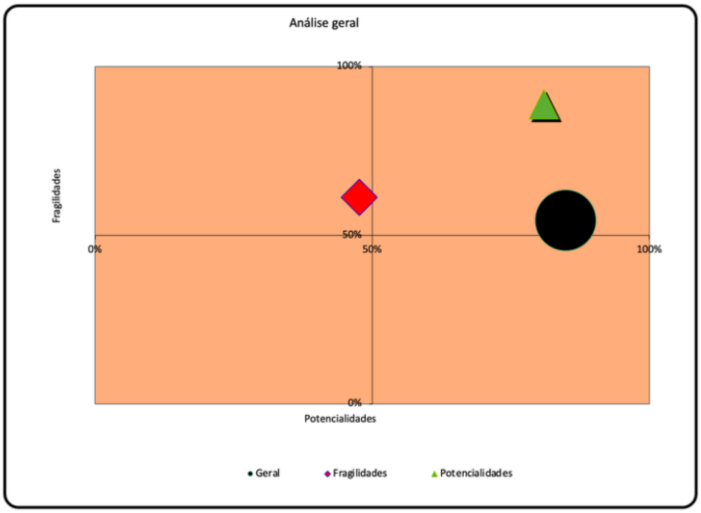
Result of Potentialities	A
Result of Weaknesses	B

Overall Result	AB
Diagnosis	Strongly rising potential and rising weaknesses
Interpretation	Pay attention to actions that are classified as THREATS and WEAKNESSES, because although STRENGTHS and WEAKNESSES are solid, proposals are necessary to resolve the difficulties highlighted in the Weaknesses.

Source: The research (2024).

According to the analyses, IMEG also provides a graph to indicate the situation of PROAD for the 2024 strategies, presented in Graph 3, a general diagnosis of Proad by IMEG.

Chart 3: Final Diagnosis – IMEG PROAD



Source: The research (2024).

On the X-axis are the POTENTIALITIES and on the Y-axis are the WEAKNESSES, thus forming four quadrants. The higher the POTENTIALITIES score and the lower the POTENTIALITIES score, the better the strategic diagnosis.

According to PROAD/IFNMG, IMEG is an instrument capable of evaluating performance and efficiency indicators in different areas of public administration and offering a comprehensive view of organizational functioning. In the context of the Provost's Office of Administration, IMEG was applied to analyze the effectiveness of administrative processes, resource allocation, and the optimization of internal practices.

By aligning IMEG with Strategic Planning, the Provost's Office of Administration can establish clear and measurable goals that correspond to the institution's strategic objectives. For example, define indicators related to efficiency in financial resource management, response time in administrative processes, and continuous improvement of internal practices. This integration allows for a systematic performance assessment, identifying areas for improvement and providing concrete data to support strategic decisions—known as data-driven management.

Control, as a key component, acts as a feedback mechanism in the Strategic Planning cycle. By incorporating continuous monitoring systems, the Vice-Rector's Office of Administration can identify deviations and quickly adjust its strategies. In this context, IMEG functions as a thermometer that provides accurate indicators of the progress and effectiveness of implemented actions.

In summary, the IFNMG Provost's Office of Administration faces the challenge of demonstrating the effectiveness of IMEG in its Strategic Planning. Efficient integration between people, processes, planning, and control is key to achieving this goal. By aligning strategic goals with measurable indicators and fostering a participatory organizational culture, the Provost's Office can not only demonstrate the effectiveness of IMEG but also strengthen its responsiveness to the constantly evolving challenges of public management in the educational sector.

The importance of alignment among people cannot be underestimated either. The Provost's Office of Administration must foster an organizational culture that values the active participation of employees in the strategic planning process. This includes training, effective communication, and recognition of the importance of each team member in achieving institutional objectives. An engaged and aligned team is essential for the successful implementation of Strategic Planning and the effective demonstration of IMEG.

Therefore, IMEG analysis emerges as a valuable tool for PROAD, enabling the identification of critical and success factors. This approach not only provides managers with in-depth insight into the organizational environment but also facilitates decision-making. Implementing this methodology not only provides essential insights for improving existing practices, but also serves as a solid guide for effectively developing

strategic actions, highlighting its crucial role in IFNMG's continuous improvement and operational excellence.

Final Considerations

Therefore, considering IMEG's alignment with Kotler's (1999) strategic thinking and its congruence with the stages of strategic business planning, it becomes clear that this methodology transcends the mere creation of spreadsheets and tables, emerging as a comprehensive approach to decision-making aligned with IFNMG's mission and organizational objectives.

IMEG's approach, incorporating concepts from renowned strategic models such as Kaplan and Norton (1990), Porter (1990), and Osterwalder and Pigneur (2011), stands out not only as a set of guidelines but also as an innovative methodology. Its role in consolidating strategic management, as suggested by Kaplan and Norton (1990), proves crucial by offering a management system for monitoring, evaluating, and constantly providing feedback between planned and executed objectives.

Emerging from a real-world problem-solving approach, IMEG stands out as a practical and applicable tool, identifying bottlenecks in public management and providing effective solutions for developing Strategic Planning. Although restricted to a specific institution, this research not only sheds light on the importance of IMEG, but also serves as a catalyst for discussion, dissemination, and encouragement of future work.

Despite the limitations associated with its restricted scope, IMEG's fundamental role in PROAD/IFNMG is undeniably promising, as it not only contributes to the efficient functioning of the institution through a systemic vision, but also generates results that enrich data-driven decision-making and enhance the services offered by IFNMG, thus consolidating its positive and relevant impact in the organizational strategic context.

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