

Measure to Better Manage: Proposal of Performance Indicators

Diogo Silva Hoffmann¹, Raimundo Nonato Lima Filho²

¹Mestre em Administração Pública, Instituto Nacional do Seguro Social, 55 (87) 988552777

²Doutor em Administração, Universidade Federal do Vale do São Francisco (UNIVASF), 55 (74) 988091231

Abstract— *The construction of performance indicators is an activity that must be performed by public and private administrators. In the public sector, the use of indicators facilitates accountability. This article, the result of a master's dissertation, presents operational performance indicators of the Operational Section of People Management (OSPM) of the Executive Board of INSS in Petrolina. The study is justified by contributing to the professionalization of management in public administration. The construction of the indicators was based on the model synthesized by Palvarini (2010), resulting in the formulation of four performance metrics: Medium Requirements Resolution Time; Medium Time to Distribute Requirements; Percentage of Concession and Rejection of Requirements; Percentage of outstanding or resolved requirements. As a mechanism for collecting data and calculating indicators, an adjustment was made to the OSPM control worksheet. The indicators developed were approved by the Executive Manager of the INSS in Petrolina, institutionalizing their use at the local level. The limiting factors of the present research, the fact that the proposed indicators are approved only for local use, stands out. Future studies can assess the use of indicators as well as the system that is in development to replace the control worksheet*

Keywords— *Public administration; Performance indicators; Accountability; INSS; Management Reform.*

I. INTRODUCTION

The act of managing an organization, either public or private, involves the practice of various functions such as planning, organization, managing, and control, in a way that efforts undertaken can be directed to the achievement of business' goals. Such administrative functions complement one another, and in some organizational activities it is possible to realize the intersection between them. In the current social context in which the participation of society on the decisions of Public Administration is increasingly demanded and managers of private organizations are charged for damaging actions to the community, societal control of organizations is facilitated by performance measurement.

Organizations stand in a turbulent external environment where they should present quick answers to the constantly-changing scenarios. This fact aroused interest from public and private administrators, since they sustain decision making (CARDOSO et al., 2015). Hoffmann and Lima Filho (2017) indicate double advantage for public organizations to use performance indicators, since it helps the manager on the decision-making process. It also gives conditions pointed to the conception that society should measure effectively the obtained results by public administrators.

Around the world, there are several examples of the use of performance indicators on the public sector. The Ministry of Municipal Affairs and Housing of Canada established the obligation for Canadian municipalities to report thirty-five performance indicators, distributed among nine service areas (Chan, 2004). The author indicates that the central body of accounting of the USA government also adopted provisions to encourage American municipalities to report their financial and non-financial performance. This will allow customers of public services to evaluate the efficiency and effectiveness of the services rendered. Pollit (2005) researched the use of performance indicators in countries of European Union, such as Finland, Netherlands, and Sweden. He showed that many government agencies, like meteorological services, public safety, environment, and social security, applied performance measurement instruments.

In Brazil, examples of performance indicator usage are found on the three levels of government (Federal Government, States, and Municipalities) and on three branches of government (Executive, Legislative, and Judiciary). In this sense, Bitencourt (2010) approaches the example of Municipal Chamber of Criciúma, in Santa Catarina (SC), that used a model based on Balanced Scorecard to build performance indicators. Through the correlation between transparency, organizational strategy, and strategic objectives, the above-mentioned municipality established indicators such as the percentage of families in extreme poverty and the percentage of tax incentive/exemption.

Regarding the Federal Executive Branch, the National Social Security Institute (INSS) is an example of autarchy that uses performance indicators. The INSS is structured in four hierarchical levels: central administration, superintendence, executive-managements, and agencies of social security. It has indicators that measure aspects related to target activity and support activities of the Institute. Aspects such as mean duration of processing and mean time to service are measured, both analyzed in agencies. It becomes an important tool to support the decision, as well as to allow the comparison of performance among various units of the referred autarchy.

One of the hierarchical units of INSS is the Executive Management (EM), which is linked to Social Security Agencies (APS), where the target activity of the Institute occurs. Many other departments are subordinated to the EM as well, being responsible for managing the support activities of the agency; among them is the Operational Section of People Management (OSPM), responsible for administering the payroll, training, and health and quality of life in the workplace.

OSPMs have performance indicators that, together with the indicators of other departments of the EM, compose the group of performance measures of Managements. However, such indicators do not approach operational aspects of the OSPMs like quantity of analyzed processes in a given period, quantity of processes pending analysis, or the mean time of analysis of those processes. Thus, managers of OSPMs face the absence of performance measures to assist them in decision making and labor organization in the department.

This article, which results from a research to the preparation of a Master's dissertation, pursued to present a proposal of performance indicators to the Operational Section of People Management (OSPM) of Executive-management of INSS in Petrolina. The research is justified by the contribution to professionalize the Public Administration, helping to fulfill the constitutional principle of efficiency, inserted by the Constitutional Amendment 19 (BRASIL, 1998). It promotes the use of management tools arising from private administration in the public sector.

II. THEORETICAL REVIEW

2.1 Schools of Management: from scientific management to strategic management

To many authors, Management as a science arose from the work *Principles of Scientific Management*, written by the American engineer Frederick Winslow Taylor in 1911. For Santos et al. (2017), the work of Taylor is a landmark in management studies, establishing precepts that are still used today.

Besides Taylor, the engineer Henri Fayol is considered one of the classical theorists of management. Ribeiro et al. (2015) point out that Fayol focused his studies on the organizational efficiency with a managerial view of administration, less focused on specific tasks.

The bureaucratic theory, also known as rational-legal theory, was proposed by the German theorist Max Weber, and united assumptions from the proposals of Taylor and Fayol. He directed his studies to the proposition of a rational and efficient organization. Weber (2015) points out that modern bureaucracy has, among other components: legal system formed by laws and regulations, limitation of power and authority by this legal system, and organized hierarchical structures, with positions of authority and control well outlined.

On the other hand, the school of human relations is based on the individual and the motivations that lead them to have, or not, good performance in the company. It refers to the Experiment of Hawthorne, conducted by the Sociologist Elton Mayo. Wickstrom and Bendix (2000) quoted that this experiment indicated that employees change their behavior when observed, affecting variables such as productivity. An alteration of performance unrelated to issues of hygiene at work or financial rewards was noted in the studied group.

Based on assumptions of bureaucratic theory of Weber and school of human relations, the structural approach that pursues to reconcile divergent points of both mentioned theories arises. To De Souza et al. (2016), the structuralist theory represents a development of the classical school, with a proximity to the ideas of the school of human relations.

Using as source the behavioral sciences, the behavioral management theory focuses more in the organizational dynamic and less on its structure, which is the focus of the bureaucratic approach. Matos and Pires (2006) pointed out that the behavioral theory expands the debate on employee motivation, following studies like Maslow's (hierarchy of needs) and Herzberg's (two-factor theory: hygiene and organizational).

The concept of the organic organizational model is appropriate to unstable environments and is subjected to constant changes. It is presented by contingency theory of management. Albuquerque et al. (2009) exemplify an appliance of contingency approach in the people management area of an organization: the way the company will manage its employees will depend on factors such as environment, organizational culture, and strategy.

One of the most modern trends of management is strategic. Mintzberg and Quinn (1991) quoted that the word strategy can assume various meanings, depending on the context in which is used. Camargos and Dias

(2010) pointed out that the concept of strategy has been broadly and unrestrictedly used in the field of Management. It could mean a course of action that the organization opts to adopt, or the manner in which this organization positions itself in a given environment.

In a more specific way, strategy can also be defined as “an integrated and coordinated group of commitments and actions defined to explore essential competences and obtain competitive advantage” (HITT et al., 2007, p.04).

2.2 Strategic Planning

Kotler (2000) defines strategic planning as a methodology used by managers to direct the organizational actions and increase interaction with the environment. To Albano and Garcia (2015), although there is no model of strategic planning that guarantees success of a chosen strategy it is a process that allows the reduction of uncertainties regarding the course of action eventually chosen.

Therefore, it can be noticed that strategic planning should consider both internal and external aspects of the organization. Fernandes et al. (2015) indicated that one of the tools that help on the evaluation of such aspects is the SWOT analysis, which identifies strengths and weaknesses (internal), and opportunities and threats (external).

One of the guiding elements of the strategic planning process is the definition of a mission. To Scorsolini-Comin (2012), the mission is the reason of existence of an organization; it is the main line of action and it gives coherence to organizational actions. Hitt et al. (2007) understand that the mission will indicate the business areas that the company intends to enter, indicating which customers will be served by the organization as well.

The usage of strategic planning is not limited to big private organizations; it can also be applied in small companies and public organizations. Teixeira et al. (2015) point out that this process helps small and medium companies, since it can be implemented with low investments. Poister (2010) indicates that public management should focus on a model of planning that aims at reaching the goals proposed in the strategic plan.

Strategic plans involve the measure of performance as well. When studying the development of performance management mechanisms in a local government in Australia, Kloot and Martin (2000) pointed to the use of four dimensions proposed by the tool *Balanced Scorecard* - BSC to measure the performance of the local government. Steurer and Martinuzzi (2005) researched planning models in the environmental area in Europe. They highlighted the good practices and key

features of such processes, focusing on aspects related to the participation and horizontal politic integration.

In Brazil, there are examples of strategic planning usage in the public sector as well. De Araújo e Silva and Gonçalves (2011) investigated strategic plans of some courts of auditors of States and municipalities, and interviewed employees responsible for the plans in those courts. The authors identified that in 14 of the 19 researched courts, the strategic planning involves the usage of performance indicators.

2.3 Performance indicators

The use of performance indicators is widespread in public organizations. The indicators have been used as a tool to support the decision making of public administrators as well, being also used as an instrument of measurement of the reach of objectives and goals proposed on the strategic planning. Speklé and Verbeeten (2014) reinforce the importance of using performance metrics, observing the fact that its effectiveness depends on the way in which it is used by managers.

Boland and Fowler (2000) recall that performance indicators on the public sector should measure three characteristics: economy, efficiency, and effectiveness. To the authors, performance indicators can be used as a motivational tool as well, rewarding the highest performance.

Performance indicators have also been used to measure environmental aspects of organizations. Granero et al (2018) point out that these metrics can measure aspects related to four areas of the companies: product, process, organization, and marketing. For instance, operational indicators of a public organization would be related to its working process.

The usage of environmental indicators allows to classify companies according to the performance in the area. Pilouk & Koottatep (2017) indicated that in Thailand the industrial organizations that aim to reach the status of eco-industrial parks measure their performance through 43 indicators. The authors point out that the metrics for measurement are the main factor of success for the referred parks.

In Brazil, the subject has also aroused interest in public administrators. The Ministry of Planning, through the National Program of Public Management and Debureaucratization (GESPUBLICA), created a guide to the development of performance indicators in Public Administration.

It is a model that was built using the state-of-the-art management literature on performance management (PALVARINI, 2010). Palvarani (2010) synthesized it observing that performance can be defined as the efforts undertaken towards reaching certain results.

Palvarini (2010) presents ten steps to build a performance indicator, namely: identification of dimension, sub-dimension and measurement goals; establishing indicators; preliminary validation of indicators with stakeholders; building formulas; establishing goals and notes; defining the responsible people; generating a system of data collection; final weighting and validation of indicators with stakeholders; performance measurement; analysis and interpretation of indicators; performance communication.

2.4 Balanced Scorecard

BSC is a performance measurement method widely spread among organizations. To Kaplan and Norton (2004), who developed BSC, it consists in a model of strategic management for integration between mission and strategy of an organization. The result of such integration is the translation of both into tangible goals and measures, which allow the global evaluation of the performance of an organization.

The authors indicate that this expansion of performance measurement to beyond financial aspects was one of the reasons for accepting and using the BSC model by organizations, including governmental organizations. Kaplan and Norton (2001) propose a performance analysis model based on four classical perspectives: financial, customers, internal processes, and learning and growth. The researchers indicate that the perspectives are not immutable, and an adaptation that takes into account the context in which the organization is inserted may occur.

The implementation of a management tool such as BSC in a public organization face challenges. Galas and Forte (2008) identified some of those challenges. Through an exploratory and descriptive research in the form of a case study, the authors pointed out challenges to the implementation of a performance measurement model based on BSC in Brazilian Agricultural Research Corporation (EMBRAPA), pointing out as difficulties to the implementation: organizational culture, the involvement of immediate supervisors, and the inadequate profile of the team responsible for implementing the model.

Still concerning the challenges around the use of BSC in public organizations, it is important to stress that many public managers still do not use the tool. Northcott and Ma'amora Taulapapa (2012) researched the use of BSC in the scope of local governments in New Zealand. Through the application of questionnaires to managers of municipal and district councils, the researchers identified that a large part of the councils researched did not use the tool.

2.5 National Social Security Institute - INSS

The National Social Security Institute - INSS is a federal autarchy instituted by Decree 99.350 on July 27, 1990 (Brasil, 1990). Briefly, the hierarchical structure of the Institute is composed of four levels: Central Administration, to which various Boards of Directors of the institute are connected; Regional Superintendence; Executive-Managements; and Social Security Agencies (APS). APS have many indicators capable of measuring their efficiency. Such indicators also allow for comparisons between agencies, allowing eventual benchmarking for the dissemination of good practices.

Within the scope of the competences of Executive-Managements (EM) is found: to propose, to plan, to coordinate, and to perform activities related to people management area, as well as actions related to training and functional development of civil servants of INSS. Such actions are performed in the EM through Operational Sections of People Management (OSPMs).

III. METHODOLOGY

The OSPM of the EM Petrolina/PE was chosen as the place to conduct and develop this research because of accessibility and convenience. In this sense, this work intends to promote organizational improvements in the department, through the development of indicators that will assist operational performance measurement.

Therefore, it is necessary to identify the operational demands of the OSPM. For this research, operational demand is considered the operational responsibilities that the OSPM receives that are related to civil servants linked to it. For methodological characterization purposes, the research is considered a qualitative study (regarding the approach of the problem), documentary research, and bibliographic review (regarding adopted procedures).

It is a qualitative work in which an analysis based on data from a text or document can occur (CRESWELL, 2010). Considering that qualitative approach inquires specific questions of a reality (MINAYO, 2010), such categorization applies to this research because the performance indicators were developed for the OSPM of the Petrolina EM.

Regarding the procedures, this research can be categorized as a documentary and bibliographic research. Sá-Silva et al. (2009) define document as any record capable of being used as information source by observation, reading, reflection, or criticism, pointing out as primary document the ones that did not received any scientific handling.

Prodanov and Freitas (2013) indicate that bibliographic research is elaborated from previous scientific works. Thus, this work used documents to map the operational demands of the OSPM, and used the

bibliography to use and adapt a model to develop indicators.

The necessary data for the survey of operational demands of the OSPM were researched in normative acts related to the people management area of INSS, produced by the autarchy. Normative acts produced in the last 5 years were chosen, aiming to delimit the quantity of data to be analyzed.

With the aforementioned data, the analysis was done by describing the demands in themes or categories (Creswell, 2010), through the technique of content analysis, in which the data are numbered and categorized. Thus, several operational demands of the OSPM were identified as normative acts of INSS. After having a list

of operational demands, a categorization was made, as shown on the chapter of data analysis.

As the data were delimited, collected (INSS Intranet), and analyzed (analysis of content through categorization of demands), the next stage was the proposition of performance indicators to measure the operational demands of the department. The model used to develop indicators was an adaptation of the one proposed by Palvarini (2010). It is important to highlight that the referred work served as base to the development of indicators, being adapted according to the particular situation observed at the OSPM, in order to better reflect the specific aspects of the research. Figure 01 shows the model used in this work.

Fig.1: Stages to the development of indicators of the OSPM.

Steps	Description
1° Definition of indicator	Establish what would be measured, justifying its importance to the department and describing it
2° Characterization of indicator	The indicator is characterized according to its dimension and sub-dimension, adopting the concepts proposed by Palvarini (2010)
3° Building a formula	Definition of mathematical formulas that will allow the calculation of the indicator
4° Definition of responsible	Definition of who will be responsible for registration of data and the frequency of evaluation of the indicator
5° Creation of the Data Collection System	The design of the system that will be used for both data collection and for the application of the mathematical formula to calculate the indicator
6° Indicator approval	Submittal of the indicator to the responsible authority (in the scope of this work it is the Executive-Manager of INSS in Petrolina) to approve the indicator

Source: Own Elaboration (2018)

IV. RESULTS AND DISCUSSION

In order to identify the operational demands of the OSPM, it was necessary to search the referred normative acts. The data were researched in the internal network of INSS through the tool of rule search. To locate the normative that address the operational demands of the OSPM, the search tool was used through the insertion of filters such as the issuing body and the date of issuance of the rule. It can be highlighted on the scope of regimental competence of the OSPM the “execution administrative activities of people management”, which should be carried out observing the guidelines of the People Management Board of Directors (DGP) of INSS (Brasil, 2017b). Besides the DGP, the presidency of INSS can also issue rules in this regard, even though in smaller quantity.

Three thousand eight hundred and ten normative acts that fulfilled the established criteria were located. It is a high number, and among the results, there are acts such as decision decree (in which the DGP decides some demand related to its area of competence) and ordinances (nominating and exonerating civil servants, for instance). Such acts, among others, do not have orientations

regarding operational demands of the OSPM; for this reason, it was necessary to insert additional filters on the search tool for rules.

To accomplish this, the filter “type of rule” was added, selecting the Circular Memorandum, which is the usual instrument of orientation and normatization between the boards of Directors and Departments subordinated to it. Thus, 247 acts issued by the DGP that meet the search criteria were located. In order to identify if a normative act was related or not to an operational demand, the description of the rule was analyzed, allowing to check if the act met or not the criteria to be included among the analyzed data. The analysis of circular memorandums indicates that 222 (89.88%) did not approach operational activities of the OSPM. It addresses matters such as setting workday, orientations to access computerized systems of INSS, and communication flows, among other themes that are not the focus of this research. Only 25 (10.12%) of the referred acts address operational demands of the OSPM.

As indicated above, the presidency of INSS also issue acts related to the OSPM. Such normatization occurs through resolutions or normative instructions. The

first ones, when related to operational demands of several areas of INSS, approve procedure manuals indicating the way to perform certain activities. Normative instructions have the characteristic of regulating the access to a specific right.

Regarding the resolutions issued by the presidency of INSS, the search tool returned with the result of 178 normative acts that met the criteria of selection. Of those

acts, only two (1.12%) are related to people management area, according to the description of the rule.

Regarding normative instructions, which are also a responsibility of the presidency of the Institute, 18 were published during the period referred on this chapter. Among which, 4 (22.22%) talk about operational demands of the OSPM. Table 01 synthesizes the information about the quantity of normative acts located.

Table.1: Normative Acts Located on the internal network of INSS

Type of Normative Act	Issuer	Quantity of Normative Acts Located	Act that contain operational demands	Percentage
Circular Memorandum Resolution	Board of Directors of People Management Presidency of INSS	247	25	10.12%
Normative Instruction	Presidency of INSS	18	4	22.22%

Source: Own Elaboration (2018)

With the referred normative acts, the operational demands of the OSPM were identified, which are object for requirements from civil servants of the department. Thirty-eight operational demands were identified.

When several normative acts that contained provisions regarding the people management area were verified, it became possible to identify that demands from the OSPM sometimes address issues related to financial matters and sometimes related to register and functional life of civil servants. On the other hand, it was observed in the analysis of normative acts that some requirements are resolved by exclusive action of the OSPM, while others depend on the action of other departments or hierarchical instances of INSS.

Thus, it can be verified, among the demands, the possibility of categorization by type and by way of processing. The first classification contain the financial requirements that involve payment or charging of monetary values from the civil servant and the cadastral requirements, which address modifications and registers that do not imply payment of financial values from the civil servants.

The categorization by processing involves resolute demands when there is no need for another department's resolution, besides OSPM's. It happens through exclusive action of people management area. It also involves dependent demands, when there is a need for manifestation of another department. The proposed categorization is shown at Table 02.

Table.2: Categorization of Operational Demands of the OSPM.

Demands	Type	Processing
Concession of Stay-On Bonus	Financial	Resolutive
Concession of External Service Execution Pay	Financial	Resolutive
Concession of Retirement	Financial	Resolutive
Concession of Funeral Grants	Financial	Resolutive
Concession of Maternity Bonus	Financial	Resolutive
Concession of Preschool Grant	Financial	Resolutive
Concession of Transportation Assistance	Financial	Resolutive
Concession of Registration of Contribution Time	Cadastral	Resolutive
Concession of Bonus for Responsibility of Course or Contest	Financial	Resolutive
Concession of Special Schedule for Students	Cadastral	Resolutive
Concession of Paid Maternity Leave	Cadastral	Resolutive
Concession of Medical Leave	Cadastral	Dependent
Concession of Training Leave	Cadastral	Dependent
Concession of Leave to Participate on External	Cadastral	Dependent

Course		
Concession of Leave to Participate on Graduate Program	Cadastral	Dependent
Concession of Paternity Leave	Cadastral	Resolutive
Concession of Leave due to Death of Person of the Family	Cadastral	Resolutive
Concession of Bonus Leave for Attendance	Cadastral	Resolutive
Concession of Civil Pension	Financial	Resolutive
Conversion of Unhealthy Time	Cadastral	Resolutive
Compliance of Judicial Decision	Financial or Cadastral	Dependent
To swear in New Civil Servants	Cadastral	Resolutive
Designation and Dismissal of Function	Financial	Resolutive
Issue Certificate of Contribution Time	Cadastral	Resolutive
Instruction of Process of Probationary Phase	Cadastral	Dependent
Payment of Living Allowance	Financial	Dependent
Payment of Additional Bonus for Health	Financial	Resolutive
Payment for Exercise Replacement of Management	Financial	Resolutive
Promoting Administrative Charge to Refund the Treasury	Financial	Resolutive
Conduct Alteration of Bank Account	Cadastral	Resolutive
Carry Out Inclusion of Dependent	Cadastral	Resolutive
Conduct the Vacancy of Public Office (Exoneration and Discharge)	Cadastral	Resolutive
Perform Calculations Solicited by Justice	Cadastral	Resolutive
Register Acts of Provision of Vacancy of Public Office	Cadastral	Resolutive
Requirement of Short Time Working	Cadastral	Dependent
Requirement of Removal	Cadastral	Dependent
Answer to Audit of Control Bodies	Cadastral	Resolutive
Answer to diverse Requirements	Financial or Cadastral	Resolutive or Dependent

Source: Own Elaboration (2018)

The processing category highlights that some requirements do not conclude at the OSPM and depend on the action of other departments of INSS, while others are concluded through exclusive processing in the department. With this criterion, it is possible for the proposed indicators to focus its measurement on the work performed in people management area.

By crossing the two proposed categories it is observed that operational demands of the OSPM can assume four macro classifications: financial/resolutive; financial/dependent; cadastral/resolutive; and cadastral/dependent.

Facing the classifications proposed above, the next stage was the elaboration of performance indicators to the department, using the model presented on the chapter about methodological procedures of this research. Four performance indicators were developed, which will be described in a detailed way below: Mean Time to Resolve Requirements (MTRR); Mean Time to Distribute Requirements (MTDR); Percentage of Concession and

Rejection of Requirements; and Percentage of Pending or Resolved Requirements. Subsequently, the process of developing the indicators, organized according to the operational model of research proposed (steps to development of indicators) is listed. Pending or Resolved. The process of development of indicators will be presented according to the stages described on the methodology of this article.

4.1 Step 1: description of indicators

4.1.1 Mean Time to Resolve Requirements (MTRR)

The indicator Mean Time to Resolve Requirements (MTRR) proposes to measure the average time of resolution of requirements submitted to the OSPM of the Petrolina/PE EM. It is an indicator that gives transparency to the department, allowing civil servants that act on people management area to have the possibility of monitoring if their requirements are being resolved in a reasonable time.

It is an indicator of efficiency, considering that the lower its value, the higher the performance of the OSPM, with a quickly resolution of requirements submitted to its evaluation. On the other hand, if the value is high, it indicates the possibility of poor performance by the department. Eventually, this can lead to the intervention of the manager of the department in order to improve the index.

4.1.2 Mean Time to Distribute Requirements (MTDR)

There are many channels in which requirements are submitted to evaluation of the OSPM; in this regard, it is necessary for the manager of the department to be continuously careful with those channels, and promote the correct distribution of demands among the civil servants of the department.

Therefore, the Mean Time to Distribute Requirements (MTDR) proposes to measure the average time that the OSPM takes to distribute a demand to a civil servant, seeking to quantify part of the work of the manager of department. A high result in this indicator can show an absence of organization of work, since managing and distribution of demands should be one of the main responsibilities of the manager of the OSPM.

It is an indicator that proposes to measure the performance of the department manager; it becomes an instrument for the higher instances of people management area to size the efficiency of their work.

4.1.3 Percentage of Concession and Rejection of Requirements

Rapid execution of a job does not necessarily mean excellence. It is not enough to measure the time spent resolving a demand; it is also extremely important to measure the outcome. Thus, the indicator Percentage of Concession and Rejection of Requirements was developed.

A requirement is conceded when the claim of the civil servant with the OSPM is granted by the department or competent instance (in case of dependent requirements). Contrarily, the demand is rejected when the department or instance regimentally competent gives a denial decision.

The indicator allows the manager of unit or department to visualize the percentage of rejection/concession of requirements submitted to the OSPM. For demands such as the compliance of judicial decisions, in which the OSPM is limited to fulfill what is determined on the process, it is not possible to apply the classification of concession or rejection. Therefore, the indicator does not cover those cases. For those and other requirements that do not fall under the criterion of deferral or rejection, the criterion "not applicable" was created for the referred indicator.

4.1.4 Percentage of Pending or Resolved Requirements

The Percentage of Pending or Resolved Requirements is proposed as a source of management information. It is an indicator that points out a general overview of operational demands of the department. It allows the manager to identify if the productivity of civil servants is as expected.

Pending requirement is one that has not yet been processed or analyzed by the OSPM. A requirement is resolved when the department has concluded its action; it can be closed (resolutive) or forwarded to the competent department to continuation (dependent).

4.2 Step 2: characterization of indicators

In the classification of dimensions proposed by Palvarini (2010), presented on the chapter about methodology, the MTRR is classified as indicator of efficiency. It is inserted in the time sub-dimension which addresses the time gap elapsed between beginning and end of a certain work process. Such classification can also be assigned to the MTDR.

Regarding the indicator Percentage of Concession and Rejection of Requirements, it concerns the metric related to the execution dimension, being related to the accomplishment of processes (PALVARINI, 2010). Indeed, this indicator is correlated with the way demands are performed, and it can indicate compliance or not with the required standards of the legislation in force. The indicator Percentage of Pending or Resolved Requirements also falls within the execution dimension.

In the classification proposed by Palvarini (2010), the indicators referred on the last paragraph cannot be framed in any sub-dimension. Considering that the model of Palvarini was adapted to the reality of the OSPM, to fill this gap, a management sub-dimension was created in the execution dimension. The sub-dimension points out that the indicator proposes to provide a general overview of operational demands of a department serving as source of management information.

4.3 Step 3: Building a formula

To calculate indicators, it was used the control sheet of the OSPM, which was properly adapted for that goal. For the MTRR of the resolutive demands, the formula AVERAGEIFS was used; it calculates the average of a range of cells according to a certain criterion. The cells that had as result the difference in days between the content of column "Date of Conclusion" and column "Date of Receiving" in the OSPM were selected. With the application of the formula, the mean time to resolve the resolutive demands can be found.

For the MTRR of dependent demands, the indicator is calculated from the average of differences between the dates indicated on column "Date of

Forwarding” by the OSPM and column “Date of Receiving” the demand. The formula used for calculate the referred indicator was also AVERAGEIFS, as explained on the above paragraphs.

To calculate the MTDR, it was necessary to measure the average time that the SOGP takes to distribute the demands to civil servants. For this purpose, the average of the results found when diminished the cells of “Date of Distribution” from the column “Date of Receiving in the OSPM” was used.

In turn, the calculation of percentage of concession and rejection of requirements was done according to the formula COUNTIF, which, in a certain range of cells, is able to count those that meet the given criterion. Therefore, the quantity of requirements labeled “Not Applicable”, “Granted”, and “Rejected” is counted and later divided by the total of requirements that already have the situation box filled. By dividing the results achieved by the total quantity of requirements with the situation box filled, the results susceptible to measurement by the indicator are obtained.

Lastly, the percentage of pending and resolved requirements was calculated through a combination of formulas. COUNTIF counted the quantity of requirements received, and the formula COUNTA was responsible for indicating the quantity of concluded requirements among them. The result of the division between quantity of received demands and the concluded ones provide the percentage of conclusion and pending demands.

4.4 Step 4: Definition of responsible

Palvarini (2010) points out the importance of establishing who will be responsible to verify the indicators. It can be noticed that, in the OSPM, the managers have an essential role in the distribution of demands and the insertion of data in the control sheet as well as in the work organization. Therefore, it was defined that the manager of the department or regimental substitute is responsible to verify the indicator. It is possible to appoint a specific civil servant for this activity, according to the criterion of the OSPM’s management.

4.5 Step 5: Creation of the Data Collection System

As indicated in the steps above, the control sheet of the OSPM was adapted to be the data collection system, since it stores the necessary information to calculate the proposed indicators. Thus, the chosen system to data collection and to calculate the indicators was the control sheet of the department, properly adapted to the goals.

At the same time, the development of a system via web platform was requested to the informatics department

of Logistics Department of the Executive Management of INSS in order to control the reception of operational demands of the OSPM. This system will allow the calculation of proposed indicators in this work, in a way that, after its conclusion, it will replace the control sheet of the department as the location for data collection.

4.6 Step 6: Indicator Approval

According to the internal rules of procedure of INSS, it is the responsibility of Executive Managements to perform activities of administration and People Management in its jurisdiction (BRASIL, 2017b). Besides, the EM is the higher unit to which the OSPM is subordinated hierarchically.

Thus, the indicators developed here were submitted to evaluation by the Executive Manager of INSS in Petrolina/PE, through a document named “Performance Indicator Proposal to the OSPM of the Petrolina/PE EM”. After proper evaluation, the authority mentioned on this paragraph approved the referred indicators by publication of the Ordinance 22/INSS/EM PTN, of June 29, 2018 in a local service bulletin.

V. CONCLUSIONS AND FUTURE RESEARCH

Although Brazilian Public Administration is still far behind the modernization and efficiency levels necessary for rendering public services with excellence, its evolution on the last decades is notorious. This article, which resulted from a Master’s dissertation, proposed to develop operational performance indicators to the Operational Department of People Management of the Executive-Management of the INSS in Petrolina.

To reach the aims of the research, it was necessary to map operational demands of the OSPM according to the analysis of normative acts of INSS that had provisions regarding people management area. Therefore, a documentary research of the rules quoted above was carried out, as well as its analysis. It was noticed that the absence of compilation of the several responsibilities of the department can be an obstacle to managing it, and the identification has the potential of promoting management improvements to the OSPM.

With the mapping, the 38 demands were categorized. This step preceded the development of performance metrics and allowed them to consider the peculiarities of each group. The data analysis allowed categorizing demands by type (cadastral or financial) e by processing (resolutive or dependent). In this context the categorization resulted in four macro classifications: resolutive financial, cadastral financial, resolutive cadastral, and dependent cadastral, thus achieving another of the specific goals.

After the described procedures, the development of four operational performance indicators to the OSPM was

conducted: Mean Time to Resolve Requirements (MTRR), which measures the average time that the OSPM takes to solve requirements that are under its responsibility; Mean Time to Distribute Requirements (MTDR), responsible for measuring the average time that the manager of the OSPM takes to distribute demands to civil servants of the department; Percentage of Concession and Rejection of Processes; Management Index, which allows the identification of eventual overflows in concession or rejection of requirements; and Percentage of Pending or Resolved Requirements, also managerial, which presents a general overview of demands that are responsibility of the department.

In the context of INSS management, it should be noted that the indicators proposed here were sent to the working group that is discussing new indexes to performance measurement inside the autarchy. Through research conducted with civil servants of the Institute, the working group selected a suggestion of each State. In Pernambuco, the suggestion of indicators developed in this work was the one selected.

As a limiting factor of the present research, the fact that the indicators proposed here were approved to be used only at the local level of the Executive Management of INSS in Petrolina is highlighted. Considering the hierarchical structure of INSS, for its use to be institutionalized within the scope of the OSPMs of the various INSS EM in Brazil, the approval by the Boards of Directors of People Management would be necessary.

Another limiting factor was the lack of knowledge of the researcher on the development of computerized systems; so, it was necessary to use the OSPM's control sheet as a tool to collect and measure indicators. Therefore, as pointed out in the data analysis chapter, the IT department of the Logistics Department of the Petrolina EM was required to development a system that allows replacing the department's control sheet.

Further research will be able to evaluate the development of the referred system, as well as, in the case of interdisciplinary research, to collaborate in its development. Thus, such research can promote interdisciplinarity between topics such as Public Administration, management reform, performance indicators, and information technology.

Further studies could also measure the results achieved by the OSPM of the Petrolina EM concerning the developed indicators. In case there is adhesion of such indicators by other OSPMs of the INSS in Brazil, research will be able to compare the results achieved between different departments in Brazil.

REFERENCES

- [1] Albano, C. S., & Garcia, F. T. (2015). O impacto do método e de fatores organizacionais no processo de planejamento estratégico: estudo de caso em uma universidade federal. *Parcerias Estratégicas*, 18(37), 151-172.
- [2] Albuquerque, L. G. D., Leite, N. P., & Silva, L. M. T. D. (2009). Estimulando o debate sobre a gestão estratégica de pessoas.
- [3] Appolinário, F. (2007). Dicionário de metodologia científica: um guia para a produção do conhecimento científico. In *Dicionário de metodologia científica: um guia para a produção do conhecimento científico*.
- [4] Bitencourt, M. F. (2010). Implantação do Balanced Scorecard como Instrumento para Avaliação de Desempenho na Gestão Estratégica dos Municípios: Um estudo de caso na prefeitura municipal de Criciúma. *Seminário de Ciências Sociais Aplicadas*, 2(2)..
- [5] Boland, T., & Fowler, A. (2000). A systems perspective of performance management in public sector organisations. *International Journal of Public Sector Management*, 13(5), 417-446.
- [6] *Decreto nº 99.350, de 27 de junho de 199* (1990). Cria o Instituto Nacional do Seguro Social-INSS define sua estrutura básica eo Quadro Distributivo de Cargos e Funções do Grupo-Direção e Assessoramento Superiores de suas Unidades Centrais e dá outras providências. Diário Oficial da União, Brasília, DF: Congresso Nacional.
- [7] *Emenda Constitucional Nº19, de 04 de Junho de 1998* (1998_). Modifica o regime dispõe sobre princípios e normas da Administração Pública, servidores e agentes políticos, controle de despesas e finanças públicas e custeio de atividades a cargo do Distrito Federal, e da outras providências. Diário Oficial da União, Brasília, DF: Congresso Nacional.
- [8] *Resolução Nº 529/PRES/INSS, de 06 de Abril de 2016*. Aprova o Manual de Consolidação de Normas e Procedimentos de Gestão de Pessoas – Volume I. Brasília, DF: Instituto Nacional do Seguro Social.
- [9] *Resolução Nº 623/PRES/INSS, de 28 de dezembro de 2017* (2017a). Aprova o Plano de Ação do INSS para o exercício de 2018 e estabelece procedimentos. Brasília, DF: Instituto Nacional do Seguro Social.
- [10] *Portaria 414, de 28 de setembro de 2017* (2017b). Aprova na forma dos Anexos I e II desta Portaria, o Regimento Interno do Instituto Nacional do Seguro Social (INSS) e o Quadro de Demonstrativo dos Cargos em Comissão e das Funções de Confiança do

- INSS. Brasília, DF: Instituto Nacional do Seguro Social.
- [11] Camargos, M. A. D., & Dias, A. T. (2010). Estratégia, administração estratégica e estratégia corporativa: uma síntese teórica. *REGE Revista de Gestão*, 10(1).
- [12] CARDOSO, T. L., ENSSLIN, S. R., ENSSLIN, L., Ripoll-Feliu, V. M., & DUTRA, A. (2015). Reflexões para avanço na área de Avaliação e Gestão do Desempenho das Universidades: uma análise da literatura científica. *Anais do Seminários em Administração (XVIII SEMEAD) São Paulo (SP)*, 4.
- [13] Júnior, E. C., & de Aquino, A. C. B. (2011). Indicadores de desempenho em Entidades Fiscalizadoras Superiores: o caso brasileiro. *Contabilidade Vista & Revista*, 22(3), 15-40.
- [14] Creswell, J. W. (2010). Projeto de pesquisa métodos qualitativo, quantitativo e misto. In *Projeto de pesquisa métodos qualitativo, quantitativo e misto*.
- [15] de Araújo Silva, F., & Gonçalves, C. A. (2011). O processo de formulação e implementação de planejamento estratégico em instituições do setor público. *Revista de Administração da UFSM*, 4(3), 458-476.
- [16] de Souza, A. V. D. O., Alano, J., Ganzer, P. P., Dorion, E. C. H., & Olea, P. M. (2016). Teoria estruturalista: uma visão do conflito organizacional. *Revista da micro e pequena empresa*, 10(1), 2-11.
- [17] Fernandes, I. G. M., Figueiredo, H. M., da Costa Junior, H. L., Sanches, S. G., & Brasil, Â. (2015). Planejamento estratégico: análise SWOT. *Revista Conexão Eletrônica das Faculdades Integradas de Três Lagoas, Mato Grosso do Sul*, 8(01).
- [18] Fernandes, D. R. (2004). Uma contribuição sobre a construção de indicadores e sua importância para a gestão empresarial. *Revista da FAE*, 7(1).
- [19] Galas, E. S., & Forte, S. H. A. C. (2008). Fatores que interferem na implantação de um modelo de gestão estratégica baseado no balanced scorecard: estudo de caso em uma instituição pública. *Revista de Administração Mackenzie (Mackenzie Management Review)*, 6(2).
- [20] García-Granero, E. M., Piedra-Muñoz, L., & Galdeano-Gómez, E. (2018). Eco-innovation measurement: A review of firm performance indicators. *Journal of Cleaner Production*.
- [21] Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2007). *Administração estratégica*. São Paulo: Pioneira Thomson Learning.
- [22] Hoffmann, D. S., & Lima Filho, R. N. (2017). Reforma gerencial e indicadores de desempenho: uma revisão bibliográfica. *Contribuciones a las Ciencias Sociales*, (2017-05).
- [23] Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part I. *Accounting horizons*, 15(1), 87-104.
- [24] Kaplan, R. S., Kaplan, R. E., Norton, D. P., Norton, D. P., & Davenport, T. H. (2004). *Strategy maps: Converting intangible assets into tangible outcomes*. Harvard Business Press.
- [25] Kloot, L., & Martin, J. (2000). Strategic performance management: A balanced approach to performance management issues in local government. *Management Accounting Research*, 11(2), 231-251.
- [26] Kotler, P. (2000). Administração de marketing.
- [27] Lilian Chan, Y. C. (2004). Performance measurement and adoption of balanced scorecards: a survey of municipal governments in the USA and Canada. *International Journal of Public Sector Management*, 17(3), 204-221.
- [28] Matos, E., & Pires, D. (2006). Teorias administrativas e organização do trabalho: de Taylor aos dias atuais, influências no setor saúde e na enfermagem. *Texto & Contexto-Enfermagem*.
- [29] Minayo, M. C. D. S., & Cavalcante, F. G. (2010). Suicídio entre pessoas idosas: revisão da literatura. *Revista de Saúde Pública*, 44, 750-757.
- [30] Quinn, J. B., Mintzberg, H., & James, R. M. (1991). The strategic process. *Concept, context, cases*. New York: Irwin.
- [31] Northcott, D., & Ma'amora Taulapapa, T. (2012). Using the balanced scorecard to manage performance in public sector organizations: Issues and challenges. *International Journal of Public Sector Management*, 25(3), 166-191.
- [32] Palvarini, B. (2010). Guia referencial de mensuração do desempenho na administração pública.
- [33] Pilouk, S., & Koottatep, T. (2017). Environmental performance indicators as the key for eco-industrial parks in Thailand. *Journal of Cleaner Production*, 156, 614-623.
- [34] Poister, T. H. (2010). The future of strategic planning in the public sector: Linking strategic management and performance. *Public Administration Review*, 70, s246-s254.
- [35] Pollitt, C. (2005). Performance management in practice: A comparative study of executive agencies. *Journal of Public Administration Research and Theory*, 16(1), 25-44.
- [36] Prodanov, C. C., & de Freitas, E. C. (2013). *Metodologia do trabalho científico: métodos e*

técnicas da pesquisa e do trabalho acadêmico-2ª Edição. Editora Feevale.

- [37] Ribeiro, J. M. C., Lovison, M., da Silva, E. M., Severo, E. A., & Dorion, E. H. (2015). A administração clássica: um estudo aplicado a centrais de atendimento (call center). *Revista de Administração IMED*, 5(1), 49-58.
- [38] Sá-Silva, J. R., de Almeida, C. D., & Guindani, J. F. (2009). Pesquisa documental: pistas teóricas e metodológicas. *Revista brasileira de história & ciências sociais*, 1(1).
- [39] Santos, R. S., Ribeiro, E. M., Ribeiro, M. M., & Pinto, F. L. B. (2017). Administração política e políticas públicas: em busca de uma nova abordagem teórico-metodológica para a (re) interpretação das relações sociais de produção, circulação e distribuição. *Cadernos EBAPE. BR*, 15(4), 939-959.
- [40] SCORSOLINI-COMIN, Fabio. Missão, Visão e Valores como Marcas do Discurso nas Organizações de Trabalho. *Psico*, v. 43, n. 3, 2012.
- [41] Spekle, R. F., & Verbeeten, F. H. (2014). The use of performance measurement systems in the public sector: Effects on performance. *Management Accounting Research*, 25(2), 131-146.
- [42] Steurer, R., & Martinuzzi, A. (2005). Towards a new pattern of strategy formation in the public sector: first experiences with national strategies for sustainable development in Europe. *Environment and Planning C: Government and Policy*, 23(3), 455-472.
- [43] Teixeira, C. A. C., Dantas, G. G. T., & Barreto, C. A. (2015). A importância do planejamento estratégico para as pequenas empresas. *Revista Eletrônica Científica da FAESB*, 1(1).
- [44] Weber, M. (2015). *¿ Qué es la burocracia?* . Santa Fe, Asociación Civil Mirame Bien.
- [45] Wickström, G., & Bendix, T. (2000). The "Hawthorne effect"—what did the original Hawthorne studies actually show?. *Scandinavian journal of work, environment & health*, 363-367.