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APPLICATION OF PROJECT MANAGEMENT TOOLS IN MANAGING THE CONTRACTING OF CONSULTING SERVICES IN THE PUBLIC SERVICE

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Abstract: The classic definition of a project consists of a transitory effort, involving one or more individuals, carried out with the objective of achieving a specific result or creating a product or service. In turn, project management can be defined as a series of activities that aim to achieve a result through the use of skills, tools and techniques. The use of management tools can be observed on a larger scale in private organizations. Surveys concluded that 48% of public bodies and entities are still in the embryonic stage of project management and only 10% of projects are in line with the government's strategic planning. In this aspect, due to the characteristics of temporality, the objective of achieving a specific result, among others, it can be considered that public contracts fall within the concept of project discussed herein. In this aspect, this study aims to evaluate the application of project management tools in the management of public service consulting services contracts, through the analysis of a case study in a Federal Government Autarchy. The methodology of this work consists of presenting a correlation between the PMBOK Guide and the requirements of Normative Instruction Number 05, of May 26, 2017, proposing a specific methodology for carrying out the project. With this, it was possible to compare the results obtained with planning the contract using the presented methodology and the contract with a similar object, which served as a benchmark for the work, demonstrating a gain in efficiency, time and improvement in contract management.
Keywords: Organizations, notice, performance, public administration, methodology.

INTRODUCTION

According to the PMI (2017), a project can be understood as a transitory effort, involving a single individual or a group, carried out with the objective of achieving a specific result or creating a product or service. Thus, the characteristic of transience indicates that it has an objectively defined beginning and end, and the end of a project can occur through the achievement of objectives, the conclusion that they will not, or cannot, be met, exhaustion or unavailability of resources human and material, extinction of the need for the project or even terminated for reasons of convenience.

An important fact to be considered about this definition is that projects catalyze changes in organizations, whether private or public. In addition, they allow the creation of business value, generating tangible benefits such as monetary assets, equity capital, public services etc., intangibles such as brand recognition, public benefit, strategic alignment, among others (PMI, 2017).

In addition to the definition of a project brought by the "Project Management Institute [PMI]", according to ME (2020), there is, within the scope of the Federal Government, its own definition that considers a project to be a programming instrument that encompasses time-limited activities, which they result in the expansion or improvement of government.

Projects have several elements that are related during management, such as project lifecycle, project phase, phase review, project management processes, project management process group and project management knowledge area (PMI, 2017).

The life cycle of a project, according to PMI (2017), consists of the phases a project goes through from beginning to completion, being responsible for providing the basic structure for project management. In turn, project management can be defined as a series of activities that aim to achieve a result through the use of skills, tools and techniques.

Vargas (2009) defines project management as a set of management tools that enable the development of skills in order to control single

and complete events, taking into account time, cost and quality, within an organization's environment.

The use of these management tools can be observed on a larger scale in private organizations, especially in medium and large companies. On the other hand, in public institutions its use is still restricted to isolated cases, even though there has been an effort in this direction in recent years.

This view can be confirmed by PMI (2011) which, through research, concluded that 48% of public bodies and entities are still in the embryonic stage in project management. Furthermore, only 48% have some type of procedure established in any department. It is noteworthy that, according to the survey, 90% of projects are not aligned with the government's strategic planning and only 60% have some type of portfolio management structure.

The asymmetries between the public and private sectors in the area of project management can be explained by several factors intrinsic to organizations. In this regard, some studies sought to identify these factors, such as in the case of Pisa and Oliveira (2013), who concluded that reasons such as excessive regulation, rigidity of contracting models, existence of different external control bodies, mandatory forecasting of resources in projects of law, among others, impact public organizations.

Another important reflection on project management in the public sector was brought by Kreutz and Vieira (2018), who listed the main aspects involved in the subject in the different dimensions of project management, encompassing the dimensions of project management tools, "stakeholders", decision-making process, transparency and accountability, process management, strategy formulation, cost management, financing, policy, communication and project impact.

The concern about project management in the public service is also shared by external control bodies, such as the Federal Court of Accounts [TCU]. According to TCU (2011), it is recommended that the Public Administration implement formal project management structures, according to the guidelines contained in the PMBOK and Cobit.

Specifically, in relation to public contracts aimed at the consulting area, the TCU (2018) itself understood that this type of contracting must avoid payment related to the mere permanence of labor or equipment, and the delivered products or results must be evaluated. achieved, previously defined in an objective and tangible way and with adequate levels of quality.

Therefore, the adoption of TCU's recommended practices is directly linked to project management practices, considering that, due to the characteristics of temporality, the objective of achieving a specific result, among others, it can be considered that public contracts fall within the concept of the project now discussed.

In this aspect, this study aims to evaluate the application of project management tools and agile methodologies in the management of public service consulting services contracts, through the analysis of a case study in a Federal Government Autarchy.

MATERIAL AND METHODS

The methodology used to carry out this work consisted of presenting the process of hiring a consultancy in a Federal Government Autarchy, correlating the steps and tools used with good project management practices, highlighting the recommendations contained in the PMBOK, comparing the results obtained from the results of the current contract that was replaced.

The need to apply a new methodology to replace the procedures previously applied by the Autarchy was motivated by the problems found in previous contracts. Thus, the interested parties pointed out as the main negative points the quality assessment methodology defined in the summoning instrument, requiring greater detailing of the products defined in the notice, with a description of standards and minimum requirements for quality and quantity; inadequate professional profile for the execution of the contract activities; insufficient number of professionals given the workload; time spent on the monthly analysis of the delivered products; high monthly cost; and slowness in supporting the technical activities covered by the contracted products.

Before presenting the methodology itself, it is important to highlight that the contracting of services under the indirect execution regime within the scope of the direct, autonomous and foundational federal Public Administration must comply with the rules and guidelines set out in Normative Instruction Number 05, of May 26 2017.

According to MPOG (2016), more specifically in Article 24 of the aforementioned Normative Instruction, the contract planning team must carry out preliminary studies covering the following requirements:

I - need for hiring;

II - reference to other planning instruments of the agency or entity, if any;

III - contracting requirements;

IV - estimation of quantities, accompanied by calculation logs and supporting documents;

V - market survey and justification for choosing the type of solution to be contracted;

VI - price estimates or reference prices;

VII - description of the solution as a whole;

VIII - justifications for the installment or not of the solution when necessary for the individualization of the object;

IX - statement of the intended results in terms of economy and better use of available human, material or financial resources;

X - measures to adapt the agency's environment;

XI - related and/or interdependent contracts; and

XII - declaration of the viability or not of the contract.

Among the requirements listed above, only I, IV, VI, VIII and XII are of mandatory approach, with the planning team being allowed to consider the others, depending on the characteristics of the contract.

Regarding the PMBOK guide, processes are grouped into five categories called Process Groups, subdivided into Initiating, Planning, Executing, Monitoring and Controlling, and Closing, which in turn are categorized by Knowledge Areas composed by Project Integration Management, Project Scope Management, Project Schedule Management, Project Cost Management, Project Quality Management, Project Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management and Management Project Stakeholders (PMI, 2017).

In this aspect, it is imperative to highlight the uniqueness of each project. Thus, it is not mandatory to apply all processes, tools, techniques, input or output described in the PMBOK Guide, and it is necessary to assess the scope, schedule, cost, resource, quality and risk restrictions (PMI, 2017).

The analysis of the requirements presented by Normative Instruction Number 05, of May 26, 2017, demonstrates a similarity with the guidelines and processes contained in the PMBOK Guide, and it is possible to establish a correlation between them and the knowledge areas, group of processes and processes of the guide.

With this, it was possible to establish a direct correlation between the requirements of the aforementioned Normative Instruction and the processes of the PMBOK Guide, defining what would be the approach in managing the contracting of the consulting service, as shown in Table 1.

In addition to the necessary correlation between the processes, it was imperative to define the project execution methodology, demonstrating the triggering of the process phases. Thus, in the figure 1, the proposed method of organization was summarized.

After establishing the correlation and execution methodology, the processes used were briefly described according to the approach outlined above.

TO PLAN SCOPE MANAGEMENT

To plan scope management is part of the planning process group and consists of creating a strategy for defining, validating and controlling the scope of the project and product. The process takes into account the project charter, the latest approved plans and historical information on organizational processes as well as the organization's cultural and environmental factors (PMI, 2017).

Thus, considering the correlation established in Table 1, the process is related to the need for contracting, reference to other planning instruments of the body or entity, if any, and declaration of the feasibility or not of contracting. This way, the normative and legal references used as the basis for hiring were broken down, the analyzes of previous contracts and current contracts with related objects were carried out, as well as the organization's environmental factors such as availability of human resources, regulatory attributions and alignment of the sector with strategic planning. With that, it was possible to establish the scope definition, validation and control strategies.

Finally, it was possible to assess the feasibility of hiring under the aspect of compatibility with the organization's needs and requirements and the economy of public resources themselves.

TO COLLECT THE REQUIREMENTS

The Requirements Gathering process is based on defining, documenting and managing the needs of interested parties in order to achieve established goals. The requirements definition stage is important as it serves as a subsidy for the definition of scope, cost planning, schedule, quality and procurement (PMI, 2017).

In this regard, taking into account the correlation established in Table 1, the process is related to the contracting requirements, market survey and justification for choosing the type of solution to be contracted, justification for the installment or not of the solution when necessary for the individualization of the object, related and/or interdependent contracts. This way, the technical requirements of the contract were raised with the interested parties, surveys of the solutions available on the market with a focus on the definitions of participation of companies in the event, definition regarding the non-individualization of the object and analysis of previous contracts with a similar object, with a focus in the contract now in force which it was intended to replace.

TO DEFINE THE SCOPE

The Scope Definition is summarized in the detailed definition of the project and the product, determining the product limits and acceptance criteria. Nevertheless, the present process is responsible for selecting the requirements documented in the previous requirements gathering process (PMI, 2017).

Thus, in compliance with the correlation established in Table 1, the process is related

Processes - PMBOK Guide	Normative Instruction
5.1 Plan Scope Management	I - need for hiring; II - reference to other planning instruments of the agency or entity, if any; XII - declaration of the feasibility or not of the contract
5.2 To collect the requirements	III - hiring requirements; [1] V - market survey and justification for choosing the type of solution to be contracted; VIII - justifications for the installment or not of the solution when necessary for the individualization of the object; IX - statement of the intended results in terms of economy and better use of available human, material or financial resources; XI - related and/or interdependent contracts;
5.3 To define the scope	VII - description of the solution as a whole;
7.2 To estimate the costs	VI - price estimates or reference prices;
8.1 To plan Quality Management	III - hiring requirements;[1]
9.2 To estimate Activity Resources	IV - estimation of quantities, accompanied by calculation logs and supporting documents;
12.1 Plan Procurement Management	X - measures to adapt the agency's environment;

Table 1. Correlation between the processes of the PMBOK Guide and the requirements of Normative Instruction Number 05, of May 26, 2017

Source: Original research data

Note: [1] requirement pertaining to more than process

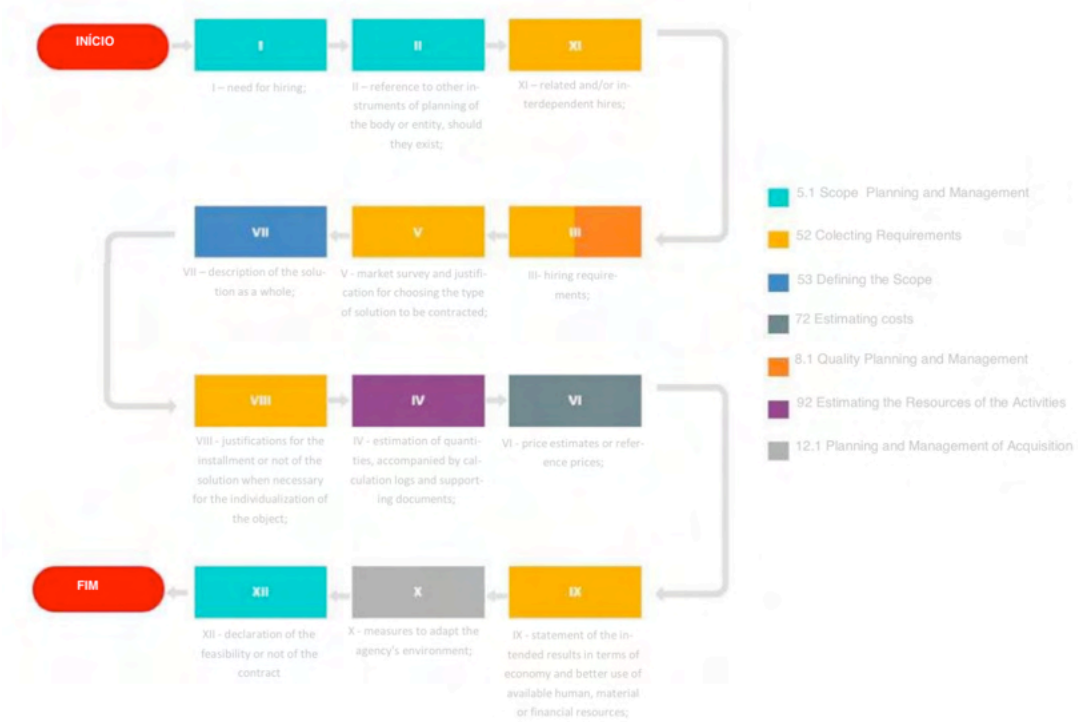

Figure 1. Project execution methodology

Source: Original research data

to the description of the solution as a whole". This way, the requirements to be considered were listed, as well as all the activities to be developed within the scope of the contract were specified.

TO ESTIMATE ACTIVITY RESOURCES

Activity Resource Estimating, a process present in the project's resource management area, represents the determination of the quantity, characteristic and type of materials, equipment, supplies and even human resources needed to complete the project (PMI, 2017).

In this sense, in view of the correlation established in Table 1, the process is related to the estimation of quantities, accompanied by calculation logs and supporting documents. Nevertheless, based on the requirements and specification of the activities defined in the scope, as well as the history of productivity of other contracts, it was possible to estimate the quantity and specification of labor, equipment, daily rates, tickets, among others.

TO ESTIMATE THE COSTS

The Estimate Costs process consists of evaluating the costs of inputs needed for execution, which includes values related to labor, equipment, services and facilities, as well as financial and contingency costs (PMI, 2017).

Therefore, taking into account the correlation established in Table 1, the process is related to price estimates or reference prices. Thus, considering the estimated resources for the activities, it was possible to determine the costs involved in the project, which were calculated according to the quantities raised and using the methodology present in the DNIT Consultancy Table (quote).

PLAN QUALITY MANAGEMENT

The Quality Management Planning process comprises the definition of the quality requirements and standards of the project deliverables, with the aim of determining the compliance standards. (PMI, 2017)

Thus, in view of the correlation established in Table 1, the process is also related to the hiring requirements. Thus, in the preparation of the contracting requirements, the criteria for organizing and evaluating the deliveries of the project's products were specified, as well as the objective evaluation methodology that took into account weighting (criticality and weight) and performance (deadline, form and argument).

In this Quality Management process, the methodology for evaluating the quality of product delivery was defined, using the agile method called "Kanban".

PLAN PROCUREMENT MANAGEMENT

Procurement Management Planning, a process present in the area of project procurement management, represents the formalization of project procurement decisions, identifying the approach and potential suppliers (PMI, 2017).

In the meantime, considering the correlation established in Table 1, the process is also related to the measures to adapt the agency's environment, considering the specificities of the project under discussion. Therefore, as it was verified that the hiring would not require changes in the organization's environment that would require acquisition of new materials or changes in the physical structure, it was considered that there would be no acquisitions within the scope of the project.

RESULTS AND DISCUSSION

Based on the results obtained with the above planning, it was possible to make a comparison between the results obtained with planning the contract using the presented methodology and the contract with a similar object, which served as a guide for the work, without using any planning method.

The first approach concerns the overall numbers obtained with the planning in relation to the previous contract. Therefore, in order to illustrate the situation, a comparison between the two contracts was presented under the aspects of type of bid, contractual term, budgeted amount and allocated team, as shown in the figure 2.

The analysis of the figure 2 showed that in relation to the types of bidding and contractual term, it was possible to keep the definitions in the new contract in relation to the previous contract. On the other hand, an increase of around 3.5% in relation to the number of people allocated was achieved, with a cost reduction of approximately 21.5%. The increase in the number of people with the respective cost reduction was possible due to greater clarity in the hiring requirements and description of the solution, with a consequent improvement in the estimate of the amount of labor and in the adequacy of the professional profile necessary to carry out the activities of the contract.

Another important point arising from the application of the methodology was the definition of the method for evaluating the quality of the products to be delivered. The previous contracting established, in general, that the performance index to be achieved by the contracted party must be greater than or equal to 80%, without specifying how the measurement would be carried out objectively. On the other hand, the planning of quality management for the new contracting allowed, based on the requirements collected and on experiences arising from previous contracts, the definition of objective criteria for evaluating the products.

Initially, the Products to be delivered by the Contractor were divided into parts called shares. In sequence, the actions were composed at a lower level in activities which, in turn, are composed of sub-activities, as shown in the figure 3.

As seen in the figure 3, the evaluation of the products, in practice, was linked to the performance of each of the component actions, which, in turn, has its performance linked to the application of weighting criteria at the level of activities and criteria of performance at the sub-activity level.

Regarding the weighting criterion, weights were defined linked to the criticality that each of the Activities represented in the execution of the Action as a whole. The adoption of weights was defined considering the need to segregate more complex and relevant activities from less complex and less relevant activities, with the aim of prioritizing and accelerating service to the most important technical activities. Figure 4 shows the criticality levels with their respective weights.

At the level of sub-activities, a performance criterion was defined consisting of three distinct parameters, term, form and argument, namely:

a) Deadline: the sub-activities must be carried out within the maximum deadline, with a score of 1 (one) if the deadline has been respected and a score of 0 (zero) if the deadline has been exceeded;

b) Shape: the sub-activities must be carried out respecting the formal writing standards of the Portuguese Language as well as the Official Writing Manual of the Presidency of the Republic, with grades given of 1.0, 0.5, 0.3 or 0.0 depending on the number of reviews by the contracting party, none, one, two or three or more, respectively;

Figure 2. Comparison between contracts

Source: Original research results

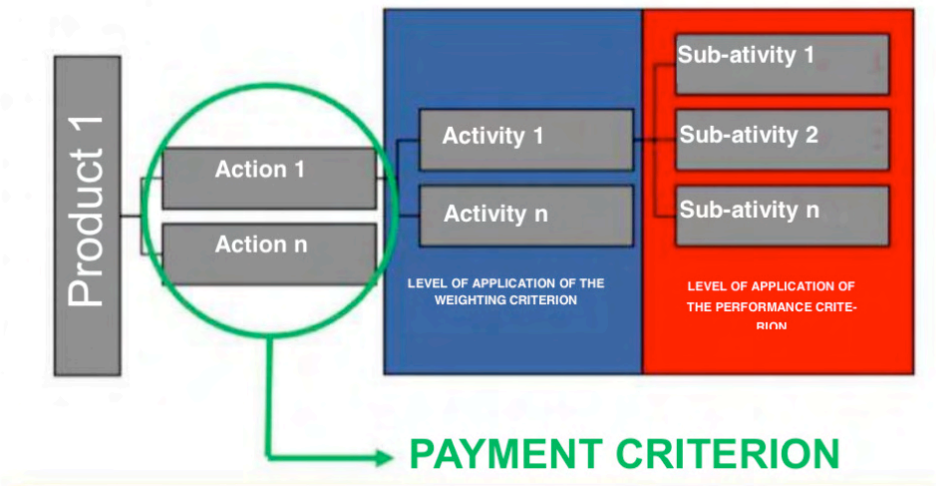

Figure 3. Product organization

Source: Original research results

Figure 4. Weighting Criteria

Source: Original research results

c) Argument: the sub-activities must be carried out using the normative and technical references correctly and with consistent technical-administrative argumentation, with grades of 1.0, 0.5, 0.3 or 0.0 being assigned depending on the number of revisions by the contracting party, being none, one, two or three or more, respectively;

d) Figure 5 summarizes the adoption of the performance criterion in the evaluation of sub-activities.

The weighting criterion and the performance criterion are applied independently in the activities and sub-activities and compose the final grade of the action, as shown in eq. (1). Critério de Desempenho

O critério de ponderação e o critério de desempenho são aplicados de forma independente nas atividades e sub-atividades e compõe a nota final da ação, conforme demonstrado na eq. (1).

$$NF = \frac{\sum_{i=1}^{n} \left(\frac{Np + Nf + Na}{3} \right) * P}{\sum_{i=1}^{n} P} \quad (1)$$

where, NF: Final Note of the action; Np: Note regarding the deadline; Nf: Note regarding the form; Na: Note regarding the argument; P: Weight; n: sub-activity.

After applying eq. (1), the result obtained is classified according to the ranges shown in the figure 6 and the measurement weighting factor is obtained, which consists of a multiplier to be applied to the financial amount to be received by the contracted company.

An a priori result of the application of the methodology was the paradigm shift in the remuneration of consulting services contracts, changing the logic of linking the payment of services to the mere permanence of labor or equipment for the effective evaluation of the products delivered and the results achieved based on objective and tangible definitions with defined levels of expected quality, respecting the principle of efficiency of Public Administration

In addition, the adoption of the proposed measurement methodology made it possible to reduce the time spent analyzing the contractor's product. However, in the previous evaluation logic, the product of the current month was fully evaluated in the following month, through the results presented in an electronic spreadsheet, as shown in the figure 7, representing an accumulation of documents to be verified.

On the other hand, with the implementation of the evaluation methodology, the analysis of the product was carried out concurrently with the completion of the activities that comprise it, using a sequential flow based on the "Kanban" methodology, as shown in the figure 8.

The adaptation of the "Kanban" method for product evaluation was called MKM (Modified "Kanban" Method) and its use was made possible with the use of the "Trello" tool, which consists of an activity management system based on the "Kanban" method ", organized in tables ("boards"), lists ("lists") and cards ("cards"), as shown in the figure 9.

The proposed operational change made it possible to dilute the work of analyzing the products throughout the month, reducing the total time spent on the monthly analysis. Thus, it was not possible to make an objective comparison between the two deadlines, considering that the previous method did not allow the measurement of indicators related to the topic.

With the use of the "Trello" tool, which allows the exchange of data through an API ("Application Programming Interface"), it was possible to establish objective controls for the performance of the contract using

Figure 5. Performance Criteria

Source: Original research results

$$VFM(P/) = FPM * VO$$

Where:

VFM(PI): Final Monthly Value of Action

VO: Value Offered by the Contractor for the Action (PI)

FPM: Weigting Factor for Mediation for the Action

PERFORMANCE	NF INTERVAL	FACTOR (FPM)
HIGH	NF ≥ 0,8	1,0
MEDIUM	0,8 < NF ≤ 0,6	0,8
LOW	NF < 0,6	0,6

Figure 6. Measurement Weighting Factor

Source: Original research results

Índice de Desempenho do Produto 5.1 - Ação 1 = 59%

abril/2020

Críticas (peso 2) 46%

Não críticas (peso 1) 100%

(2 x Críticas + 1 x Não Críticas) / 3

ID	Produto / Atividade	Criticidade	Un. Medição (critério)	Atividades previstas	Para Sub	Atividades Concluídas em	Inexecução justificada	Nota de Eficácia (resultado)	Justificativa
	Permanente								
1	**Estruturação, atualização e divulgação de informações Gerenciais da Diretoria de Planejamento e Pesquisa - Atlas Gerencial.**	Crítica	**Número de Seções atualizadas**	6			0	84%	
	1.1 - Quadro resumo com informações orçamentárias e financeiras de cada empreendimento monitorado pela DPP	Crítica	Quadro	1	10%	1	0	10%	
	1.2 - Quadro resumo com informações orçamentárias, financeiras e administrativas dos contratos geridos ou vinculados à temática da DPP	Crítica	Quadro	1	10%	1	0	10%	
	1.3 - Espacialização gráfica de ações vinculadas à CGPLAN	Crítica	Mapas	1	20%	0,8	0	16%	
	1.4 - Espacialização gráfica de ações vinculadas à CGDESP	Crítica	Mapas	1	20%	0,8	0	16%	
	1.5 - Espacialização gráfica de ações vinculadas à CGMAB	Crítica	Mapas	1	20%	0,8	0	16%	
	1.6 - Espacialização gráfica de ações vinculadas à CGDR	Crítica	Mapas	1	20%	0,8	0	16%	
2	**Prover suporte técnico no cadastramento de novos empreendimentos e na manutenção de informações atualizadas**	Padrão	**Número de Controles atualizados**	2				100%	
	2.1 - Suporte SGPLAN (Sede)	Padrão	Controle 1	1	50%	1	0	50%	
	2.2 - Controle Contratação (Sede)	Padrão	Controle 2	1	50%	1	0	50%	
3	**Prover suporte técnico no atendimento das demandas de gestão, controle e acompanhamento dos contratações e projetos objeto**	Crítica	**Número de Controles atualizados**	2				100%	
	3.1 - Acompanhamento dos empreendimentos selecionados	Crítica	Controle 1	1	50%	1	0	50%	
	3.2 - Controle Contratação (Superintendências)	Crítica	Controle 2	1	50%	1	0	50%	
4	**Suporte na implantação, execução e manutenção de ações voltadas ao Planejamento Estratégico da Diretoria de**	Crítica	**Número de Relatórios atualizados**	5			0	48%	
	4.1 - Indicadores Estratégicos da DPP	Crítica	Relatório 1	1	20%	0,8	0	16%	
	4.2 - Sala de Situação da DPP	Crítica	Painel atualizado	1	20%	0,8	0	16%	
	4.3 - Sistematização da Sala de Situação da DPP	Crítica	Relatório 3	1	20%	0	0	0%	
	4.4 - Avaliação do desempenho dos empreendimentos	Crítica	Relatório 4	1	20%	0	0	0%	
	4.5 - Monitoramento das iniciativas estratégicas da DPP	Crítica	Relatório 5	1	20%	0,8	0	16%	
	Sob Demanda								
5	**Prover suporte técnico para atendimento às demandas de Gestão de Processos e Técnico das Grandes Empreendimentos**	Padrão	**Itens Realizados / Itens Requisitados**	21	100%	21	0	100,0%	
6	**Prover suporte técnico para atendimento às demandas de Comunicação interna e externa, alinhados aos setores competentes do Órgão.**	Padrão	**Itens Realizados / Itens Requisitados**	54	100%	54	0	100,0%	
	Programado								
7	**Suporte na implantação, execução e manutenção de ações voltadas à integração das Superintendências Regionais ao sistema SGPLAN**	Crítica	**Avanço físico do cronograma**	100%	100%	0%	0	0,0%	
8	**Implantação da iniciativa Estratégica de Planejamento Integrado**	Crítica	**Avanço físico do cronograma**	67%	100%	0%	0	0,0%	

Figure 7. Product evaluation using electronic spreadsheets

Source: Original research results

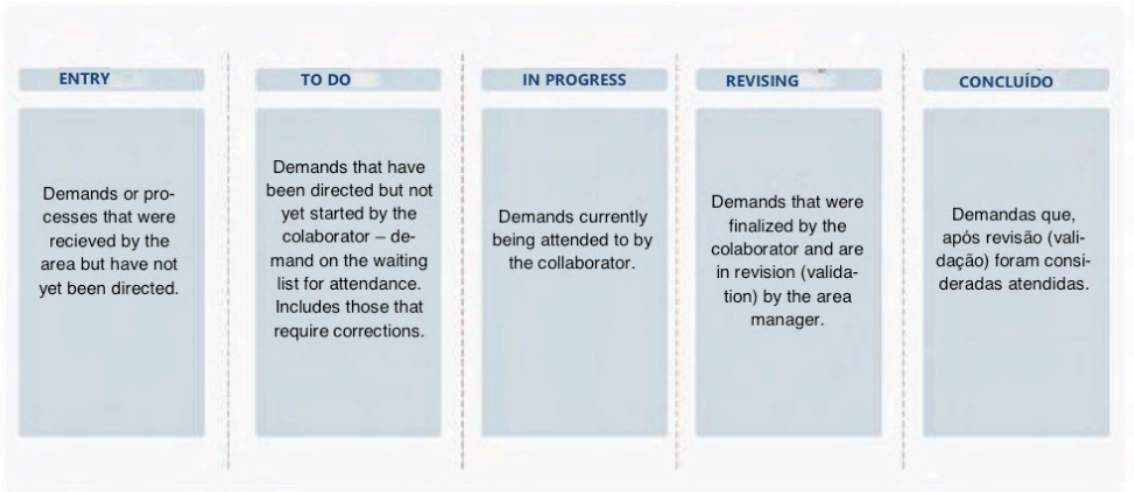

Figure 8. Product evaluation methodology using a sequential flow based on the "Kanban" method

Source: Original research results

"dashboards" (management panels) prepared by means of BI ("Business Intelligence") with the use of "Power BI" software, taking into account different levels of detail.

As can be seen in the figure 10, it was possible to obtain, in real time, the progress of all component products of the contract with managerial information to the contract performance manager.

The implementation carried out enabled the manager, at the highest level, to monitor the contract, with macro data on the number of demands made within the scope of the contract, as well as information on the established quality criteria.

Furthermore, considering the need to understand the behavior at the Product level, the view expressed in the figure 11 was also proposed.

Still at a high level, the implementation of the presented panel allowed the coordinators of the respective areas to have a thermometer of the actions linked with a picture of the quality criteria with the possibility of directing efforts to those actions that are underperforming the others.

Finally, ending the implementation cycle of the BI panels, a lower-level view was elaborated with the details of each one of the actions, as shown in the figure 12.

With this, it was possible to obtain detailed data on the execution of the activities that comprise the actions, with the presentation of the action's final score as well as the notes referring to the term, form and argument. In other words, the application objectively demonstrated the application of the evaluation criteria proposed for the contract.

As can be seen in previous analyses, the application of management "dashboards" made it possible to improve the monitoring of contract performance. As there was a need to wait for the end of the month to evaluate the product, the manager did not have mechanisms to intervene in a timely manner in the execution of the tasks. Thus, with the possibility of daily monitoring the performance of the contract, the manager was able to act in a timely manner in the execution of the product and correct any failures during the execution.

In the previous contract, it was not possible to accurately gauge the number of activities carried out in the contract, as well as to qualitatively assess criteria related to the deadline and specific performance of each demand. With the application of the panels, it was possible to obtain more substantial data from the contract, being possible to measure an average of 1,000 requests met per month, with around 88% being met within the deadline and 84% reaching the maximum score in the pre-established criteria.

Before concluding, it is imperative to highlight that, with the application of the new methodology and in view of the results presented, it was possible to observe an evolution in the conception and management of the contract. As pointed out, it was possible to define more objectively the quality criteria for evaluating the products with a description of the standards and minimum requirements. With this, it was possible to obtain quantities and professional profiles that were more consistent with the objectives of the contract, demonstrated by the initial performance in the execution of the tasks.

Finally, the assertiveness of the model provided managers with a consistent reduction in the time it takes to evaluate products, in addition to providing tools for analyzing and monitoring the contract, which enabled timely actions and decisions to be taken. This set of factors also contributed to the reduction in the slowness of the service provided by the contracted company.

Trello

Trello uses the Kanban paradigm for project management, became popular when used by Toyota. Projects are represented by boards, which contain lists of tasks. Tasks are represented by cards that are created within the boards. Cards can be moved from one list to another to represent task progress and users can be inscribed on cards.

Figure 9. Summary of the "Trello" tool

Source: Original research results

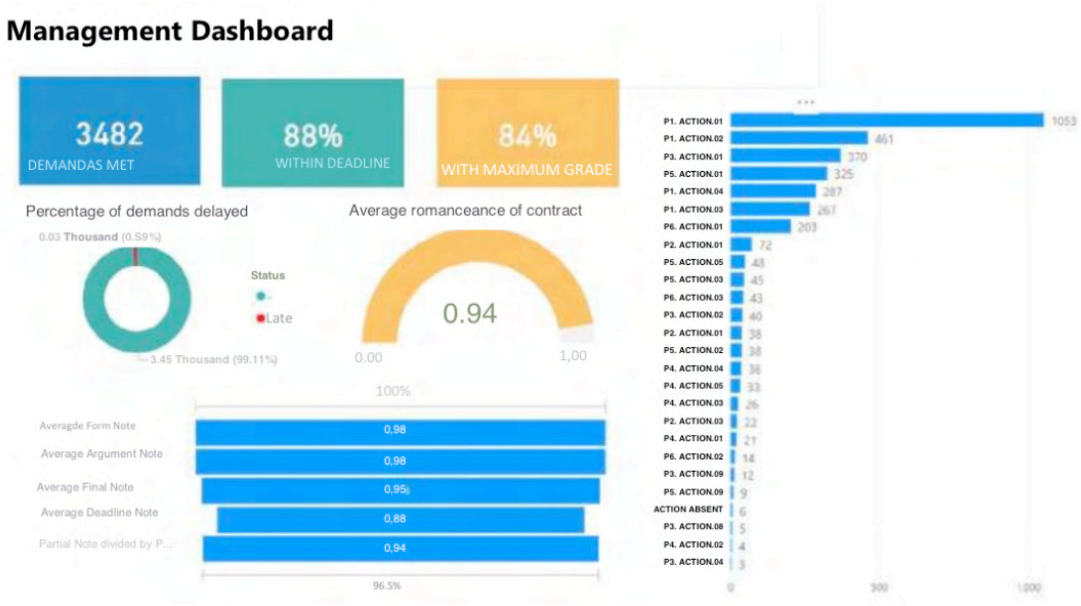

Figure 10. Overall Contract Performance Management Dashboard

Source: Original research results

Figure 11. Product Overview Management Panel

Source: Original research results

Url	Card Name	Classification	Activity	Criticity	Weight	Deadline Note	Form Note	Argument Note	Partial Noter
httBiZ/fríUaxo ttLC/âbflpPlBy	Press - BR-OIO/GO	Permanente		9.00	1.50	000	1,00	1.00	1.00
https.7frello.co mZc&lttótóôJ	50000006456/2019-70 - Adaptation of the section of highway 8R-265/MG between Jacuí and Alpindpolis.	Permanente	2	9.00	1.50	1.00	1,00	1.00	1.50
httR4//frel:040 m/c/7Jrrwxrbx	50000.028090/2020-23 - Project for the Avenida Moaçara viaduct on the BR-163/PA highway. in Santarém/PA	Permanente	2	9.00	1.50	1,00	1.00	1.00	1.50
http^'/frtHoco m/c/9TnBpaDd	50000.028090/2020-23 - Project for the Avenida Moaçara viaduct on the BR-163/PA highway, in Santarém/PA	Permanente	2	9.00	1.50	1.00	1,00	1.00	1.50
httpfc/Zfrtttõco taüíotoeJ httPS;7frtU04Q oZczlaLíKf)	50000.028801/2020-60 - Santo Ângelo Contour Project - BR-285/RS 50000.028801/2020-60 - Santo Ângelo Contour Project - BR-285/RS	Permanente Permanente	2 2	9.00 9.00	1.50 1.50	1.00 1.00	1.00 1.00	1.00 1.00	1.50 1.50
httfis.'ZV.e!,o_.SQ m/c/CqOdxfla	50000.029388/2020-51 - Information on the existence of studies for the duplication of the BR-435/RO highway in the stretch from the exit of the Municipality of Cerejeiras to the 4th axis interchange.	Permanente	2	9.00	1.50	1.00	1.00	100	1.50
íittPiZ/trelio.cQ m/c/loJ|corf8	50000029388/2020-51 • Information on the existence of studies for the duplication of the BR-435ZRO highway in the stretch from the exit of the Municipality of Cerejeiras to the 4th axis interchange.	Permanente	2	9.00	1.50	1.00	1.00	1.00	1.50
	WKY) n WI?ft/>fl?O-nn ▪ Arf»tt»m*ntn rU rnrlrv.-.» RR-JÍH/RR		*						
Total					139.50	88.00	91.50	90.50	135.00

Figure 12. Action performance breakdown management dashboard

Source: Original research results

CONCLUSION

The method presented in this work enabled the correlation of good practice processes in project management, more focused on the reality of the private sector, with the legal determinations of public contracts. With this, it was possible to evaluate the application of project management tools and agile methodologies in the management of public service consulting services contracts, through the analysis of the case study presented. Nevertheless, the results obtained showed that the application of the tools enabled objective and measurable gains in contract management and in the allocation of public resources, as well as in respect for the principle of efficiency in Public Administration.

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