UDK: 005.72:351

Improvement in Public Administration Services: a Case of Business Registration Process

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Abstract

This work addresses the process of opening enterprises (grant of license) in a municipality. The purpose is to perform the identification, analysis and redesign of the process of granting permits to private companies, then making a proposal for improvement. The chosen method was a case study, using a qualitative approach according to the BPM methodology to respond: how to improve and accelerate the grant of a license? As a result, the proposed model used the best practices for business registration to reduce the time to 70%, and using half of the involved sectors. The conclusion is that it is possible to reduce bureaucracy and increase the efficiency of public administration with the applied methodology.

Key words: *Business process management, business registration, public service*.

1. INTRODUCTION

The private sector to create jobs, lift people out of poverty and create more opportunities for the economy to prosper, so it has important role economic and social around the world [39].

However, business environment is not easy [2] [29] and customers are extremely demanding [17] [20] [23] [36]. The market is more competitive [15] [20] [23] and there is an increasing requirement to adapt and to survive [24][34][40]. Thus, companies need more and more agility, but as shoed at Doing Business 2018 Report [39] in some countries, there is difficult yet to start a business. Bolivia, Namibia, Cambodia, Venezuela, Suriname, Haiti and Brazil are examples of countries where it is necessary more than 40 days to start a business.

In New Zealand, the process of opening a new business requires the completion of one single procedure, takes half a day and costs a small fee, while in Brazil, it is quite slow and costly, promoting the informal market and negatively affecting tax collections. In terms of fees, Brazil stands 54th among 189 countries surveyed [38].

Leaders of India and the Russian Federation talk about how important it is for their countries to improve their business environment to create more jobs for young workers. It requires long-term policies of removing administrative barriers and strengthening laws that promote entrepreneurship.

In Brazil, administrative barriers are also a chronic problem, which interferes in the business environment causing damages, since it compromises the country's wealth-generating base [35].

To change this conjuncture, bringing more efficiency to the public service and ensuring the highest satisfaction of the taxpayer, Edwards et al. (2015) [13] address the need for decentralization; however, one should not disregard the effective coordination of what is decentralized. Without someone to marshal the parties involved, it is unlikely that the targets or commitments are achieved in the future.

Thus, to soften this situation, the objective of this article is to reduce the timeframe of the business registration process in a municipality so that to improve the business environment, using the best practices for business registration. In order to achieve the objective, the authors propose the use of the Dumas' approach about the Business Process Management (BPM). Observations, interviews and mystery shopping have been used as methodology.

The result of this study shows that by using the BPM techniques it is possible to improve the term of business opening, so this information can contribute to improvement of the processes in municipalities around the world that are not updated in this regard.

This paper is organized into five parts. First, it presents the Introduction. Second, it briefly presents a theoretical framework on Process Management. Third, the methodology is described. Fourth, it presents the results obtained by applying the proposed methodology. Finally, it describes the conclusions arising from this study.

2. BUSINESS PROCESS MANAGEMENT

Business Process Management (BPM) has been an intensely debated topic in academia and in practice since the end of the Decade of 1980. The project management has been solidified and offers a variety of methodologies, models, classifications and approaches [8]. The amount of literature on BPM, the existence of specialized magazines and conferences as well as the institutionalization of specialized degree programs in BPM in various universities shows that this theme is not a temporary fashion, but a tendency to evolve [21].

It has gained importance in the last decades and many organizations today focus their attention on identifying and documenting business process, defining and measuring key performance indicators, and implementing means for process improvement and innovation [37]. Furthermore, developing policy on "best practices", processes and how they can be transferred between countries have been focused on current studies [18].

BPM is concerned with all management activities around business processes [39]. It has proven successful to help organizations improve and innovate, and its application has grown in scope and context [37]. According to Nikolova-Alexieva (2012) [28] companies that routinely practice BPM are able to consistently improve on the results obtained from existing processes.

Increasingly, interest in the improvement of business processes has been a constant in the present day, report Melão and Pidd (2003) [26], where the reasons for this include the intensification of competitiveness in business, increasing expectations of customers and the advancement of information technology, that naturally, lead to increased efficiency and effectiveness. In intelligent organizations workers, machines and resources communicate easily and the knowledge provision add value in the processes [11].

The BPM is management technique that brings continuous optimization of the business processes being important to contemporary organizations [31]. Due to the high complexity of modern-day business, organizations are forced to quickly adapt to a wide range of changes that influence the structure and behavior of the business processes [30].

According to the concept from the BPM CBOK (2009, p. 30) [4], a process can be understood as "a defined set of activities or behaviors performed by humans or machines to achieve one or more goals". The BPM lifecycle defined by Dumas et al. (2013), is illustrated in Figure 1, showing six major steps.
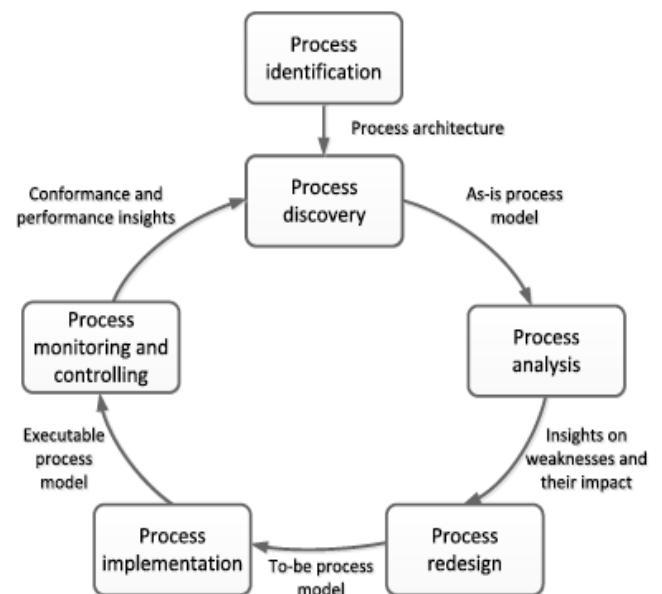

Figure 1. BPM Lifecycle [12].

The following will explain the six steps from Dumas et al's BPM lifecycle.

a)   Process identification

At this stage, a problem is presented, then processes relevant to the problem are identified, defined and related to each other. The result or the output of the process identification is a new or updated process architecture that serves as a framework for defining the priorities and the scope of process modeling and redesign projects. In some cases, the identification is held in parallel with the performance measure.

Dumas et al. (2013) present a method for process identification that is based on two phases, calling

designation and evaluation. The first phase consists of identifying a list of small processes involved in the study. Organization should focus on processes founded in areas where there is either great value created or significant trouble present (or both). The second phase considers suitable criteria for defining priorities of these processes. This phase, based on the understanding that is established in the previous phase, intends to develop a prioritization among these for process management activities (modeling, redesign, automation, monitoring, etc.). Note that neither of these phases is concerned with the development of detailed process models.

Once these phases are finished, it is time to design the Process Architecture, which consists of three levels. The part of the process architecture that covers the processes on level one is the most important and is known as the process landscape model or simply the process architecture. It shows the main processes on a very abstract level. The level two shows the processes at a finer degree of granularity, but still in a quite abstract way.

On the third level, the process models show the detail of the processes including control flow, data inputs and outputs, and assignment of participants [12].

According to Dijkman *apud* Dumas et al. (2013), the process architecture on level one could be described along two dimensions: case type and business function.

1. The case type dimension classifies a product or service that is delivered by an organization. Note that, depending on the part of the organization for which the process architecture is designed, the cases can represent products or services that are delivered to the customers of the organization, or they can also refer to products or services that are delivered by one department of the organization to another department.

2. The business function dimension is something that an organization does. A function consists of sub-functions, which, in turn, consist of sub-sub-functions, etc.

With these two dimensions is possible to build a Case/Function Matrix that could be created following four steps:
- identify case types;
- identify functions for case types;
- construct one or more case/function matrices, and;
- identify processes.

b)   Process Discovery (also called process modeling)

This stage has goals to understand the process and to share the understanding of the process with the people who are involved with the process on a daily basis. It is defined as the act of gathering information about an existing process and organizing it in terms of an as-is process model. Here the current state of each of the relevant processes are documented, typically in the form of one or more processes. The goal of this phase

is usually to discover the process, instead of designing it [12].

It is possible to model, make the representation of part of the reality of existing processes or desired processes. Therefore, is necessary to first define a setting in which information can be gathered effectively. Indeed, gathering information often proves to be cumbersome and time-consuming in practice. To help this gathering information, [12] presents four steps for process discovery:

- Defining the setting: This phase is dedicated to assembling a team in a company that will be responsible for working on the process.

- Gathering information: This phase is concerned with building an understanding of the process. Different discovery methods can be used to acquire information on a process.

- Conducting the modeling task: This phase deals with organizing the creation of the process model. The modeling method gives guidance for mapping out the process in a systematic way.

- Assuring process model quality: This phase aims to guarantee that the result in process models meet different quality criteria. This phase is important for establishing trust in the process model.

As it is possible to see in figure 1, the output of the discovery phase is an As-Is process modeling. It's a complex task, so it is good to follow a predefined procedure in order to approach this task in a systematic way. One way to do so is to work in five stages, as follows:

- Identify the process boundaries;
- Identify activities and events;
- Identify resources and their handovers;
- Identify the control flow;
- Identify additional elements.

c)   Process Analysis

At this stage, the problems associated with the process as it stands are identified, documented and, where possible, quantified using performance measures. The result of this phase is a structured set of questions. These issues are typically prioritized in terms of their impact and, sometimes, in terms of estimated effort required to resolve them.

This phase aims to show and share with those involved the difficulties, the rework, the damage and losses to the company and to the people that these processes are causing [1].

In practice, the analysis makes use of strategic plans, process models, performance measurements, changes in the environment and other factors to understand business processes in the context of the organization [4], that could be split into two parts: a qualitative and quantitative analysis. The qualitative analysis sounds

like an art, while quantitative analysis has science characteristics. So, these two ways of analysis have different tools that can be used to help the process analyst.

According to Rinnert (2015) [32], a trouble displayed in studies that address Civil Service and Administrative (CSA) is the measurement of the results properly and not subjectively as most studies reviewed by this author have. Therefore, it sought to base clear quantitative indicators such as time and cost of the process.

d)   Process redesign (also called process improvement)

The goal of this phase is to identify changes in the process to help resolve the problems identified in the previous phase and allow the organization to meet its performance objectives. To this end, several option changes are analyzed and compared in terms of performance. This implies that redesign of processes and process analysis go hand in hand. The result of this phase is typically a new process model, called *To-Be*, which serves as a basis for the next phase.

At the time of redesign, according to Baldam *et al.* (2011) [5], attention should be paid to:

- Eliminate bureaucracy;
- Analyze the value-added;
- Eliminate duplicated tasks;
- Simplify methods;
- Reduce cycle time;
- Use simple language;
- Standardize;
- Partnering with suppliers;
- Use automation and information technology.

In this step, Albuquerque and Rocha (2006) [1] feature points that guide decisions at the time of the redesign process, thus avoiding bottlenecks, delays, waste, damage, rework, inconsistencies and increased costs. Those points are:

▪ Something (activity, output, relationship between areas) that exists, but should not exist, because it does not add value. E.g.: duplicate activities performed by more than one area at the same time – various areas controlling the finished product.

▪ Something (activity, output, relationship between areas) that does not exist, but should exist, because it would add value. E.g.: survey with customers not made;

▪ Something (activity, output, relationship between areas) that exists, that should exist because it adds value, but currently, instead of adding it is a problem because it doesn't work well, e.g.: performance indicators poorly designed or difficult to be collected, and policies or standards that affect organizational performance.

The inputs and outputs must be clearly identified (Figure 2) so that the new proposal brings effectiveness.
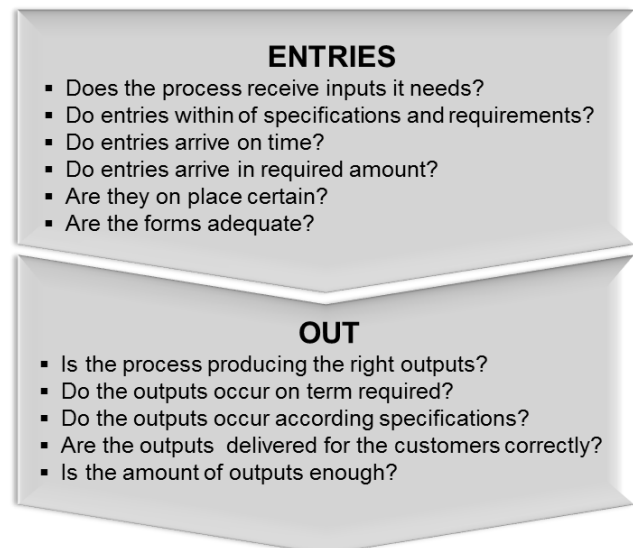

ENTRIES
- Does the process receive inputs it needs?
- Do entries within of specifications and requirements?
- Do entries arrive on time?
- Do entries arrive in required amount?
- Are they on place certain?
- Are the forms adequate?

OUT
- Is the process producing the right outputs?
- Do the outputs occur on term required?
- Do the outputs occur according specifications?
- Are the outputs delivered for the customers correctly?
- Is the amount of outputs enough?

Figure 2. Inputs and outputs - adapted [1].

According to the BPM CBOK (2009), this step must occur in order to deliver customer value, while the Organization should consider issues such as what, when, where and how the work is performed.

For Dumas *et al.* (2013), if someone would like to improve the quality of such a product or service from the perspective of a customer, arguably the best way to do that is to improve the related business process. In that way, a customer-oriented organization is in fact a process-centered organization. Business process redesign is all about improving the quality of products and services by rethinking and re-organizing business processes.

e)   Process Implementation

At this stage, the necessary changes to start the new process shall be prepared and executed. The implementation process covers two aspects: automation process and organizational change management. Process automation refers to the development and implementation of IT systems (or improved versions of existing IT systems) that support the new process and could be approached by different angles. In a broad sense, it may refer to the intent to automate any conceivable part of procedural work that is contained within a business process, from simple operations that are part of a single process activity up to the automated coordination of entire, complex processes [12].

Organizational change management refers to the set of necessary activities to change the way of working for all participants involved in the process. It is a continuous activity that has to be done for a long time, even after intervention is finished. It is necessary to have coordination between the different actors inside and outside to deliver products and services in a smooth way [27]. The possibility to define task and procedure by BPM tries to improve the process, providing obligation, permission or prohibition. This mechanism empowers the actors, structure their relations and rules their coordination [3].

f) Process monitoring and control

Once the redesigned process is running, relevant data are collected and analyzed to determine how well the process is with regards to its performance measures and goals. Bottlenecks, recurring errors or deviations from the expected behavior are identified and corrective actions are performed. New problems may arise later, on the same or other processes, which require that the cycle be repeated. Along a process lifecycle, BPM should be seen as an organizational capability and not just as the execution of tasks. This view requires an organization-wide perspective, as well as the identification of core areas that are relevant to the organization's success [6].

Furthermore, a more mature BPM must focus on the effectiveness of the process that is closely based on human knowledge rather than focus only on BPM systems, because tacit interactions bring a different way of thinking for improving performance, enabling the creation of advantages that rivals cannot easily duplicate [25].

There is strong empirical evidence demonstrating culture as a key factor in BPM, and there are other factors relevant to BPM maturity: strategic alignment, governance, methods, IT and people. Each of these factors is based on the fitness of five areas that include the ability to reply to the changing process, values and beliefs, attitudes and behaviors, leadership in the management of processes and the process of managing networks [7].

In this way, success does not depend only on the balance between tasks and technology resources. Staff training is an essential factor, since they must understand not only their tasks, but also their role in the process, seeking the integration and support from the other parties involved [33].

The result of good control can be measured when the conformance between event logs and a process model can be checked [12]. These concepts are presented below as well as the data obtained through the analysis of documents, interviews and observations.

3. METHOD

The municipality chosen to carry out the study is called São José and is one of the 10 largest of the State of Santa Catarina (Brazil), constantly standing among the main generators of employment in the state.

The city of São José has been selected because it is the target of recurrent criticism from business associations and entrepreneurs.

Regarding the characterization of the research, the proposed research is classified as applied research. Regarding the approach of the problem approach, the research is qualitative.

3.1 Data Collection and Processing

The method of collection used was personal interviews, observation not in disguise and undercover (mystery shopping), plus document analysis.

A structured questionnaire was applied, available in the Guide for implementation of general law for Micro and Small Businesses, prepared by Micro And Small Business Support Service (SEBRAE) and the CNM – National Confederation of Municipalities [19].

As an auxiliary tool, a semi-structured questionnaire was elaborated based on the content brought up in theoretical framework in order to enhance data collection and, consequently, the understanding of the topic.

The software used to draw the figures was Bizagi BPM Suite, since it has the necessary tool to develop the notation and it is available for free.

3.2 General steps

It began with a bibliographic review on the subject (BPM) and defined the object to be studied.

We then defined the use of a validated form for diagnosis already used by other institutions, as described in item 3.1. However, it was considered necessary to collect specific data. For that, a form was elaborated that went through an update after discussion among the authors.

Subsequent to these definitions, the contact with the person in charge of the process was sought in order to request authorization for the study. Once the authorization was granted, the first conversation for the identification of the processes was scheduled. A further 3 meetings were scheduled for documentary analysis, observation and interviews with others involved. There was contact with the protocol area anonymously, to verify deadlines and procedure of that sector (mystery shopping method).

As a benchmark, two visits were also carried out in a neighboring city hall, which is considered a model in this process, where the research tools already mentioned were also applied. Then steps of BPM Lifecycle were used (figure 3).

Figure 3. Method steps

3.3 **BPM Procedure**

Steps of BPM Lifecycle from Dumas et al (2013) [12] were used, being: a) Process identification; b) Process Discovery; c) Process Analysis and d) Process redesign.

4. RESULTS AND DISCUSSION

This section presents the case/function matrix, describing how the process runs presently (*as-is*), then the proposed improvement (*to-be*).

4.1 **Process Identification**

The identification process problem will be described following the two dimensions proposed [12], which culminate in the creation of a Case / Function Matrix offering a wide view of the studied situation.

The Case/Function matrix briefly describes the activities carried out by the Economic Register, inserted into the internal revenue service and responsible for the process of granting the permit. It is possible to obtain a broad view of the analyzed area, allowing verification of the connections between the different processes performed. It is observed in the array the existence of three Macro processes, which are: Granting of License, Periodic Inspection and Closure of Business. Each of these Macro Processes can be subdivided into sub processes of lower amplitude, as exemplified in the figure 4.

Figure 4. Case/Function Process architecture Matrix in the area of Economic Register.
Source: Authors - Interviews, observation and document analysis.

4.2 **Process Discovery**

After the development of the Function matrix the study continued up to the process discovery of granting the permit, which consists in describing the current state of the process, the way it is being executed, as well as a list of the documents involved in its execution. This step, also called *as-is* process is essential in order to understand the current reality and to propose amendments that will bring benefits to those involved.

Despite Periodic Inspection and Business Closure Processes also being conducted by the Economic Register sector, they only come into operation upon the granting of the License so they are unlinked from the processes studied here and do not interfere with their

performance, therefore they are not subject of this study.

This way, through the application of the methods previously exposed, the main elements of the process (Grant of License) have been identified in order to allow its modeling. Those are:

1. Initiation of proceedings: the CAC - Citizen Service Center - is the area responsible for providing all information to the applicant, as well as the forms to be filled. These information and forms can also be accessed over the internet.

2. The path process (Interfaces): once the process starts at City Hall, it goes through 6 different sectors, i.e. it presents a multifaceted interface which interferes directly in its performance. Part of this interface are the following sectors:

▪ CAC – Citizen Service Center: as described previously, this sector has the role of providing information and documents for the beginning of the process. This sector is unlinked from the economic register, however, it is the first interface between the taxpayer and the granting of the license and therefore is a source of data for this study. This sector has an important role, because if wrong information is received the process of Granting the License will be retarded therefore harming the taxpayer as well as the City Hall revenue.

▪ General Protocol: this sector, also disconnected from the Economic Register, is an important interface, since it is responsible for receiving the applicant's documentation requested by the CAC - Citizen Service Center. Once received, this documentation will be registered into the City's internal system and put inside a folder, becoming what is called "the physical process". If accepted by the Economic Register, the process will return to the General Protocol where it will be issued to the applicant. Being responsible for registering the information given by the taxpayer, this sector will provide the status of the process, which could then be accessed by all sectors involved in the Granting of Permits, allowing greater clarity of information and consequently greater agility in attending internal requests.

▪ CCC - Communication Center with the Taxpayer: this sector is responsible for all communications with the applicant as soon as the documentation is received. For being unlinked from the Economic Register, it constitutes an important interface, since the rapid communication of possible demands with the taxpayer may be a decisive factor for speeding the process of granting the permit.

▪ SUSP - Secretary of Public Services: the issue of business feasibility is up to this Office. Such activity is performed by confronting the businessman desired address and the activity to be performed with the master plan of the Municipality. Once again, there is the involvement of an area unrelated to the Economic Register, being an important interface to be taken into consideration, since the issue of feasibility is a decisive factor for the granting of a license.

- Secretary of the Environment – In situations involving risk to the environment, considered as medium to high risk in the matrix Case/Function, an authorization will be required from the Secretary of the Environment. This is also unrelated to the Economic Register and therefore, constitutes an important new interface to be considered, because in case the authorization is denied, it compromises the entire process of License Granting.
- Technical analysis: Once the process is put together and the feasibility granted, it returns to the sector of Economic Register. It competes to this sector the verification of the existence, consistency and validity of the documentation presented. When all documents presented are in accordance with the request of CAC (First interface), the technical analysis update the system with the new information, if any, and then grant the request, which then awaits the signature of the Secretary of Revenue to be released.

3. Termination of proceedings: The process terminates at the General Protocol, where it stays until collected by the applicant.

4. Customers of the process: By having many interfaces, and being part of a system, each of the sectors that receive the process with pre-existing information, not connected to the owner of the process (Economic Register), can be considered internal clients of the process. Besides, we have the main customer of the process that is the taxpayer himself, also called the applicant.

5. Suppliers of the process: Here again, applying the concept of systems and recognizing the existence of multiple interfaces, we can also consider the customers as clients of the process, concluding that all clients, at

some point are also suppliers of the process, as well as the previous sector.

6. External Interfaces : The process of Granting the License involves, besides the internal sectors already mentioned, an important set of offices outside City Hall, which have municipal activity (fire department and health department), State activity (Board of commerce) and Federal activity (IRS), and each of them have their own policies and management, therefore constituting a determinant interface in granting the license. However, because they are not involved in all kinds of Cases described in the matrix Case/Function, and because they are entirely autonomous with regards to this process, they will not be discussed in this case study. It is important to note that according to the vision of processes such external organs act both as clients or as suppliers of the process, depending on the moment. Based on the type of low-risk case described in the matrix Case/Function and on the identification of the scope described above, the modeling of the process as it happens currently in the municipality of São José, is described in Figure 4. It is possible to identify where the process begins, where the process ends, the circulating process, and who the customers and suppliers of the process are, as shown in figure 5.
Process modeling demonstrates that, if there is no feasibility of opening the company at the place chosen by the entrepreneur, the process begins and ends at the CAC. Having the feasibility, the process goes through 3 more areas (General Protocol, Technical Analysis and CCC), ending successfully at General Protocol with the withdrawal of the license by the applicant.
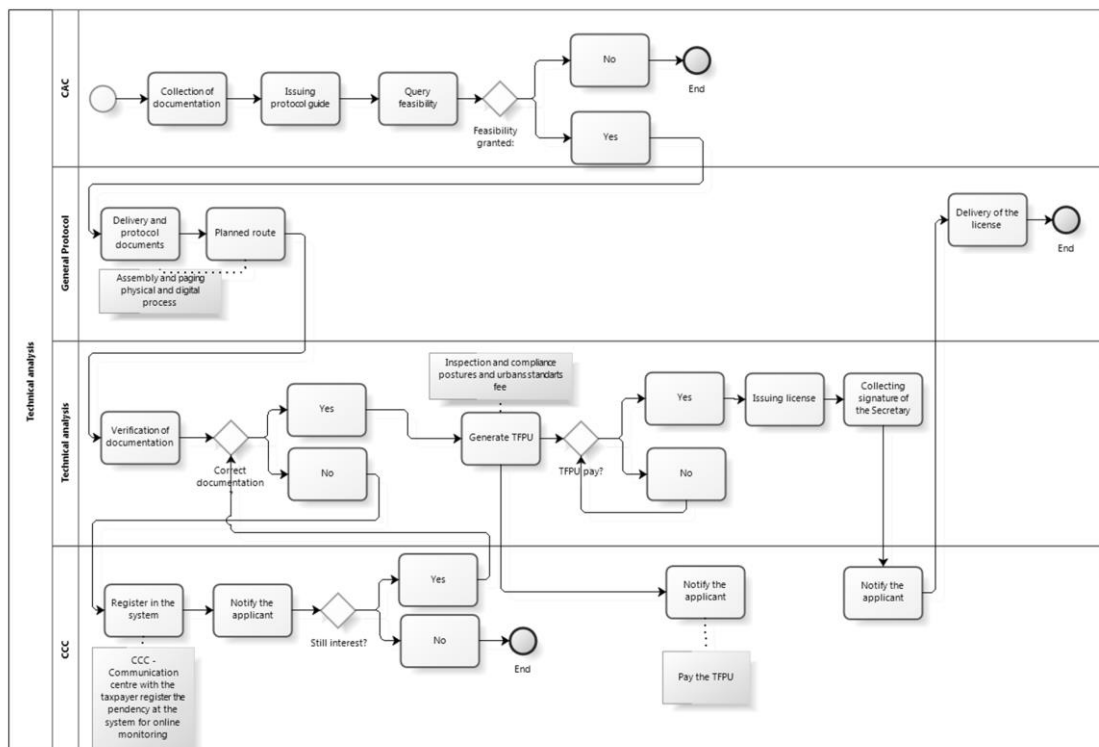

Figure 5. Modeled Process *(as is)* Note: The process map refers to granting of license for low-risk companies.

4.3 **Process Analysis**

The BPM helps to understand the enterprise structure, policies, and operations [14]. According to Rinnert (2015) [32], problems displayed in studies that address CIVIL SERVICE AND ADMINISTRATIVE (CSA) should be measured properly and not subjectively as most studies reviewed by this author show. Therefore, the analysis should use clear quantitative indicators such as time and cost of the process.

These objectives are described as two basic indicators:

With respect to time: Considering that all documents are correct and the applicant company is considered low-risk, as described in the matrix Case/Function, dispensing licensing from the health department, the Secretary of Environment and the fire department, the process lasts an average of 25 days.

With respect to costs: seeking to attend the General Law of Small and Micro businesses, the operating License for the Micro Individual Entrepreneur (MEI) [19] is free at the Municipality of São José and can be issued on a provisional basis for a period of 120 days. In the case of Micro enterprises (MEs) and small businesses (EPPs) the cost varies depending on the activity starting at U$ 100,00, having a provisional validity of 90 days. For other companies, the cost is related to the activity developed and the provisional permit has a validity of 60 days. Both cases are considered low-risk companies.

We will now offer alternatives that could make the process faster and less expensive, granting licenses in accordance with legal requirements and registering companies for future taxation.

4.4 **Process Redesign (also called process improvement)**

The processes need to be designed from the point of view of the executor and the customer. Improvements implemented in only one direction do not meet the criteria of quality and efficiency currently required. It is also important to remember that processes and improvements are dynamic concepts and therefore require constant updating of their performance, since the environment and customer's needs also change

The propositions of improvement for the redesign of the process should be aligned with the purposes of City Hall which are: meeting the needs of the population, a Government with transparency and acting near the community. More specifically, the analysis process is allocated in the internal revenue service, which aims to take studies and actions to maximize revenue and ensure the revenue goes to the City.
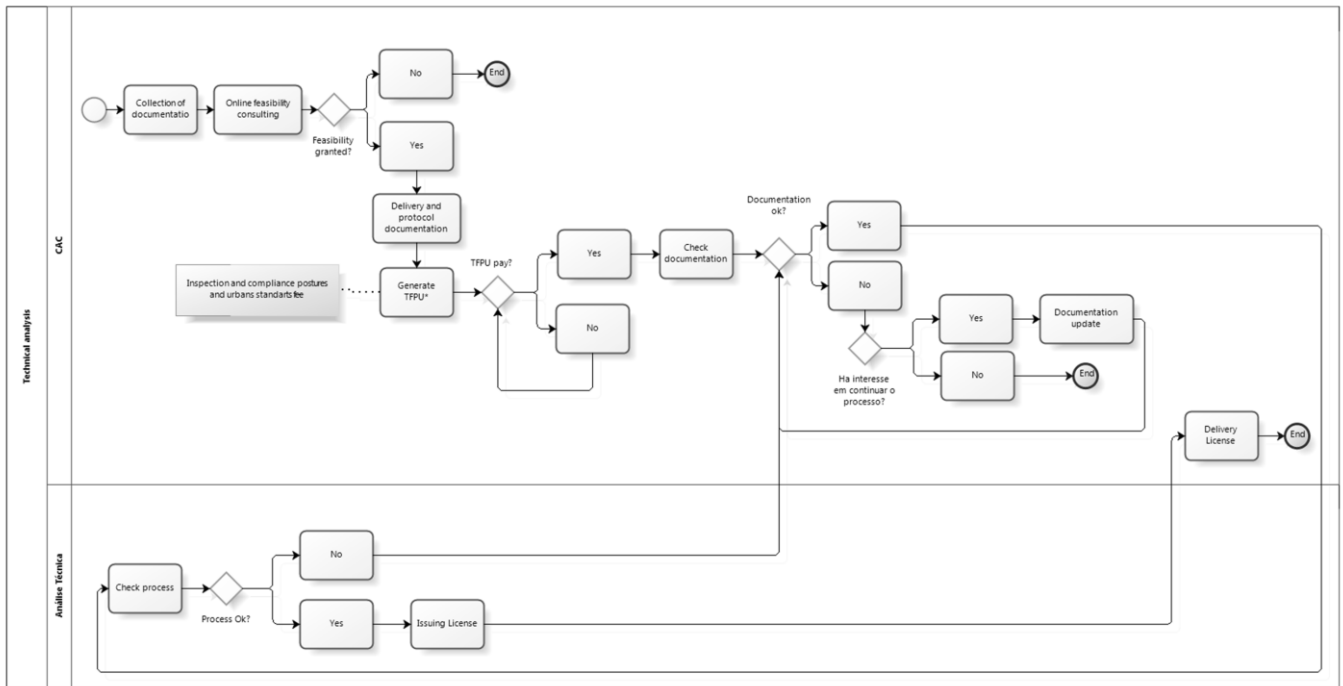
In face of this reality and considering that with the studies conducted in the city of São José and in a nearby town, taken as benchmark, as well as the bibliographic surveys relating to national and international experiences, we visualize possibilities of efficiency in this process, reducing the time and costs involved on the registration of enterprises in the municipalities. Thus, the following table proposes 14 possible changes:

Table 1. Proposals for improvement.

1	*Expansion of information via internet about the documentation required for the process:* this initiative, while optimizing the preparation of the required documentation, would prevent the applicant from going to City Hall. This suggestion of improvement does not rule out the trip to City Hall though, because the internet not only is not available to all neither is always stable. According to the World Economic Forum (2014) [16], Brazil figures in position 69th among 148 surveyed countries, when it comes to the availability of the World Wide Web.
2	*Inclusion of the process flowchart on the City Hall website:* with this measure the client would better understand the processing requirements, being able to anticipate information and documents that would be needed in the following steps, contributing to the reduction of the waiting time and the internal rework.
3	*Implementation of online business licensing:* this model has been used in several cities, especially in Maringa [9] [10], Curitiba, Porto Alegre, São Paulo and Rio de Janeiro [22]. Although restricted to some activities, the system lets micro and small enterprises classified in categories of low risk to the environment to obtain the license of operation in 30 minutes.
4	*Anticipation of Inspection Fee (TFPU) payment:* with input on documentation, the applicant could submit the fee already paid avoiding an additional trip to City Hall.
5	*Training for those involved in the process:* Although the City of São José has a Citizen Service Center, the lack of specific training contributes to the slowness of the process, since many irregularities could be identified on the first contact of the applicant with this sector, which would avoid rework or duplication of processes, as it actually occurs.
6	*Synchronized National Register:* this system, once used in the City of São Jose, was discontinued in the beginning of the current administration. If resumed it would help the process, since it connects the city with other agencies involved in the registration and legalization of companies, in the Federal, State and Municipal spheres. This way, if there aren't impediments by the applicant, the process could be completed in 48 hours, as it happens in other municipalities that use the system, greatly enhancing the efficiency and user satisfaction. The shared data system has other advantages such as: monthly updates, integration with data sources, acting also as a feedback system, possibility of updating the source code for any of the partners involved and compatibility with different file formats of the partners.

7	*Feasibility Consultation online*: Whereas the feasibility consultation is the first step towards obtaining the registration of the company in the municipality and that it basically consists of checking out if the desired activity is permitted in the region where the company will be established, such consultation could be held directly by the applicant through access to an online system, where he would provide just the address and the activity that will be performed. Then, electronically, the system would grant or not the feasibility for the venture. This improvement would allow the activity currently carried out in at least 24 hours, to be completed in a few minutes, without consuming time of public servers and reducing the total time of the process.
8	*Empower agents involved in the process*: this amendment, already tested in a neighboring city of São Jose, would allow the reduction of activities and, therefore, the time involved in the step of technical analysis, since the executioner agents would have knowledge and power to decide about the question, granting or not the requested authorization.
9	*Sending the payment confirmation via internet*: this improvement would conform to another existing project at City Hall (São José Digital City), and would also avoid the need for another trip of the applicant, saving time for the "customer", accelerating the process and decongesting the Citizen Service Center (CAC) and the General Protocol.
10	*Eliminate the need for the signature of the Secretary*: this change meets the *empowerment process already* suggested, since performers of activities have full knowledge of the subject and power to make decisions within their area of operation. This improvement, though small, would prevent licenses already authorized from being forced to wait for a signature to be released.
11	*Increase in the number of inspectors*: Inspection activity is important in the process of opening businesses. Although in many cases being granted a Provisional License allows the businessman to start their activities before the inspection is made, depending on the risk involved in the activity to be performed early surveillance and *on-the-spot check* are required to ensure the safety of all involved. Thus, an increase in the number of these employees would avoid the accumulation of requests awaiting inspection.
12	*Prevent duplication of processes (license) of the same applicant*: according to the employees involved, duplication of processes of the same kind makes identification difficult and causes delay in the service as a whole.

13	*Determine the risk level of business activities*: The City determines high risk activities, but does not determine medium and low risk ones. Because of this, the release of Permits to companies who are not High risk forces the employees involved to discuss the matter to define risk level. This activity slows the process and can generate unnecessary deadlocks among employees.
14	*Sending the permit (license) via internet*: Current technological advance allows the sending of documents via internet using authentication keys, as in the case of Electronic Invoices. The same procedure could be adopted for the Licenses, offering further reduction in the total time of the process, from the point of view of both the City and the entrepreneur, who wouldn't need another trip to City Hall.

The improvements proposed in table 1 are not cumulative and will be linked to the direction given by the managers of the process. For the purposes of exemplification we will present a new process template (*to-be*) that makes use of eight of the fourteen suggested improvements, which are:
- Expansion of online information about the necessary documentation (improvement # 1);
- Inclusion of the process Flowchart on City Hall website (improvement # 2);
- Anticipation of TFPU payment (improvement # 4);
- Training of those involved in the process (Improvement # 5);
- Online feasibility consultation (Improvement # 7);
- *Empowerment* of agents involved in the process (improvement # 8);
- Elimination of Secretary's signature (improvement # 10);
- Prevention of file's duplication (improvement n#12);
- Definition of business activities degree of risk (improvement # 13).

Thus, the new process (*to-be)* would involve only 2 sectors, which would perform 6 procedures, a fact that would reduce about 70% of the total processing time. Figure 6 describes this new configuration.

The new proposal for process modeling centralizes activities in just 2 sectors, through the good practice of *empowerment* proposed on improvement #. 8. In addition, it eliminates the active involvement of SUSP – Secretary of Public Services , and it would be very easy to provide the feasibility Online, without the need for intervention in this sector, as suggested in improvement #7.

The Protocol Sector could be also dismissed, since CAC - Citizen Service Center, through adequate training, could confirm the completeness of the documentation submitted and generate the fees involved in the process, in addition to carrying out the first tweaks and system updates when necessary in accordance with improvement suggestions numbers 2, 4, 5 and 12.

Figure 6. Redesigned process *(to be)*
Note**:** This process map refers to the granting of permits for low-risk companies.

Once clearly defined the activities of low, medium and high risk by the Economic Sector Register, this activity could be automated and performed by CAC - Citizen Service Center, since there would be no more need for deliberation from the technical analysis sector.

Finally, through the implementation of the suggested improvements, the technician responsible for the latest revision in the Economic Sector Register could sign the grant of the charter, eliminating the need for the Secretary of the Revenue signature, since that job has many political duties that prevents him/her to be on the premises all the time.

With respect to time: if all documents are supplied satisfactorily by the applicant in the case of low-risk type company described in the matrix Case Function, thus dispensing permits from the Public Health Department, the Environment and the Fire Departments, the process would take an average of only 7 days, as verified in a neighboring City Hall which has a similar model to the one proposed for the City of São José.

With respect to costs: considering the involved fees remain the same, there would be no reduction in costs. Considering that this study will not propose the implementation of a new process, our analyses will finish at the Process Redesign step, so the last parts presented by Dumas, Process Implementation and Process Monitoring and Control, will not be discussed. We will now present our final considerations, the study limitations and suggestions for future studies.

5. CONCLUSION

A process-oriented view assumes a rational approach in which organizations formalize work subdividing it into smaller tasks and activities. In the public environment, with its constitutional prerogatives of legality, impartiality and morality, this rationalist approach can be an alternative for debureaucratization of dense and sometimes extensive processes.

In addition to the challenge of improving the processes without losing the constitutional principles and making them less bureaucratic, it is observed that the organizational culture of some offices of the Brazilian public service are based on lack of meritocracy, on the inconsistency of the goals, on excessive resistance to change, on employment stability, on concealment of information among several other bad practices that prevent the functioning of the public machine. There are significant obstacles to overcome to make it possible to implement the vision of processes using a methodology approved and recognized all over the world, such as BPM.

Considering this, the theory that was studied made it possible to adopt part of the BPM lifecycle model up to the redesign of the process and provided subsidies for the creation of a form, in addition to instructions on how to redesign the process so that it is streamlined.

It became apparent that to change a process isn't as easy as it may seem. As mentioned, the resistance to change, present mainly in public companies, can make it difficult to map, propose a process redesign and implant it. However, this should be a challenge to be pursued, since there is a direct impact on the economy, as it has been reported on cited studies.

The comparison between the process *as-is* presented and the *to-be* proposed, shows that there is still room for further debureaucratization. The process of opening businesses, more specifically the granting of permits, can be optimized according to the suggestions described in item 4.4.

Improvements # 7 (online feasibility consultation), # 8 (transfer of authority- empowerment) and # 10 (delegation of permit signature to a technician) can be highlighted. Only with these three measures is possible a reduction of 50.5% on the permit granting time, since these improvements act directly on the reduction of time, while the other improvements have a less relevant timely impact, however important for the smooth progress of work and for customer satisfaction.

Improving # 3 deserves a special attention, because it knocks down the average 25 days to about 30 minutes for permit granting for low-risk companies. That would be a huge efficiency gain for City Hall.

Therefore, this work has focused on the identification, analysis and redesign of the process of opening and operating permits, revealing that the municipality can achieve significant gain in improving the business registration process through the debureaucratization, computerization, training of those involved and focus on the customer, all aspects that may be perfectly worked based on BPM methodology.

In a practical and direct way, if our new proposed process is employed, it could result in 3 types of contributions:

- **For municipal employees** – faster and more agile work, less rework and greater customer satisfaction with reduction of criticism and even generating compliments from taxpayers;
- **For the Municipality** – A possibility of greater formalization of the labor force, higher revenues and lower environmental and social risk;
- **For the entrepreneur/applicant** – reduction of successive trips to City hall, increasing agility of the process, greater tranquility with the legalization of their activity, less time spent obtaining the permit.

Besides proposing a more efficient solution for the process of granting the operating permit, this work offers an important breakthrough for the Organization's culture, by presenting new opportunities and demonstrating improvements related to the process for both the external customer and internal client.

The importance of the methodology used in this study called Mystery Shopping (mysterious client) should be emphasized, since it approaches the employee without his knowledge of the fact, therefore facilitating the obtaining of information that could be concealed in an open communication research process.

Finally, we think the adoption of some simple measures could eliminate part of the bureaucracy and its cost, bringing beneficial effects for the economic development of the municipality, bringing employment and income to the population.

ACKNOWLEDGEMENTS

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Poboljšanje usluga javne uprave: Studija slučaja za registracije preduzeća

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Apstrakt

Ovaj rad se bavi procesom otvaranja preduzeća (izdavanje dozvole) u opštini. Osnovni cilj ovog rada je da se identifikuju, analiziraju i redizjniraju procesi izdavanja dozvola privatnim preduzećima, nakon čega su prikazani predlozi za poboljšanje. Odabrana istraživačka metoda bila je studija slučaja, a primenjen je kvalitativni pristup prema metodologiji BPM-a kako bi se dali odgovori na pitanje: Kako poboljšati i ubrzati izdavanje dozvole? Kao rezultat, predloženi model koristi najbolje prakse za registraciju preduzeća u cilju smanjivanja vremena trajanja registracionog procesa za 70% uz eliminaciju polovine postojećih službi uključenih u posmatrani proces trenutno. Zaključak je da je moguće smanjiti birokratiju i povećati efikasnost javne uprave primenom ove metodologije.

Ključne reči: *Upravljanje poslovnim procesima, registracija preduzeća, javni servis*