Implementation of Business Process Mapping Framework for Indonesia's Government Institutions

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ABSTRACT

Government organizations today face unprecedented challenges in carrying out their vital mission in an environment marked by shrinking budgets, strict regulations, and changing workforce status. The business process map is a diagram that shows the working relationship between organizational units that generate added value for all respective stakeholders. While some independent guidance is available on how various tools support different aspects of business process mapping initiatives, organizations still need to determine their speciûc needs and establish how information gathered on tool functionality can be evaluated against these needs. This study explores the practices of implementing business process mapping in 10 government institutions in Indonesia using a 3-dimensional framework approach. The research employed a qualitative approach with in-depth interviews, observation, and documents study was performed to collect and analyze data. The framework succeeded in describing a paradigm-shifting to encourage people to move from a silo thinking to a cross-function team. Finally, the business process map as a foundation of the organizational bureaucracy movement shows an improvement in institutional capacity to encourage administrators in operational consistency. Keywords: Bureaucratic Reform, Business Process Framework, Business Process Management, Business Process Mapping, Government Business Process.

ABSTRAK

Organisasi pemerintah saat ini menghadapi tantangan yang semakin kompleks dalam menjalankan misi vitalnya pada lingkungan yang ditandai dengan anggaran yang menyusut, peraturan yang semakin ketat, dan status tenaga kerja yang berubah. Peta proses bisnis adalah diagram yang menunjukkan hubungan kerja antar unit organisasi yang menghasilkan nilai tambah bagi semua pemangku kepentingan. Meskipun ada beberapa panduan independen yang tersedia tentang bagaimana berbagai alat yang mendukung berbagai aspek inisiatif pemetaan proses bisnis, organisasi masih perlu menentukan kebutuhan spesifik mereka dan dapat menetapkan bagaimana informasi yang dikumpulkan secara fungsional dapat dievaluasi terhadap kebutuhan ini. Kajian ini akan mengeksplorasi praktik penerapan

peta proses bisnis di 10 instansi pemerintah di Indonesia dengan menggunakan pendekatan kerangka kerja 3 Dimensi. Penelitian ini menggunakan pendekatan kualitatif dengan wawancara mendalam, observasi, dan studi dokumen dilakukan untuk mengumpulkan dan menganalisis data. Kerangka tersebut berhasil menggambarkan pergeseran paradigma untuk mendorong pelaku organisasi beralih dari pemikiran sektoral kepada kerjasama lintas fungsi. Akhirnya, peta proses bisnis sebagai landasan gerakan birokrasi organisasi menunjukkan peningkatan kapasitas kelembagaan untuk mendorong para administrator dalam konsistensi operasional.
Kata kunci: Reformasi Birokrasi, Kerangka Proses Bisnis, Manajemen Proses Bisnis, Pemetaan Proses Bisnis, Proses Bisnis Pemerintah.

INTRODUCTION

Bureaucratic reform is essentially an effort to make reforms and fundamental changes to the system of government administration, especially regarding aspects of the institution (organization), management (business process), and human resources of the apparatus. Various problems/obstacles that cause the government administration system not to work or run properly must be reorganized or renewed. Bureaucratic reform is carried out to realize good governance. In other words, bureaucratic reform is a strategic action to build the state apparatus to be more efficient and effective in carrying out the general tasks of government and national development. In addition, the very rapid progress of science, information, and communication technology and changes in the strategic environment require the government bureaucracy to be reformed and adapted to the dynamics of society's demands. Therefore, steps that are fundamental, comprehensive, and systematic in nature must be taken immediately so that the goals and targets that have been set can be achieved effectively and efficiently.

Bureaucratic reform is one of the Indonesia government's efforts to achieve excellent and clean governance and carry out fundamental reforms and changes to the government administration system, especially concerning eight areas as follows; changes in mindset, institutional management, policy deregulations, human resources of the public servant, management of the business process, accountability, supervision, and public services (Ministry of State Apparatus Empowerment and Bureau-

cratic Reform of the Republic of Indonesia, 2020). Through bureaucratic reform, an effective and efficient government administration system is organized. Bureaucratic reform is the backbone of changing the lives of the nation and state. The bureaucracy itself relates mainly to a complex structure that consists of multilayered systems and processes. These policies and procedures are responsible for maintaining the organization's uniformity and control. Traditional bureaucracy translates to creating an environment that helps to improve the management and controlling a country or organization (Weber, 2009). Nowadays, the definition of bureaucracy is often linked with bureaucratization, which relates to the complicated rules, enormously long processes and procedures, and written work that makes an individual's life harder.

Implementing bureaucratic reform is mandated for all government organizations, from central to local governments. The government has issued business processes since 2018, namely the Ministerial of State Apparatus Empowerment and Bureaucratic Reform Regulation Number 19 of 2018 concerning the Preparation of Business Process Maps for Government Agencies which also mandates all Ministries and other Institutions to compile business process maps. The preparation of a business process map is one form of improvement from a better government system and a reference for government agencies to describe an effective and efficient working relationship between organizational units to produce performance following the objectives of the organization's establishment to produce outputs that have added value for stakeholders. The purpose of compiling a business process map for government agencies is not only a form of implementing bureaucratic reform but also an improvement to the governance, duties, and functions of the state civil apparatus to be more effective and efficient in carrying out value-added work relationships.

Through the years, bureaucracy has experienced the transition from an ideal phenomenon at the beginning to painful real-

284　izations of its shortcomings in today's world. The following bureaucracy dysfunctions have been distinguished (Manning, Nick, & Agere, Sam , 2002) such as; dehumanization of interpersonal relationships and abuse of power by an official through corruption and lack of duty approach, routine and lack of flexibility in the employees' performance, maintaining a rigid organizational structure, excessive conformism, difficulties in responding to unexpected situations, a problem with implementing innovations and responding to changes. A business process map promotes cross-functional processes synchronization and facilitates an organization to focus on what is believed to be valuable from the stakeholder's perspective in a graphical diagram, simplicity, standardization, and provision for execution processes (Arevalo, Escalona, I., & M., 2016).

The President also issued Presidential Regulation Number 68 of 2019 concerning Organization of State Ministries which obliges every ministry and other government institutions to implement business processes that aim to describe effective and efficient relationships between organizational units within the ministries and institutions and coordinating ministries. With this picture of the relationship, the performance of each ministry and agency is expected to be more optimal in maximizing coordination between organizational units in providing added value for stakeholders.

Furthermore, the PANRB Ministerial Regulation Number 26 of 2020 concerning Guidelines for Evaluation of the Implementation of Bureaucratic Reform in point (a), namely the Fulfillment Aspect, including the business process map that has been translated into Standard Operational Procedures (SOP) and the translation of cross-functional maps into SOPs has been carried out. With the cross-functional map, it is hoped to create a system that encourages collaboration between departments/work units so that sectoral egos and silo thinking can be avoided. Furthermore, the business process map will provide a reference for agencies to build and organize and provide a solid basis for pre-

paring SOPs, including service standards that are simpler, more efficient, effective, productive, and accountable.

Designing the correct business processes allows the organization to recognize stakeholders' expectations, address their needs appropriately, establish support processes for consistent service, and manage the value-added processes that spark innovation (Fleacã, 2016). Therefore, this study was conducted to understand the systematic and systemic framework of business process map development in 10 government institutions in Indonesia. The study adopted a 3-Dimensional approach to business process mapping, consisting of a process and sub-process map, a relationship map, and a cross-functional map (Tukiran M. , 2016).

LITERATURE REVIEW

Business Process Management (BPM) has emerged as a comprehensive consolidation of disciplines sharing the belief that a process-centered approach leads to substantial improvements in both performance and compliance of a system. Apart from productivity gains, BPM has the power to innovate and continuously transform value-added creation in the entire cross-organizational value chains. The paradigm of "process thinking" is by no means an invention of the last two decades but had already been postulated by early economists such as Adam Smith or engineers such as Frederick Taylor (Brocke, 2015). The process approach involves a systematic definition that uses the management of processes and their interactions to achieve the desired results in accordance with the organization's policies, objectives, and strategic plans. Overall, system and process management can be achieved using the Plan-Do-Check-Act (PDCA) cycle with an overall focus on risk-based thinking to seize opportunities and prevent undesirable outcomes.

According to scientists, to better manage the organization, it is necessary to incorporate a structured view of managing these business processes with the aid of a business process management approach. The Association of Business Process Manage-

286   ment Professionals (ABPMP, 2009) has defined this approach as a discipline that helps practitioners to identify, design, execute, document, measure, monitor, and control business processes to achieve consistent and targeted results aligned with the enterprise2 s strategic goals (ABPMP, 2009). Understanding and managing interrelated processes as a system contributes to the effectiveness and efficiency of the organization in achieving the desired results. This approach allows organizations to control the interrelationships and dependencies between system processes so that overall organizational performance can be improved. As a standard of design and implementation of business process management founded in 1989, the Object Management Group, Inc. (OMG) is an open membership, not-for-profit computer industry standards consortium that produces and maintains computer industry specifications for interoperable, portable, and reusable enterprise applications in distributed, heterogeneous environments. Membership includes Information Technology vendors, end-users, government agencies, and academia.

The Object Management Group (OMG) has developed a standard Business Process Model and Notation (BPMN). The primary goal of BPMN is to provide a notation that is readily understandable by all business users. It ranges from the business analysts that create the initial drafts of the processes to the technical developers responsible for implementing the technology that will perform those processes, and finally, to the business people who will manage and monitor those processes. Thus, BPMN creates a standardized bridge for the gap between the business process design and process implementation. The main goal of BPMN is to provide a notation that is easy to use and understandable by all people involved in the business. BPMN notation is also designed for the nature of web service-based systems and can be mapped to an XML-based business execution language such as BPEL4WS (Business Process Execution Language for Web Service) and BPML (Business Process Modeling Language) (Harmon, 2007).

This specification represents the process of best practices within the business modelling community to define the notation and semantics of Collaboration diagrams, Process diagrams, and Choreography diagrams. BPMN intends to standardize a business process model and notation in the face of many different modelling notations and viewpoints. In doing so, BPMN provides a simple means of communicating process information to other business users, process implementers, customers, and suppliers (The Object Management Group, 2011). By focusing on and designing end-to-end processes mapping that transcends organizational boundaries, an organization can drive out the non-value added overhead accumulated at these boundaries. Furthermore, through a business process map, an organization can ensure that its processes deliver on its promise and operate consistently at the level at which they are capable (Hammer, 2015).

For the purpose of a business process review initiative, business process modelling is the act of representing both the current "As-Is" and future "To-Be" processes of an organization, so that the current process may be analyzed and improved. Essentially, it provides a graphical depiction of the process, enabling ease of communication and a shared understanding with different stakeholder groups. Furthermore, this "documented knowledge" provides structured analysis and discussion for improvement opportunities.. With the right tool, these models can be enriched with information regarding issues, risks, assumptions, opportunities, etc., and linked to information elements from other models, such as data models and organizational charts, to allow deeper analysis and better enterprise-wide reporting (Davies, 2015). There is a broad range of other purposes for process modelling, such as simply providing documentation on an organization's work practices (without a view for improvement) at the one end to designing automated workûow solutions at the other extreme. Therefore, it is critical to ensure that the correct tool has been selected to meet the process modelling needs and purpose.

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With process orientation being a central paradigm of the organizational outcome, a business process map is closely related to capability development (Helfat, 2003). A business process map reflects the skills and routines necessary to integrate, build, and reconfigure an organization's business processes in response to environmental change (Forstner, Kamprath, & & Röglinger, 2014). The performance benefit of improved integration between business map and operations management is extensively studied, including a focus on the alignment of planning to achieve maximum production processes (O'Leary-Kelly, W., & & Flores, 2002) (Sale, 2017). A business process map is often employed to cross the boundaries of organization functions and improve integration (Berente, Vandenbosch, & & Aubert, 2009) (Hassen & Turki, 2019) (Kobayashi & Tamakia, 2003). Improved integration can lead to higher levels of effectiveness and efficiency and a better structure of processes that are the basis for flexibility in operations. More recently, a single business process management system for business and operations management has been proposed and demonstrated (Pauker, 2018). While these studies embrace the ambition of cross-functional process management in an organization, they offer practical guidance on modelling executable organization processes.

With a business process map, a diagram that shows the working relationship between organizational units that generate added value to all stakeholders could be managed and improved continuously. A framework for drawing a map of business processes is needed to help organizations, especially government institutions, to be able to build a map of their business processes correctly and to be able to integrate all series of activities within the organization into a representative diagram. Business process modelling demonstrates a cross-functional view of the organization and allows the organization to focus on the customer. This focus provides the basis for considering the actions to be applied to the actors' performance. Process-related performance measures need to be defined so that they contribute to meeting the

customer's required value proposition (Cadle & Debra, 2010).

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Conceptually, the process is defined as a series of activities that change inputs into value-added outputs by utilizing certain resources. In short, we can say that a process is a series of value-added activities. The emphasis on value-added creation is the understanding of the word 'business' in business processes. So the word business here does not indicate an activity related to commercialization (trade and investment) but rather is a business as an added value creation. From this understanding arises the principle in business process mapping, that what is meant by business process mapping is the mapping of activities and not the mapping of work units within the organization. The output of one process can be the input for the following process. The series of input-process-output, which is forwarded to the next series of input-process-output and so on, is called a business process mapping. The preparation of a business process map requires strong leadership to decide on a helicopter view image of the organization that unites the entire series of activities to generate added value for stakeholders (Tukiran M. &., 2020).

RESEARCH METHOD

The research approach employed in this study has been based on in-depth qualitative studies with ten government institutions in Indonesia. The focus of the research in this paper is to describe the differences in the preparation of business process maps using the 3-dimensional method, which is simpler than the BPMN method with the same results. Triangulation analysis on document study, focus group discussions, and top management justification was employed among activities to ensure data validation. The study employed a qualitative data analysis technique. Additionally, a qualitative analysis was done based on the documents reviewed, which will be explained and aimed as part of this observation. The consistency of using an observation instrument in a qualitative study often refers to the instrument that shows the observer's individual capacity (Schneider, 2013). Because of

that, the instrument of the study is the observer himself (human instrument). This is made possible by venturing into the field and performing observations and in-depth interviews with previously identified informants.

RESULTS AND DISCUSSION

Business process mapping begins with a review of documents, especially the organization's strategic plan documents, where strategic objectives, program objectives, and activity objectives are measured in performance indicators, and targets are identified as a reference for outputs and outcomes. The achievement of these targets is the organizational performance that has been determined in the organization's strategic plan. The performance to be achieved is a driver that becomes a reference for all work units within the organization to carry out a series of activities in creating added value and achieving performance.

Business process map development should be managed with good project management, starting with the preparation and planning stages, development stages, implementation stages, and monitoring and evaluation stages. Organizing the development of the business process map needs to be appropriately developed and must involve the organization's leadership as the person in charge and support for the successful development of the organization's business process map to the preparation of SOPs and their implementation.

The organization's strategic plan document also lists the general policy directions and strategies chosen by the organization as well as a reference in determining the series of actions that work units must take within the organization to achieve the goals, objectives, mission, and vision of the organization set out in the strategic plan. This general policy direction and strategy describes how the organization chooses to achieve the goals that have been previously set. By understanding all the descriptions of the selected method and all the measurable targets to be completed, the data contained in this organization's strategic plan document

becomes a document that needs to be analyzed, categorized, reduced, and presented in a business process map.

The duties and functions of each organizational unit also need to be analyzed to determine the roles and responsibilities of each work unit in achieving organizational goals. Table 1 shows the document components analyzed as follows;

Table 1. Documents Analysis

NO	COMPONENTS	CRITERIA	DOCUMENTS TOBE ANALYZED
1	Organization vision statement	output and outcome	Strategic Plan
2	Organization mission statement	process	Strategic Plan
3	Organization goals	output and outcome	Strategic Plan
4	Strategic objectives with performance indicators and target	outcome	Strategic Plan
5	Program objectives with performance indicators and target	output and outcome	Strategic Plan
6	Activity objectives with performance indicators and target	output	Strategic Plan
7	General policy directions and strategies	process	Strategic Plan
8	Duties and functions of organizational units	process	Organization structure
9	Regulatory framework	instrument input	Strategic Plan
10	Organizational framework	instrument input	Strategic Plan

Once the documents have been analyzed, categorized, reduced, and presented, the next step is to conduct in-depth interviews with informants who are representatives of organizational units who understand their respective duties and functions. Then, the following step is to find out the extent of the series of activities that must be carried out, the series of activities that have been carried out, the series of activities that have not been carried out, and the series of activities that are not necessary. In this case, the series of activities described in the business process map are not only a series of "as is" activities, but also include a series of "to be" activities that have not been carried out. As long as the activities are ideal and relevant to be carried out according to the provisions of the legislation and the desired performance

achieved, those activities should be included within the business process map. The tasks and functions in the organizational structure can be used as a reference to ensure that the ideal and relevant series of activities can be carried out by work units within the organization.

Table 2. Triangulation of 10 Government Institutions

No	Units of Analysis	Component of Business Process Map	Data Collection		
			Interview	Document Review	Observation
1	Ministry of Foreign Affairs (MOFA)	Process map, sub-process map, relationship map, and cross-function map	√	√	√
2	Ministry of Trade (MOT)	Process map, sub-process map, relationship map, and cross-function map	√	√	√
3	Ministry of Education, Culture, Research, and Technology (MECRT)	Process map, sub-process map, and relationship map	√	√	√
4	Ministry of Public Works and Public Housing (MPWPH)	Process map, sub-process map, and relationship map	√	√	√
5	National Agency of Drug and Food Control (NA-DFC)	Process map, sub-process map, relationship map, and cross-function map with risk identification	√	√	√
6	National Institute of Aeronautics and Space (NIAS)	Process map, sub-process map, relationship map, and cross-function map	√	√	√
7	Meteorology, Climatology, and Geophysical Agency (MCGA)	Process map, sub-process map, relationship map, and cross-function map	√	√	√
8	Directorate General of Intellectual Property (DG-IP)	Process map, sub-process map, relationship map, and cross-function map	√	√	√
9	Secretariat General of Regional Representative Council of Indonesia (SG-RRC)	Process map, sub-process map, relationship map, and cross-function map	√	√	√
10	Indonesian Maritime Security Agency (IMSA)	Process map, sub-process map, relationship map, and partial cross-function map	√	√	√

Observation of the ideal process that needs to be built in the business process map as an effort to achieve organizational performance determined in the organization's strategic plan can be carried out by conducting secondary document studies. They include conducting interviews with stakeholder representatives and benchmarking analysis of similar organizations abroad. Table

2 shows the results of data analysis through interviews, document studies, and observations (triangulation) conducted on ten government agencies.

A business process map is a diagram that shows the working relationship between organizational units to achieve organizational performance effectively and efficiently. Considering that there are so many series of activities in an organization and so many organizational units involved, the first step in mapping the working relationship is to group these activities into a group of activities called a process.

As in a computer, there are many files, and they need to be organized into folders to make them easier to manage. It is the same way of thinking about making groups of organizational activities.

The results of all the previously collected data then need to be analyzed by being categorized, coded, and described in a series of activities carried out by the organization and grouped in folders of organizational activities.

As a result, process maps are established as a part of the business process map. When we use BPMN (Business Process Model and Notation), it is known as a level 0 map, which is similar to a process map. The process map or level 0 map is a helicopter view of organizational-wide activities. One of the principles underlying this process map is that simpler is better, as long as all activities within the organization are represented in each of the process boxes described. The business process map using the level is divided into several levels, namely the business process map level 0, level 1, level 2, level 3, and level n map (hereinafter). At all levels in this business process map, the preparation starts from the vision, mission, and goals which are then translated into business functions and processes to achieve them. Each identified business process map is then further elaborated into the next level (n) business process map, which is a logical series of activities in that one business process. The number of levels of the business process map is highly dependent on the complexity

of each business process. Below is an image of a business process map framework using levels (BPMN).

The results of the process map, which is a diagram of the relationship between processes as a display of all organizational activities, are shown in Figure 1 below;
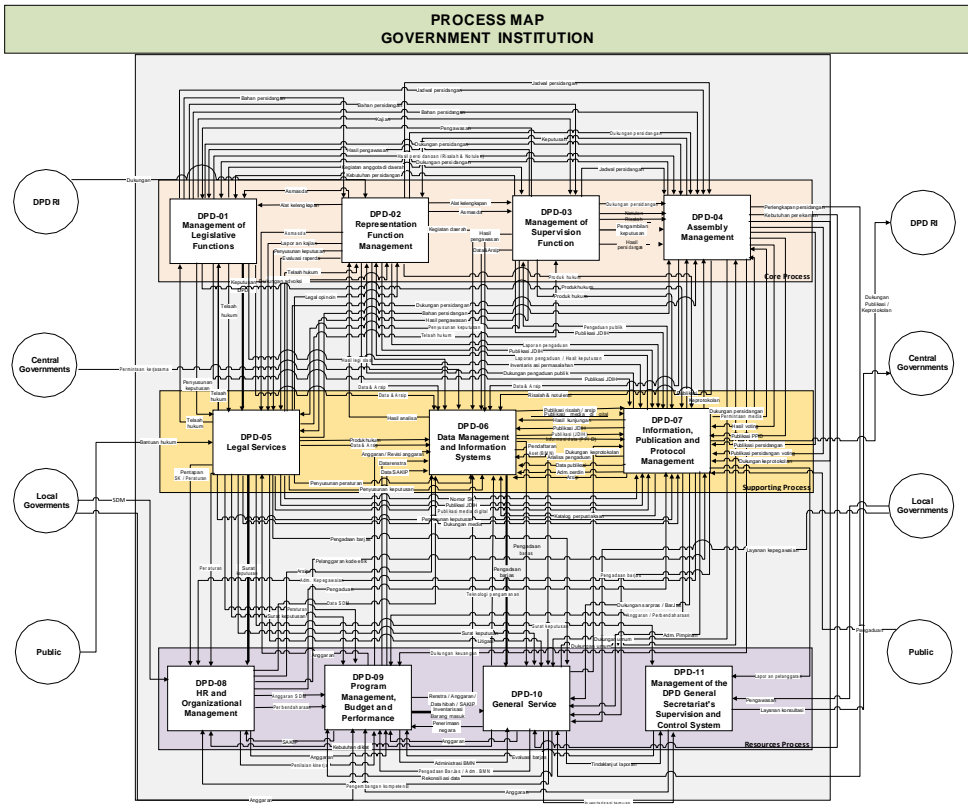

Figure 1. **A Process Map as A Helicopter view of Organizational Activities**

The process map that has been realized is a series of activities within the organization. Each process depicted represents a series of activities involving several organizational units. It is important to underline as a principle that the process boxes displayed in the process map are not the same as the work units in the organizational structure. There is a series of activities within each process box that involve several work units within the orga-

nization. If it turns out that an identified process only involves one work unit within the organization, then that process must be combined with other processes. This emphasizes that the definition of a process is a series of activities that involve more than one work unit within the organization.

Next, each process described in the process map needs to be broken down into sub-processes. The number of sub-processes in each process will, of course, vary. First, however, it is necessary to consider the coherence between processes so that the number of sub-processes in each process should not be too much different.

In BPMN, this sub-process map is called a level 1 map. In contrast to BPMN, this 3-dimensional framework approach is limited to sub-processes only. Meanwhile, in BPMN, the detail of the process can be unlimited. A Diagram of sub-processes in a government institution that has been developed can be seen in Figure 2 below;

Figure 2. **A Sub-Process Map**

After the process map and sub-process map have been successfully compiled, the next step is to conduct a focus group discussion with top management in government agencies to validate all the data obtained. Top management acts as an expert who justifies the design of process maps and sub-process maps that have been built. This is a crucial step because building process maps and sub-process maps is essentially a consensus-building activity.

Thus, the relationship between one process and another has been described in process maps and sub-process maps and validated by the organization's top management, so it is necessary to explain which work units in the organization are involved in each of the processes described. A map that describes the involvement of work units in each process and sub-process is a relationship map. In BPMN, this relationship map is not known, so in compiling a business process map with the existing BPMN, the level 0 map is detailed into a level 1 map, and so on into a level 2 map to an unlimited level n map. With this 3-dimensional framework approach, the presence of a relationship map makes it easy to identify which organizational units will be involved in each process and sub-process identified previously. The relationship map of a government institution is shown in Figure 3 below;
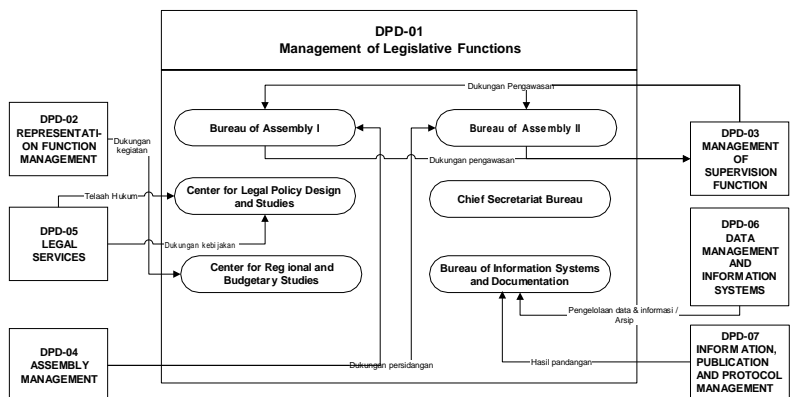
Figure 3. **A Relationship Map**

A cross-functional map is a diagram showing the working re-lationship between organizational units. The cross-functional map shows "who" as an organizational unit and "will do what" in a series of processes and sub-processes identified previously. So, the cross-functional map is the culmination of the business pro-cess map.

The number of cross-functional maps will be large enough to reach hundreds of maps, depending on the organization's size. A cross-functional map is a diagram translated from a sub-pro-cess map and a relation map. Each sub-process identified will be the title of the cross-functional map. However, it can happen that one sub-process map will generate multiple cross-functional maps. The numbering of process maps, sub-process maps, and cross-functional maps is done systematically so that identifica-tion and traceability of each process, sub-process, and cross-func-tional will be maintained. In mapping business processes with BPMN, the level of this cross-functional map will vary from one process to another. However, with this 3-dimensional framework approach, cross-functional maps are derived from sub-process maps and relation maps. In this cross-functional map, a more detailed description can be carried out into several cross-func-tional horizontally. A cross-functional picture of a government agency can be seen in Figure 4. (*see Figure 4*)

Cross-functional maps were prepared by involving in-depth discussions with representatives of work units. Each work unit is following its duties and functions, ensuring that work steps in-volving relationships with other organizational units are agreed upon under applicable regulations. Thus synergies between work units will occur in jointly achieving organizational performance. This cross-functional map illustrates transparent working rela-tionships between organizational units so that the unclear duties and responsibilities of each work unit can be avoided. The cross-functional map illustrates the role of each work unit in achieving
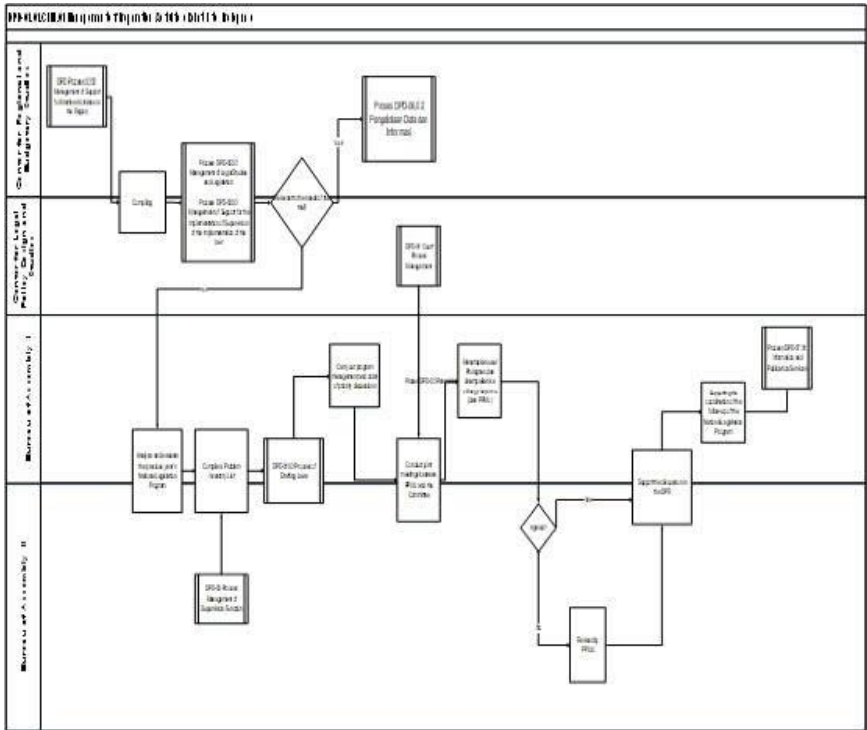
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Figure 4. **A Cross-Functional Map**

organizational performance. The cross-functional map becomes the basis for further preparation of standard operating procedures (SOP) that explain "who", "does what", "how", "terms and conditions", as well as the "service level" of each stage of activity that has been described. From the cross-functional map, an in-depth analysis of the roles and responsibilities of each work unit can also be carried out so that organizational redesign can be conducted objectively.

Process maps and sub-process maps show the interrelationships between one process and another. A relationship map is a map that shows the relationship between a particular process and the actors involved in the process. A cross-functional map shows the relationship between the actors involved in a process and what activities each actor's roles are. This 3-dimensional framework approach shows that new cross-functional maps can

be realized if process maps, sub-processes, and relationships have
been identified. In conclusion, the development of a business
process map for a government agency can be carried out using a
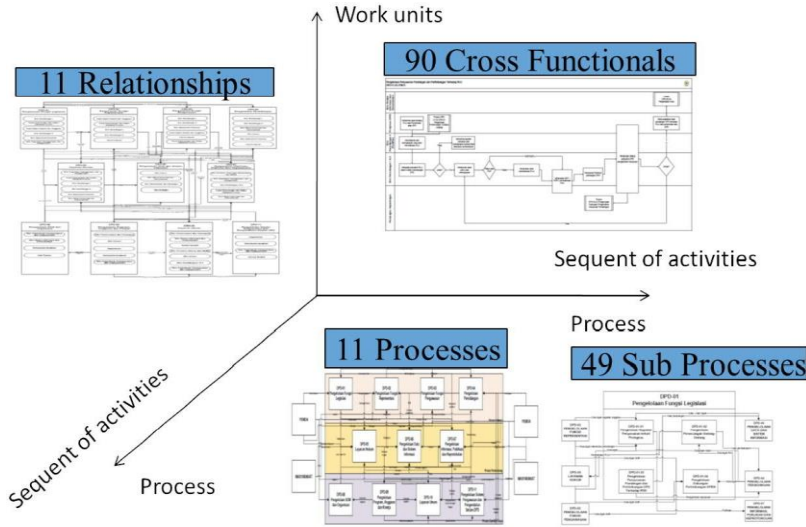framework shown in Figure 5 below;

Figure 5**. Framework in Business Process Mapping**

THEORETICAL IMPLICATION

Business Process Management emerged as a management dis-
cipline to building process-centric thinking. One of the tools
considered to be crucial for modelling business processes is the
Business Process Model and Notation (BPMN) (Nešiæ, Ljubiæ,
M., & & Vasoviæ, 2015).

This study in 10 government institutions has succeeded in
implementing a framework that facilitates the development of
business process maps. This framework focuses on describing
the substance of existing activities within an organization that
involves all work units involved and not on the notational rules
that strict and rely on sequential completion of the process map.
Thus, bureaucratic reform that requires government administra-
tion to be more effective and efficient in public services can be

designed, controlled, and improved based on the described busi-ness process map. The business process map serves to describe a series of activities carried out by a government agency in the public service it provides. Business process maps can also be used as a tool to project scenarios that will occur in public services carried out by a government agency. In the end, the business process map can also be made to find solutions as a prescription for the problems faced by a government agency related to the perfor-mance of its organization.
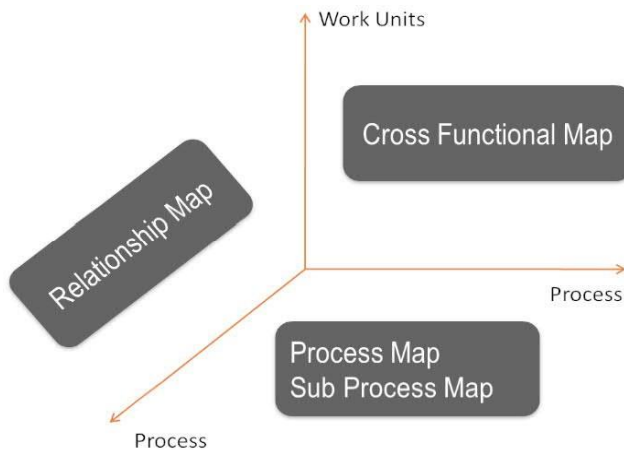
Figure 6. **A 3-dimensional Framework Model of Business Process Mapping**

Figure 6. shows a 3-dimensional framework approach as a framework model for building a business process map for a gov-ernment institution. Making a business process map begins by compiling process maps, sub-process maps, relationship maps, and cross-functional maps. Meaning, that a business process map, according to the 3-dimensional framework approach, consists of a process map, a sub-process map, a relationship map, and a cross-functional map constructed in the 3-dimensional relationship. Each map has a role in describing the substance of the series of activities and work units involved.

Although drawing a map of government institution business processes with a 3-dimensional framework approach is similar to

BPMN, there are also fundamental differences. The distinctive feature of this 3-dimensional framework approach is the emergence of a relationship map which is a diagram showing the work units involved in each process and the specified sub-processes. In contrast to how to draw a business process map with BPMN, this relationship map is not known in BPMN. This better shows the systematics and consistency with the 3-dimensional framework approach because every element described in the business process map becomes clearly visible. In addition, because the business process with a 3-dimensional framework approach emphasizes the construction of the substance of existing activities in a government institution, the notation used is also straightforward. This is also what distinguishes BPMN, which emphasizes the notations known by the computer.
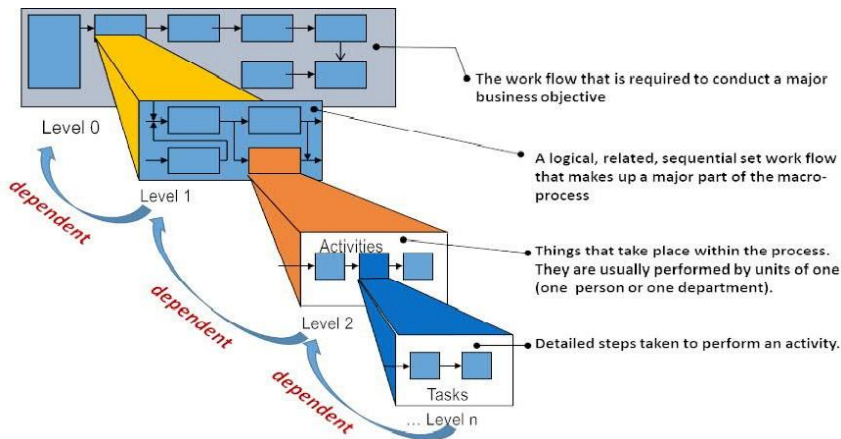

Figure 7. **Dependency of BPMN**

BPMN, widely known as a tool for drawing business process maps, is very suitable for single organizations such as business organizations, schools, or hospitals with no complex series of activities. However, if BPMN is applied to large organizations such as government institutions that handle multiple affairs, then BPMN has a weakness in that it requires a significant amount of time and energy to be able to describe a complete and complete

map of business processes. BPMN as a tool has limitations in describing a comprehensive and systemic series of activities for large organizations because the pattern used is dependent, as shown in Figure 7. This is because BPMN describes the processes that exist within the organization systematically and sequentially. If the previous processes have not been fully described, the derived processes cannot be described. The existing business processes in a company consist of several levels (levels). Starting from level 0, which describes the company's value chain. The next level, which is level 1, describes the core and supporting business processes. From every business process at level 1, some processes are carried out, so it is said that these processes are at level 2. At level 3, it is the breakdown of level 2 processes called subprocesses. Each sub-process contains various activities categorized in the next level and so on. The more detailed each sub-process, the more detailed activities (Harmon, 2007).

However, unlike the 3-dimensional framework approach, developing a business process map for a government agency can be carried out concurrently to save time and effort, especially if it is applied to a large organization. This study of 10 government institutions has proven that developing a business process map with a 3-dimensional framework approach is more effective and more efficient in line with the spirit of reform itself. This is reinforced that the regulation on business process mapping guidelines based on BPMN has existed since 2011 in Indonesia but has not been successfully implemented. This 3-dimensional framework approach method has changed the regulation of business process mapping guidelines for Indonesia's government institutions which have been in effect since 2018.

The 3-dimensional framework approach has been widely used in Indonesian government agencies, in line with adopting the 3-dimensional framework approach model into regulatory guidelines since 2018.

This 3-dimensional framework approach has succeeded in overcoming the weakness of the existing dependence on BPMN.

This is very useful for developing business process maps in large government institutions, where a single ministry consists of various directorates general that have different affairs from each other. By using this 3-dimensional framework approach, the directorate general in each ministry can build its business process map without having to wait for the business process map at the ministry level to be perfect. This is because the 3-dimensional framework approach is built on a systematic and systemic approach that has interdependence in a unified system (figure 8).
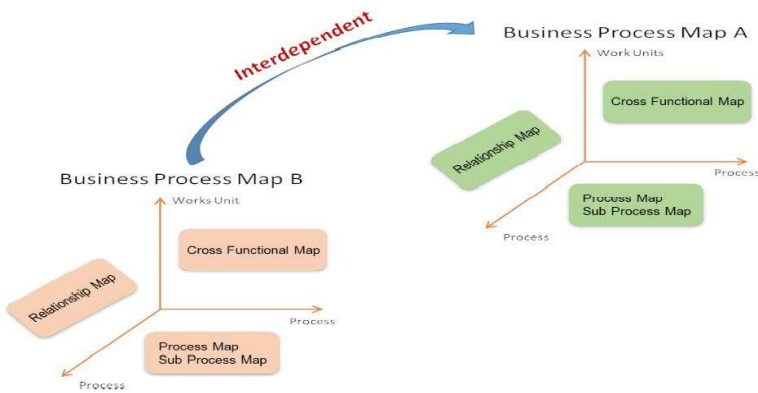

Figure 8. **Interdependency of 3 Dimensional Business Process Mapping Framework**

Dependency relationships on each business process map can be presented with an alignment matrix with a codification that has a strong association.

Thus, building a business process map for government agencies with a 3-dimensional framework approach provides a significant, practical, and theoretical impact. However, further research related to the impact of implementing government agency business process maps with a 3-dimensional framework approach needs to be carried out to obtain an evaluation and refinement of the concepts and models that have been introduced. Therefore, this article does not aim to generalize but rather to identify and develop preliminary discussions related to the theoretical

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elements. This is undoubtedly the main limitation of this article. Future research on business process reengineering, for example, in the public sector, must seize the importance of these underpinning tensions.

CONCLUSION

Bureaucratic reformation involves a significant change in paradigm and governance in Indonesia. Furthermore, bureaucratic reform also means a big stake for the Indonesian race to meet head-on the challenges of the future. This bureaucratic reform aims to increase human resources professionalism in all respective governments' institutions. Through bureaucratic reform, an effective and efficient government administration system is organized. A business process map promotes cross-functional processes synchronization and facilitates organizations to focus on what is believed to be valuable from the stakeholders' perspective in a graphical diagram, simplicity, standardization, and provision for execution processes.

Process design is the most fundamental aspect of a process. It consists of the specification of what tasks are to be performed, by whom, when, in what locations, under what circumstances, to what degree of precision, with what information, and the like. The design is the specification of the process; without a design, there is an only uncoordinated individual activity and organizational chaos (Hammer, 2015). The 3-dimensional framework approach is a systematic and systemic approach that will provide a framework to develop business process maps more easily but still provide added value for the organization in consistently carrying out its services. The business process map built with a 3-dimensional approach reinforces the substance of a series of activities within the organization so that a series of activities involving organizational units effectively and efficiently in achieving their performance can be presented in a simple yet comprehensive diagram.

The framework succeeded in describing a paradigm-shifting to encourage people to move from a silo thinking to a cross-

function team. In addition, when the paradigm is changed, it is easier to enhance the transformation and move forward to create value-added activities within the organization. Finally, the business process map as a foundation of the organizational bureaucracy movement shows an improvement in institutional capacity to encourage administrators in operational consistency. Public organizations face several specific tensions, such as, for example, providing good, adjusted services for each client while also maintaining principles of equality of treatment. Therefore, these organizations and their individuals have a lot to balance. Thus, this study demonstrates that a contextually business process of a public organization is expected to perform better since it provides its individuals with the tools to make these decisions.

DISCLOSURE STATEMENT

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REFERENCES

ABPMP. (2009). *Guide to the Business Process Management Common Body of Knowledge (BPM COK). 2nd edition.* Chicago: ABPMP Publishing.

Arevalo, C., Escalona, M., I., R., & M., D.-M. (2016). A metamodel to integrate business processes time perspective in BPMN 2.0. *Information and Software Technology, 77*, 17-33. doi:https://doi.org/10.1016/j.infsof.2016.05.004.

Berente, N., Vandenbosch, B., & & Aubert, B. (2009). Information Flows and Business Process Integration. *Business Process Management Journal, 15*, 119–141.

Brocke, J. v. (2015). *Handbook on Business Process Management: Strategic Alignment, Governance, People and Culture.* New York: Springer.

Cadle, J., & Debra, P. &. (2010). *Business Analysis Technique: 72 Essential Tools for Success.* Swindon: BCS Learning & Development Limited.

Davies, I. &. (2015). BPM Tool Selection: The Case of the Queensland Court of Justice. In *Handbook on Business Process Management 1, International Handbooks on Information Systems, Second Edition* (pp. 371-392). New York: Springer.

Fleacã, E. &. (2016). The Business Process Management Map – an Effective Means for Managing the Enterprise Value Chain. *Procedia Technology, 22*, 954-960. doi:https://doi.org/10.1016/j.protcy.2016.01.096.

Forstner, E., Kamprath, N., & & Röglinger, M. (2014). Capability development with process maturity models – Decision framework and economic analysis. *Journal of*

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Decision Systems, 23(2), 127-150. doi:https://doi.org/10.1080/12460125.2014.865310

Hammer, M. (2015). *What is Business Process Management. .* New York: Springer.

Hanson, J. E., & Nandi, P. &. (2002). Conversation support for business process integration. *Sixth International Enterprise Distributed Object Computing.* Lausanne, Switzerland. doi:10.1109/EDOC.2002.1137697

Harmon, P. (2007). *Business Process Change: A Guide for Business Managers and BPM and Six Sigma Professionals. 2nd Edition.* Burlington, USA.: Morgan Kaufmann Publisher.

Haseeb, Junaid; Ahmad, Naveed; Saif UR Malik; Anjum, Adeel. (2020). Application of formal methods to modelling and analysis aspects of business process reengineering. *Business Process Management Journal, 26*(2), 548-569. doi:DOI:10.1108/BPMJ-02-2019-0078

Hassen, M. B., & Turki, M. &. (2019). A Multi-criteria Evaluation Approach for Selecting a Sensitive Business Process Modeling Language for Knowledge Management. *Journal Data Semant, 8*, 157-202. doi:https://doi.org/10.1007/s13740-019-00103-5

Helfat, C. &. (2003). The Dynamic Resource-Based View: Capability Lifecycles. *Strategic Management Journal, 24*, 997-1010. doi: https://doi.org/10.1002/smj.332

Indonesia, M. o. (2020). *Bureaucratic Reform Road Map 2020-2024.* Jakarta: Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia.

Kobayashi, T., & Tamakia, M. &. (2003). Business process integration as a solution to the implementation of supply chain management systems. *Information & Management, 40*(8), 769-780. doi:https://doi.org/10.1016/S0378-7206(02)00102-7

Manning, Nick, & Agere, Sam . (2002). *Current Good Practices and New Developments in Public Sector Service Management.* London: Commonwealth Secretariat.

Nešiæ, Z., Ljubiæ, L., M., R., & & Vasoviæ, J. V. (2015). A model of information flow management in the function of business processes improvement. *16th IEEE International Symposium on Computational Intelligence and Informatics, Proceedings*, (pp. 209-214). Budapest. doi:10.1109/CINTI.2015.7382924

O'Leary-Kelly, W., S., & & Flores, B. E. (2002). The integration of manufacturing and marketing/sales decisions: impact on organizational performance. *Journal of Operations Management, 20*, 221- 240. doi: https://doi.org/10.1016/S0272-6963(02)00005-0

Pauker, F. e. (2018). centurio.work - Modular Secure Manufacturing. *16th International Conference on Business Process Management.* Sydney.

Pereira, J. L. (2016). Business Process Modeling Languages: A Comparative Framework. *New Advances in Information Systems and Technologies, 444*, 619–628.

Sale, S. e. (2017). A dynamic marketing-operations interface model of new product updates. *European Journal of Operational Research, 257*(1), 233-242. doi:DOI: 10.1016/j.ejor.2016.07.051

Schneider, C. Q. (2013). Combining QCA and Process Tracing in Set-Theoretic Multi-Method Research. *Sociological Methods & Research, 42*(4), 559-597. doi:https://doi.org/10.1177/0049124113481341

The Object Management Group. (2011, March 1). *https://www.omg.org/.* Retrieved June 5, 2022, from https://www.omg.org/spec/BPMN/2.0/PDF

Tukiran, M. &. (2020). *Membangun Sistem Manajemen Organisasi Pendidikan Berdasarkan ISO 21001:2018.* Yogyakarta: Kanisius.

Tukiran, M. &. (2020). *Petunjuk Praktis Penyusunan Peta Proses Bisnis Instansi Pemerintah.* Yogyakarta: Kanisius.

Tukiran, M. (2016). *Pemetaan Bisnis Proses & Penyusunan SOP Instansi Pemerintah.* Yogyakarta: Leutikaprio.

Weber, M. (2009). *The Theory Of Social And Economic Organization.* New York: Simon and Schuster.