
ARCHITECTURAL DESIGN OF BUSINESS PROCESSES FOR COMMUNITY EMPOWERMENT AND FLEXIBILITY BASED ON PRESIDENTIAL REGULATION NUMBER 132 OF 2022

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Abstract: The development of information technology in daily life is very rapid so it can increase the productivity of an individual or organization. The Government Sector also utilizes information technology to increase the provision of effective and efficient public services. Likewise the Government of Indonesia, 2018 issued Presidential Regulation No. 95 of 2018 concerning Electronic-Based Government Systems (SPBE) as a guideline for governance that utilizes information and communication technology to provide quality public services. SPBE evaluation and monitoring are carried out by the Ministry of State Apparatus Empowerment and Bureaucratic Reform (KemenPANRB) in every government agency in Indonesia. In 2020 the results of the SPBE evaluation at the Tangerang City Government obtained a score of 3.44 with a good index. For this reason, this research focuses on improving SPBE governance which includes the standardization and integration of SPBE business processes for the Tangerang City Government. This research provides a solution in the form of an SPBE enterprise architecture design in the business process domain according to the SPBE architecture. Several phases are used, namely the preliminary phase, architecture vision, and business process architecture. The main phase of this design is the business process architecture which produces level 0 business process maps, level 1, 2, 3, 4, and 5 business process maps, and cross-functional maps as standardization of SPBE business processes according to PermenPANRB No. 19 of 2018.

Keywords: Business Process Architecture; Enterprise Architecture; Tangerang City; SPBE.

INTRODUCTION

Based on Tangerang Mayor Regulation number 83 of 2016 concerning the position, organizational structure, duties and functions, and work procedures of the village, in article 3 the Ward has the task of assisting or carrying out some of the duties of the Sub-District in carrying out governance, economic and development, and community affairs within the scope of the village by the vision and mission of the Mayor as described in the Regional Medium-Term Development Plan (RPJMD). The implementation of information systems and technology plays a very important role in the framework of public services that are quick easy, fast, and efficient necessary for the sustainability of sustainable development. In line with the actualization of the vision and mission, as an elaboration of the Tangerang City RPJMD for 2019-2023, the alignment between the Tangerang City RPJMD and the Batucapeper District Change Strategic Plan for 2019-2023. The goals and objectives of Batucapeper District in 2019-2023 are, "The realization of good District Governance".

One of the reform action plans of the Tangerang City government is Quik Wins with its priority activities/ sub-activities including Strengthening the Electronic-Based Government System (SPBE). The implementation of the Masterplan-Government/ SPBE is based on the implementation policy contained in Presidential Regulation Number 132 of 2022 concerning National SPBE Architecture. To build fast and efficient governance. Therefore, an SPBE architecture is needed

as a guideline in building and harmonizing the system in each government agency, both central and regional.

In its implementation, Tangerang City has implemented a policy with the issuance of Mayor's Decree number: 591.2 / Kep.471-Bag.Orgaisasi / 2022 as an amendment to Mayor's Decree number: 591.2 / Kep.93-Bag.Org/ 2022 concerning Business Process Maps. This is necessary because of the change in Perda No.3/2019 to Perda No.5/2021 ttg RPJMD for 2019-2023. However, the Mayor's Decree (Kepwal) only describes the business process maps up to level 2. In this study, making a business process map that can touch up to the village level, by taking the example of the Community Empowerment and Ward program.

In the implementation of development carried out in Tangerang City, there is often repeated work related to data collection and proposed maintenance activities for facilities and infrastructure at the village level. For this reason, with the business process map up to the village level, to make it clearer, the business process map and cross-functional maps can be integrated according to the RPJMD in Tangerang City.

Currently, data on existing facilities and infrastructure in the region always uses data that requires repeated data verification and validation due to the absence of a database that can be a reference material that is integrated with the Tangerang City Public Works and Spatial Planning Office (PUPR). Through the clear architectural mapping of business processes, it will facilitate the discovery of

data again whose data is clear and accountable.

This research is to identify development and interoperability targets in each area, namely designing the architecture to be formed, complementing the vision, mission, and objectives of the Tangerang City Government, especially the Porisgaga Baru sub-district of Batuaceper,

MATERIALS AND METHODS

The research method used in this study starts from the data collection stage, namely by conducting interviews and interviews with Tangerang City government agencies, in addition to the Organization Section of the Tangerang City Regional Secretariat as well as Batuaceper District, Tangerang City, and the Porisgaga Baru Village Office as research objects. Then create architectural design and business process design.

The SPBE Pemerintah Regional architecture is prepared for a period of 5 (five) years guided by the National SPBE Architecture and the RPJMD. Architectural references describe the das an r component that is used as a reference for the compilation of each architectural domain. While the architectural domain describes the substance of the architecture that contains one of them the business process architecture domain. Based on Presidential Regulation 95 of 2018 concerning SPBE, the "SPBE Master Plan" has been distinguished from the "SPBE Architecture" (previously in the Minister of Communication and Informatics No. 41 of 2017 the concept of the ICT Master Plan also contains

Tangerang City, as well as the Architectural Business to explain the flow of business processes in Tangerang City, especially in the Community Empowerment and Ward programs. This business architecture is produced starting from the stage of mapping business processes level 0, level 1, 2,3, and 4 and cross-functional maps on public works government affairs.

Architecture).

The SPBE architecture, which is an application of Enterprise Architecture, is a basic framework for describing the integration of business processes, data and information, SPBE services, SPBE applications, SPBE infrastructure, and SPBE security to produce integrated government services.

In Prepress number 132 of 2022, each SPBE Architecture contains 2 (two) components, namely:

1. Architectural references, describe the basic components of the standard architecture and can be used as a reference for the compilation of each architectural domain.
2. Domain architecture, which describes the substance of the architecture that contains the domain of business process architecture, the domain of data and information architecture, the domain of the SPBE infrastructure architecture, the domain of the SPBE application architecture, the domain of the SPBE security architecture, and the domain of the SPBE service architecture.

The relationship between all SPBE

Architecture References and all SPBE Architecture Domains and Architectures

within the SPBE framework is shown in the following figure:

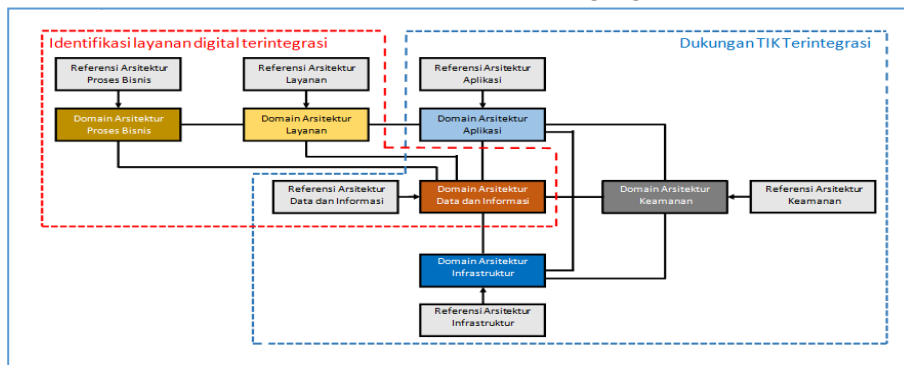


Figure 1. Inter-Component Linkages in SPBE Architecture (Prepres number 132 of 2022)

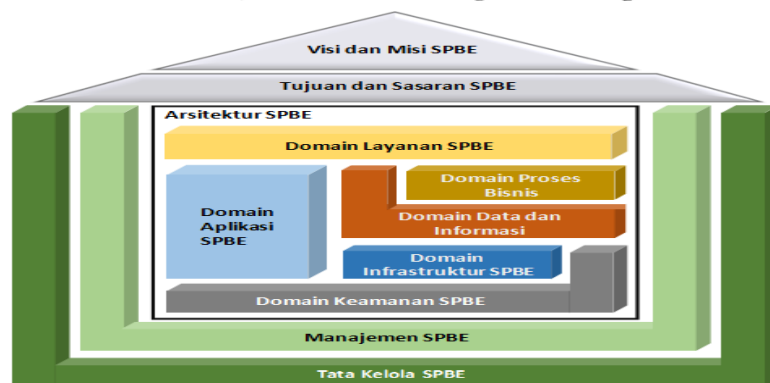


Figure 2. The SPBE Architecture Framework within the SPBE Framework (Prepres number 132 of 2022)

In the domain of government business process architecture, classified into levels of business process architecture reference structure consists of 4 (four) levels, namely the government sector as level 1 (first) which becomes a structure at the national level, government affairs as level 2 (second), government functions as level 3 (third) defined by local governments by the duties and functions and authorities related to the national level (Central

Agencies), The Government Sub-Function describes in more detail the function of government as level 4 (fourth) which defines the data and information generated and the integrated services to be built as part of the national digital service.

Here's Figure 2.3 of the interrelationships of business process architecture structures in the SPBE Architecture framework:

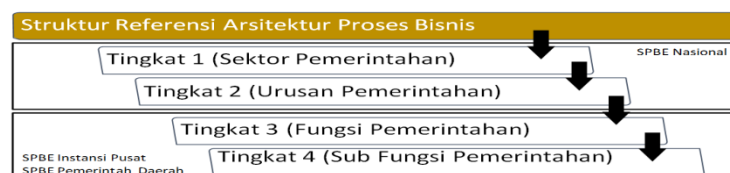


Figure 3. Linkage of business process architecture structure in the SPBE Architecture framework (Prepres number 132 of 2022)

The domain of business process architecture consists of a wide variety of

government business processes that will generate a wide variety of data and information and will define government services, which are directly related to the SPBE service domain and the data and information domain. Thus, other

information related to government affairs can be related, such as applications or supporting infrastructure, or data and information needed or generated in the implementation of government affairs.

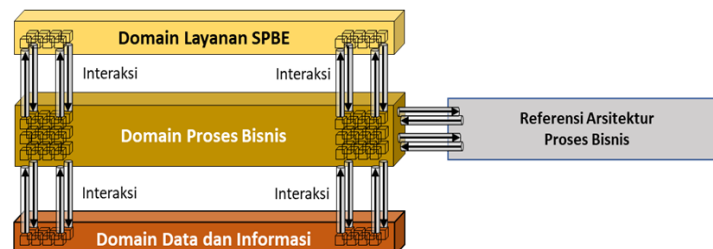


Figure 4. Direct relationships in Business Process Domains (Prepres number 132 of 2022)

To make an efficient alignment of an organization with the wants and needs of the organization using Business Process Modelling Notation (BPMN). BPMN, describing a business program that is based on flowchart techniques, is assembled to create graphical models of business operations with activities and flow controls that define the sequence of work. In business processes, it can be said to be BPMN (Business Process Modelling Notation) which can be compiled in the form of a diagram used to represent a sequence of activities implicitly focusing on a process, action, and activity.

The first step of the study is the data collection stage. At this stage, it aims to explain research data collection techniques for the design of EA SPBE. The data collection techniques used are interviews and literature studies. The initial step at this stage is the introduction of the object of study and the introduction of the concept of SPBE. Furthermore, conduct interviews with speakers from the Tangerang City Government to obtain the data needed

and to find out the existing conditions of the Tangerang City Government. The next step is to conduct a literature study by studying several regulatory documents related to SPBE and business processes, namely Presidential Regulation Number 95 of 2018, RPJMD of 2019-2023, PermenPANRB Number 19 of 2018, and studying scientific journals relevant to EA SPBE. The second stage in the study is the identification and design stage.

The implementation of the development and preparation of the vision, mission, and priority programs of the Mayor and/or RPJMD of Tangerang City is guided by the RPJPD of Banten Province. RPJMD is an elaboration of the vision and mission of regional heads during the 5 years, namely the period 2005-2008, 2009-2013, 2014-2018, 2019-2023, and 2024-2025.

The preparation of the Business Process Architecture is carried out by conducting an inventory and defining business processes according to the organizational structure of the work order

(SOTK), then completing the attributes of business process metadata, classifying business processes based on business process architecture references (levels 1, 2, and 3). In this case, reference to the business process architecture level 4 (sub-function) and level 5 of the activities of the regional device work program are proposed. Next is an inventory of diagrams (artifacts) of business processes that have been mapped.

A level 0 business process map is a Business Process Map that contains the entire business process of a government agency which is a direct derivative of the vision, mission, and objectives in the strategic plan document. A level 1 business process map is a more detailed overview of a level 0 business process map, which can be identified from the government's strategic goals or objectives for the regional development program. While the relationship and cross-function map serves to illustrate the series of work across units on the level 2 business process map, in more detail it is depicted on the level 3, 4, and 5 business process maps, so that it can be known from the work activities of each regional development program up to the lowest level of sub-districts and sub-districts.

RESULTS AND DISCUSSION

This business process architecture is produced starting from the stage of mapping business process level 0, levels 1, 2, 3, and 4 and cross-functional maps with examples of case studies depicting the OpD of Batuceper sub-district at the Porisgaga Baru sub-district level.

The final stage in the study is the conclusion drawing stage. This stage aims to describe the conclusions of the results of the design of SPBE EA in the business process domain of the Tangerang City Government, especially Porisgaga Baru village which can be used as a guide or reference for business process development in subsequent research.

The application of Enterprise Architecture focuses on Architecture Bussines, which describes the business architecture, containing organizational business strategies and information on key activities. At this stage, it will explain the flow of business processes in Porisgaga Baru village, to suit its duties and functions, so that it is easy to communicate internally and externally about business processes to achieve the vision, mission, and goals and have knowledge assets that integrate and document with business processes related to OPD in Tangerang City. This business architecture is produced starting from the stage of mapping business processes level 0, levels 1, 2, 3, 4, 5, and cross-functional maps with examples of discussions on government affairs in the field of public works. The mapping is illustrated by identifying based on strategic goals in the 2019-2023 RPJMD of Tangerang City.

The level 0 business process contains a description of the entire process to achieve the vision and mission of the Tangerang City Government based on the strategic goals of the RPJMD for 2019-2023. Using the KT (Tangerang City) process code.

While at level 1 the elaboration is more detailed than the process at level 0, which is carried out by each process at level 0. Level 1 depicts a map of business processes performed by organizational units and the connectedness between one

process and another. An explanation of the process description of the level 1 business process map for KT.05 of the Tangerang City government can be seen in table 3.1 below:

Table 1. Description of Business Process Level 1

Business Process Level 0		Business Process Level 1	
KT.05	Realizing adequate and competitive city infrastructure, facilities and facilities	KT.05.11	Community and Village Empowerment Program

On the KT.05 relation map, there are more regional linkages, namely the Regional Secretariat in this case the Regional Development Planning Agency has relations with the Housing and Settlement and Land Service, the Regional Library and Archives Service, the Population and Civil Registration Service,

the District and the Regional Disaster Management Agency. Figure 3.2 shows a more detailed process of the KT.05 Process for Community Empowerment and Ward, in which there is a sub-process, namely KT.05.11, namely the Community and Ward Empowerment Program.

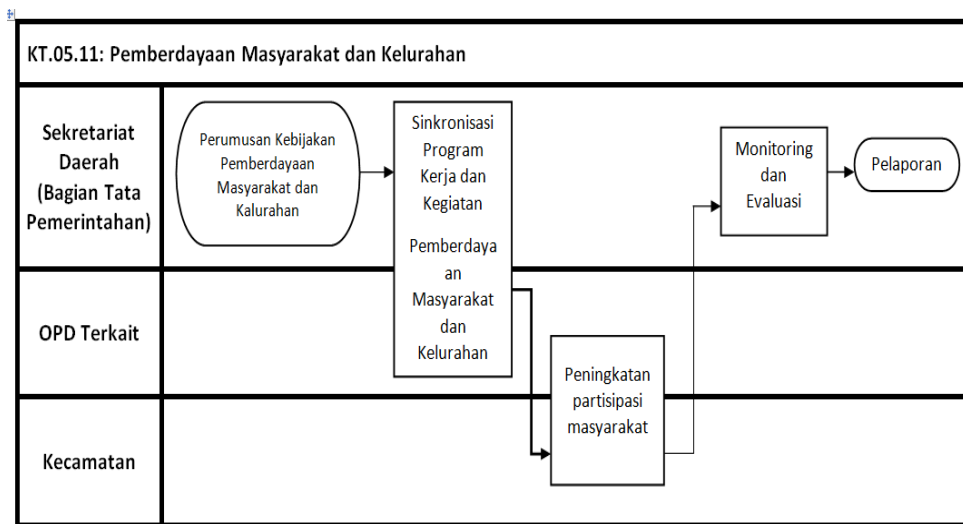


Figure 5. Level 1 Business Process Map
Community and Village Empowerment Program

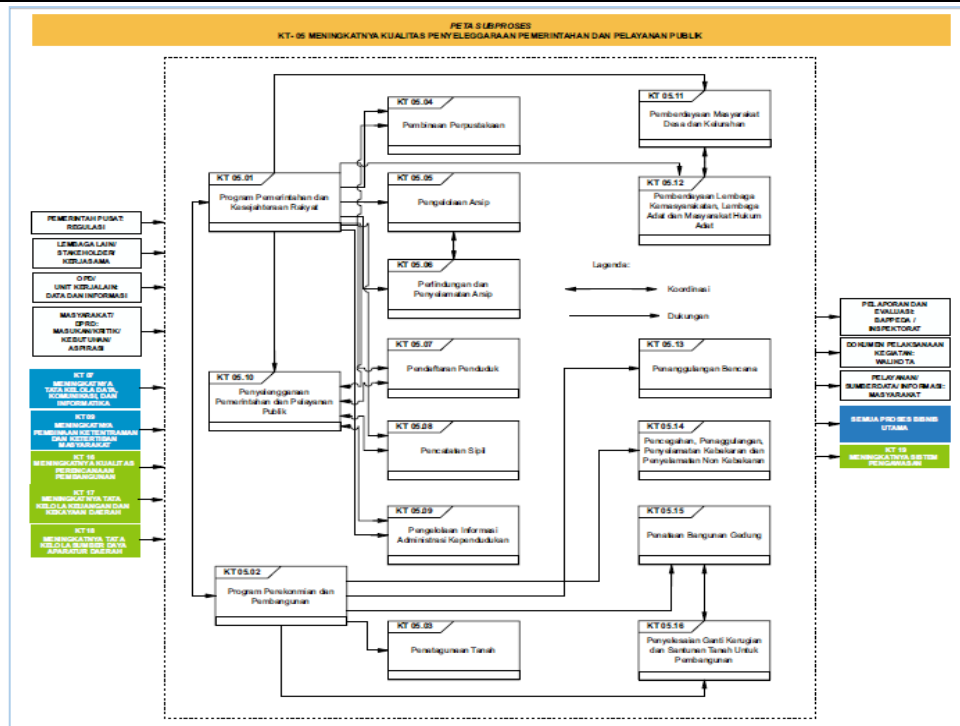


Figure 6. Business Process Sub Map
Community and Village Empowerment Program

The next process is a cross-functional map that depicts interconnected cross-device work sequences and forms the work processes of each process at process level 1. This cross-functional mapping is identified from the work activities contained in the priority program

in the process map above as well as the identification of development priority programs in 2022. An explanation of the description of activities from the KT.05.11 function map of the Tangerang City Government can be seen in Table 3.2 and Figure 3.3 below:

Table 2. Description of Business Process Level 2

Business Process Level 1		Business Process Level 2	
KT.05.1 1	Community and Village Empowerment Program	KT.05.11. CFM.01	Community Empowerment Activities in Ward

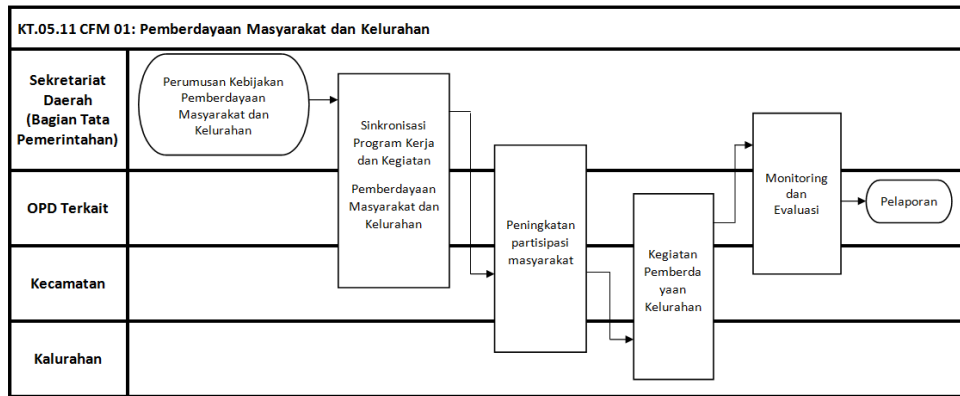


Figure 7. Level 2 Business Process Map

Community [Empowerment](#) Activities in Ward

Figure 3.3 shows a more detailed process of the KT.05 KT.05.11 Process, namely the Community Empowerment Program and Ward, which is a cross-functional map of KT.05.11.CFM.01, namely Community [Empowerment](#) Activities in Ward.

The level 3 business process map illustrates the implementation of Community [Empowerment](#) activities in Ward. While on the level 4 business process

map is the verification and validation process of the recipients of the Drainage Sakuran Maintenance Package in Rw.04. On the level 5 business process map is the process of how data and information can be stored and shared with other regional devices, through an application system that can be accessed together but in the accountability of the data is carried out by each relevant OPD who directly handles the data, in this case, the Tangerang City PUPR Office.

Table 3. Level 3 Business Process Description

Business Process Level 2		Business Process Level 3	
KT.05.11.CFM.01.1	Community Empowerment Activities in Ward	KT.05.11.CFM.01.01	Inventory of Data and Information on Facilities and Infrastructure

Table 4. Description of Business Process Level 4

Business Process Level 3		Level 4 Business Process	
KT.05.11.CFM.01.01	Inventory of Data and Information on Facilities and Infrastructure	KT.05.11.CFM.01.01. KT.07.02.CFM.02	Drainage Channel Maintenance Package at Rw.04

Table 5. Level 5 Business Process Description

Business Process Level 5		Information
KT.05.11. CFM.01.01. KT.07.02 CFM.02	Drainage Channel Maintenance Package at Rw.04	Data verification and validation - Infrastructure Condition

On the level 5 business process map, business processes are described by alignment methods to be efficient using Business Process Modelling Notation (BPMN), to describe flowchart techniques, assembled to create graphical models of business operations that contain activities and flow controls that define the work sequence in the form of diagrams used to represent the sequence of activities

implicitly focused on a process, actions, and activities. The depiction of BPMN for activities related to Community and Village Empowerment Activities is exemplified starting from the preparation of the RKA, preparation of DPA, verification and validation of data, and monitoring of physical development can be seen in the following pictures below:

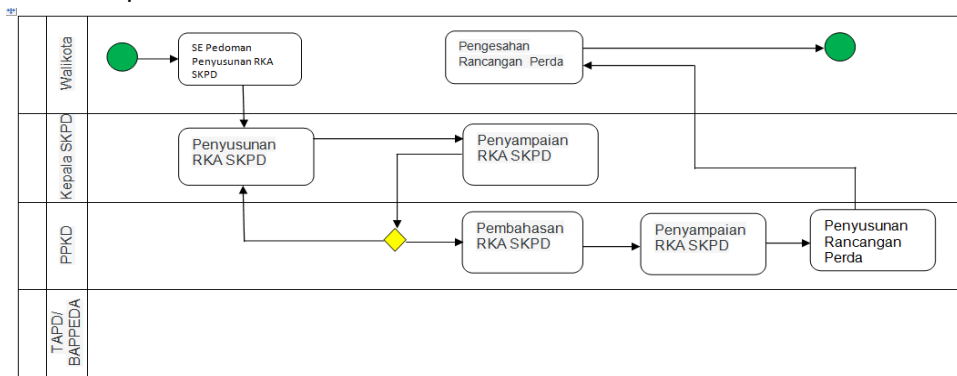


Figure 7. BPMN Business Process of RKA Preparation

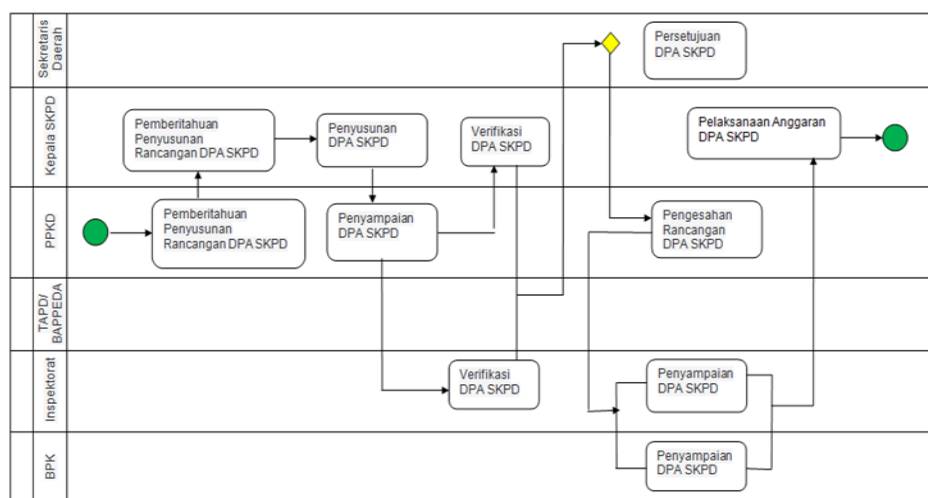


Figure 8. BPMN Business Process of DPA Preparation

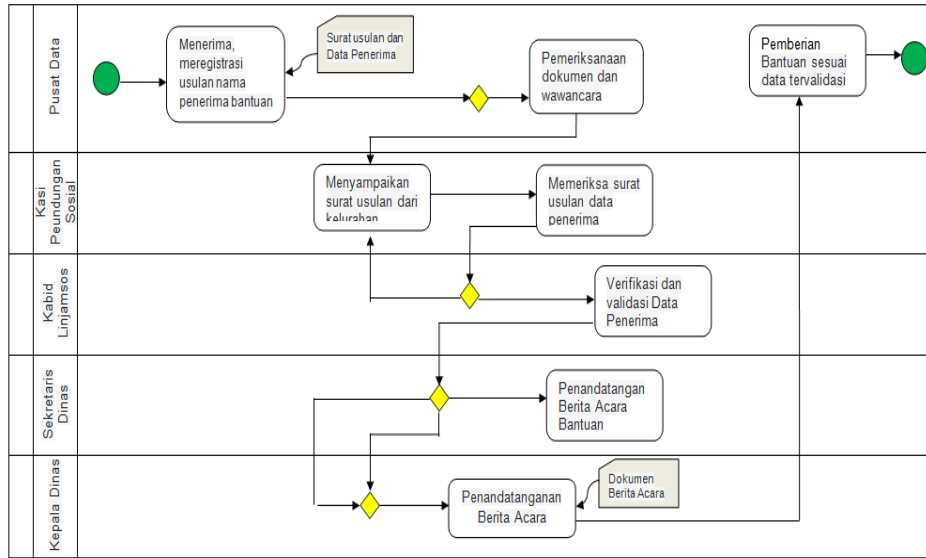


Figure 9. BPMN Business Process Data Verification and Validation

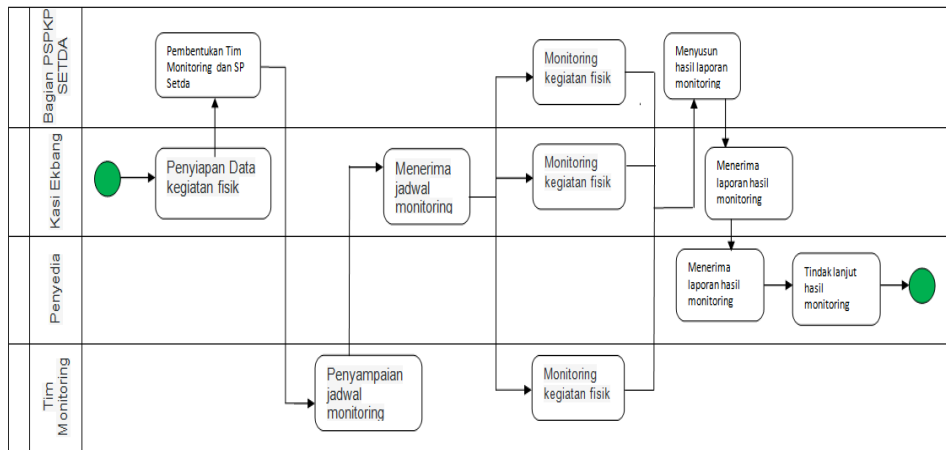


Figure 10. BPMN Business Process Physical Development Monitoring

CONCLUSIONS

Based on the results of the discussion in this study, several conclusions can be drawn, including:

1. Business processes are not optimal in the use of information systems and technology, so this study makes an analysis and design of enterprise architecture to align business strategies and SI / IT strategies.
2. The design of a business process architecture based on Presidential Decree

number 132 of 2022 mapping in this phase produces a map of business processes from level 0 to level 5, which aims to provide guidelines for the implementation of SPBE Tangerang City in an integrated manner.

The level 0 business process map, explains the entire process carried out to achieve the vision and mission of Tangerang City. The level 1 business process map uses an example of depiction

through the field of local government administration and public service of the main process KT.05. The level 2 business process map describes in detail the level 1 business processes and a cross-functional map that illustrates the workflow and interrelationships of regional devices from programs in level 1 business processes. The level 3 business process map illustrates the implementation of Community [Empowerment](#) activities in Ward. While on the level 4 business process map is the process of verifying and validating the recipients of the Drainage Channel Maintenance Package in Rw.04. On the level 5 business process map is the process of how data and information can be stored and shared with other regional devices, through Data Inventory and Information of Facilities and Infrastructure.

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