Architectural Design of an Electronic Based Government System (Case Study of XYZ district government)

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Abstrak

Perancangan Arsitektur Sistem Pemerintahan Berbasis Elektronik (SPBE) bertujuan menyusun kerangka dasar terkait integrasi antar domain Arsitektur SPBE yaitu Proses Bisnis, Layanan, Aplikasi, Data dan Informasi, Infrastruktur dan Keamanan. Hasil penelitian menunjukkan bahwa proses pemetaan SPBE menghasilkan 17 proses bisnis, 44 layanan, 112 aplikasi ,123 data dan informasi. Pemetaan infrastruktur SPBE memiliki beberapa pembagian yaitu fasilitas komputasi, platform dan sistem integrasi. Pemetaan keamanan SPBE memiliki beberapa bagian yaitu standar teknis dan prosedur keamanan, penerapan keamanan SPBE dan kelaikan keamanan SPBE. Tahap analisis SWOT menyimpulkan bahwa yang menjadi kekuatan (strengths) yaitu proses bisnis, layanan dan aplikasi SPBE yang memadai untuk mendukung kinerja layanan administrasi pemerintahan dan layanan publik. Kurang lengkapnya data yang digunakan untuk mengisi kelengkapan domain infrastruktur dan keamanan SPBE sendiri menjadi kelemahan (weakness), peluang (opportunity) serta ancaman (threats) yang dimiliki. Peluang yang dimaksud yaitu dapat menjadi arah yang jelas dalam implementasi SPBE sehingga berpeluang untuk menaikkan nilai indeks SPBE.

Kata Kunci: *Perancangan Arsitektur, Sistem Pemerintahan Berbasis Elektronik, SPBE, Analisis SWOT.*

Abstract

The design of the Electronic-Based Government System Architecture to develop basic framework related to integration between SPBE Architecture domains, such as Business Processes, Services, Applications, Data and Information, Infrastructure, and Security. The results showed the SPBE mapping produces 17 business processes, 44 services, 112 applications, 123 data and information. SPBE infrastructure mapping has several divisions, such as computing facilities, platforms, and system integration. SPBE security mapping has several parts, such as technical standards and security procedures, SPBE security implementation, and SPBE security feasibility. The SWOT analysis concludes the strengths are business processes, services, and SPBE applications are sufficient to support the performance of government administration services and public services. The incomplete data used to complete the infrastructure and security domains of SPBE is a weakness, opportunity, and threat. The opportunity is can provide a clear direction in the implementation of SPBE has the opportunity to increase the SPBE index value.

Keywords: *Architectural Design, Government System Based Electronic, SPBE, SWOT Analysis.*

1.   Introduction

The information and communication revolution provides opportunities for the government to innovate in the development of state apparatus through the implementation of an Electronic-Based Government System (SPBE) or better known as e-Government (e-gov) or digital government [1] [2]. SPBE has a role in providing services to government agencies, state civil servants, business people, the community, and other parties. SPBE provides an opportunity to encourage and realise open, innovative, and accountable government administration, increase collaboration between government agencies in carrying out government affairs and tasks to

achieve common goals, and improve the quality and reach of public services to the wider community [3][4].

Several Central and Regional Government Agencies have implemented SPBE which contributes to efficiency and effectiveness in administering government at Central and Regional Government Agencies. The results of SPBE development and the level of maturity still vary greatly between Central and Regional Government Agencies. This is reflected in the average achievement of the SPBE index value in each Central and Regional Government Agency which is still varied and quite unequal [5].

The XYZ Regency government is very aware of the importance of implementing SPBE, but XYZ Regency is currently facing important problems that must be resolved regarding SPBE. Some of these problems mainly come from the technological and communication aspects, such as application development, is carried out by regional officials individually. This causes overlap and difficulties in integrating applications with data centers. District Government The SPBE domain index value is a value that shows the maturity level of SPBE implementation in certain aspects [6]. Nationally, XYZ Regency is at the maturity level or ALREADY category, which is the second lowest maturity level after LESS (out of 5 maturity level categories), with an SPBE index value of 2.07 (range 1 to 5). The portrait of the National SPBE evaluation results does not match the expected target, such as achieving the good or very good predicate category according to the SPBE index.

Seeing that the implementation of SPBE has not run optimally, various efforts need to be made to increase the SPBE index in XYZ Regency. There are still many shortcomings in several domains, such as the policy domain, governance domain, management domain, and SPBE Services domain. One of the efforts that must be made by the Regional Government of XYZ Regency is the design of the SPBE Architecture which is a reference in the implementation of integrated government, the SPBE Architecture is prepared based on the national SPBE Architecture and the regional Medium Term Development Plan.

Previous research related to new government governance and digital government smart cities showed the need for information technology infrastructure support so that it allows the public to interact directly with the government through communication channels [7], [8]. Other research related to GAP analysis carried out on 4 SPBE domains, such as policy, governance, management, and SPBE services, resulted in the identification of capability maturity based on SPBE processes and technical functions without considering the level of maturity caused by other things [9]. Research related to the evaluation of E-Government maturity, which shows the results of SPBE maturity in public services, received the "Poor" category. Some improvements include improving indicators, governance recommendations, and SPBE service recommendations [10].

SPBE Architecture Design aims to develop a basic framework related to integration between SPBE Architecture domains, such as business processes, services, applications, data and information, SPBE infrastructure, and SPBE security. XYZ Regency itself has a development agenda in the digital sector, especially the implementation of an Electronic Based Government System (SPBE), which requires clear direction and plans. This SPBE architectural design uses the Abacus architectural template to carry out the mapping process of the 6 SPBE Architectural domains. The Abacus architectural template contains several metadata from the 6 SPBE Architectural domains that will be mapped. Mapping using the Abacus architectural template aims to ensure that there are no duplicates of existing data. Mapping results using the Abacus architectural template produced 17 business processes, 44 services, 112 applications, 123 data and information. SPBE infrastructure mapping has several divisions, namely computing facilities, platforms and system integration. SPBE security mapping has several parts, namely technical standards and security procedures, SPBE security implementation and SPBE security feasibility, integrated SPBE development and management. The SPBE Architectural Design is expected to provide clear direction and a sustainable plan as a guide for the XYZ Regency Government in the development and management of an integrated SPBE.

2. Research Method / Proposed Method

The research method is the basic stage carried out in conducting research. The research methodology aims to ensure the research process is carried out regularly and systematically in accordance with the stages that have been determined.

2.1 Research Flow

This research uses descriptive qualitative research methods, which relate to the study of an object, condition or other real phenomenon. The approach to this research also uses literature studies which aim to understand and deepen the research topic, such as Electronic-Based Government Systems (SPBE).[11]. Research methodology explains the stages used in research to obtain results. The following is the research flow of the Electronic Based Government System Architecture (SPBE) design process.
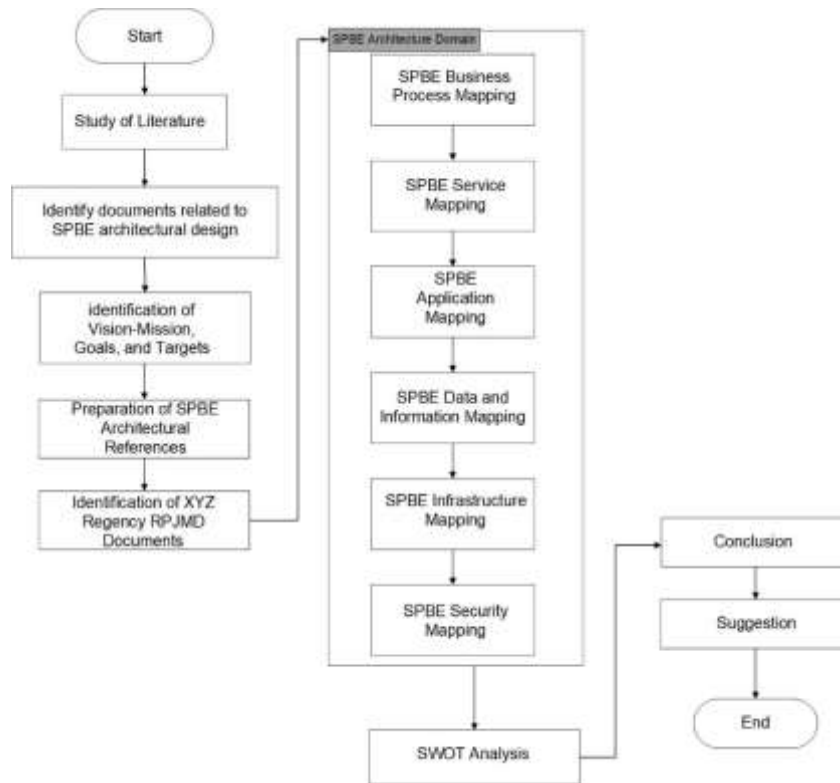

Figure 1 Research Flow

Figure 1 is the flow of research into the design of the SPBE Architecture for the XYZ Regency Government. The research flow begins by identifying several documents used in the SPBE Architecture design process, then identifying the vision and mission that will be used as a reference in creating the SPBE business process. The next stage is preparing SPBE architecture references and identifying documents that are sources in the process of mapping the SPBE Architecture domain. The final stage is to carry out the mapping process and fill in data in the SPBE Architecture domain using the Abacus architectural template. After the mapping process is complete, a SWOT analysis process is carried out.

2.2 Data Collection

The data used in the SPBE Architecture design process comes from 2 sources, such as:
a. Primary data is data obtained directly through the research process on an object or subject [12]. The primary data obtained in this research is from the process of exploring and analysing the vision and mission and RPJMD of the XYZ district government.
b. Secondary data is data obtained indirectly or through study results [13]. Secondary data in this research was mostly obtained from credible journal articles and websites that discussed the research topic.

3. Literature Study

This literature review contains supporting theories that were used as a reference in making this research.

3.1 Electronic Based Government System

Based on Presidential Regulation Number 95 of 2018, the Electronic Based Government System (SPBE) is a wise step for the government in managing the development of information and communication technology. [14]. SPBE has the aim of realising a governance system that utilises technology and communication so that it can create a government that is transparent, clean, effective, and accountable in order to provide services to the community [15].

3.2 SPBE Architecture

The SPBE architecture consists of three parts, such as the National SPBE Architecture, the Central Agency SPBE Architecture and the Regional Government SPBE Architecture. The National SPBE architecture is implemented by integrating all government administrations electronically and by describing it in an integrated manner, in all domains within it, thereby making it easier to increase the expected efficiency and effectiveness. As stated in the SPBE Presidential Decree, IPPD needs to prepare its respective organisational architecture by referring to the national SPBE Architecture. Several things that need to be considered in preparing this architecture are that the SPBE Architecture of central agencies or the SPBE Architecture of local governments is part of the national SPBE Architecture [16], [17].

3.3 Interrelationships Between SPBE Components

Each SPBE domain is related to other SPBE domains. A depiction of the relationships between components in the SPBE Architecture can be seen in Figure 2.
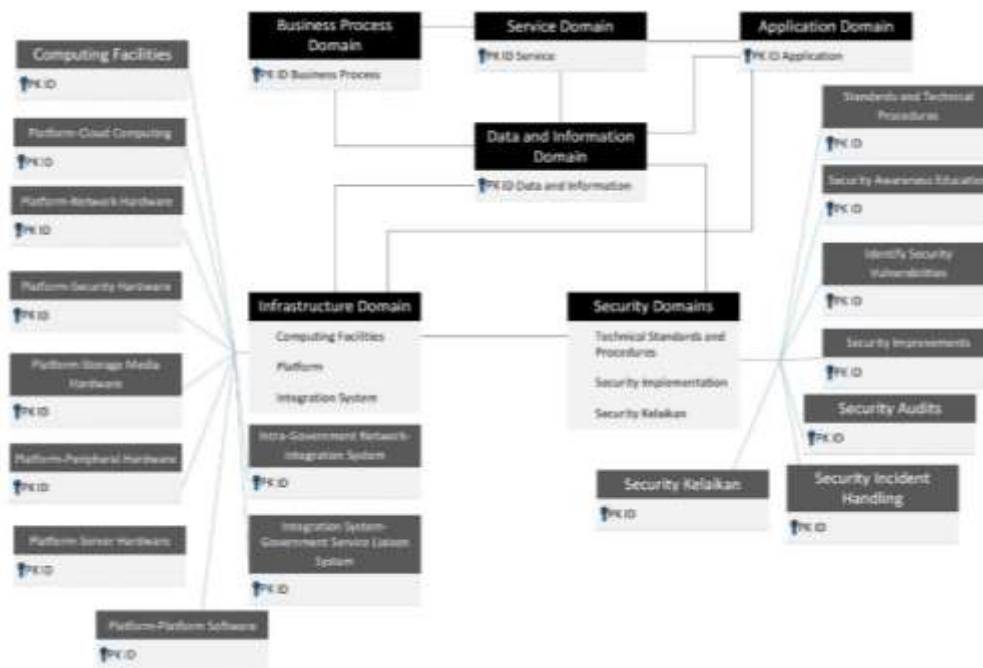

Figure 2 SPBE Interrelationship between Components in SPBE Architecture
(Source: Peraturan Presiden Republik Indonesia No. 132 Tahun 2022)

Figure 2 is a depiction of the interrelationship of each component of the SPBE Architecture. The following is an explanation of each relationship between components in the SPBE Architecture.

a. The Business Process Domain interacts with the Service Domain and the Data and Information Domain.
b. The Service Domain interacts with the Business Process Domain, Application Domain and Data and Information Domain.
c. The Application Domain interacts with the Service Domain, Data and Information Domain, Infrastructure Domain and Security Domain.

d.   The Data and Information Domain interacts with all existing Domains.
e.   The Infrastructure Domain interacts with the Application Domain, Data and Information Domain and Security Domain.
f.   The Security Domain interacts with the Application Domain, Data and Information Domain and Infrastructure Domain.

3.4   Abacus Architectural Template
The Abacus architectural template is a template used in the process of mapping the 6 SPBE architectural domains. The Abacus architecture template is an Excel template that contains several metadata from the SPBE Architecture domain, which will later be filled in based on data obtained from the agency used as the object in the research. The metadata in the Abacus architectural template includes ID, SPBE domain name, architectural reference, and the name of the agency used [18].

3.5   Analysis SWOT
SWOT analysis is a method used to carry out a comprehensive assessment of a company's strengths, weaknesses, opportunities, and threats [19]. This SWOT analysis is used to assess the strengths and weaknesses of the company's resources and the external opportunities and challenges it faces [20]. Another definition of SWOT analysis is a form of analysis of situations and conditions that provides an overview. This analysis places situations and conditions as input factors, then groups them according to their respective contributions [21].

4.   Result and Discussion
The results of this research are divided into two sub-chapter, which discuss the results of the SPBE Architecture domain mapping and the results of the SWOT analysis of the SPBE Architecture domain mapping results.

4.1   Domain Mapping Result of SPBE architecture
This business process mapping process uses the Abacus template that has been provided. The following are the results of SPBE Business Process Domain mapping using the Abacus template.

4.1.1 Business Process Mapping Result
This business process mapping process uses the Abacus template that has been provided. The business processes mapped into the Abacus architecture template consist of public service business processes with an ID, such as TBN, and managerial business processes with an ID, such as MJ.

Table 1 Result of Business Process Domain Mapping Using the Abacus Template

ID	Business Name	Key performance indicators (IKU)	IKU Goal	Work Unit	RAB Level 1	RAB Level 2	RAB Level 3
TBN.01	Guaranteeing the Fulfillment of Citizens' Basic Rights	Percentage of achievement of SPM 6 basic services (Education, Health, Public Works and Spatial Planning, Public Housing and Settlement Areas, Peace, Public Order, and Community and Social Protection)	100%	Department of Education (DISDIK), Department of Health (DISKES), Department of Public Works, Spatial Planning, Housing and Settlement Areas (DPUPRPKP	RAB.05 Public Order and Safety	RAB.05.02 Security	RAB.05.02.01 Peace, Public Order

ID	Business Name	Key performance indicators (IKU)	IKU Goal	Work Unit	RAB Level 1	RAB Level 2	RAB Level 3
				), DISPOLPP, DISOSP3A			
MJ.01	Improving the quality of regional government governance	bureaucratic reform index	75%	Organization Bureau	RAB.09 General Government	RAB.09.01 Domestic	RAB.09.01.02 Political Policy and General Government

4.1.2 Service Mapping Result

SPBE service mapping is carried out after SPBE business process mapping has been completed because the SPBE service domain has attributes filled in from SPBE Business Process derivatives. The results of service domain mapping produce public services with an ID, such as TBN, and government administration services or what are called managerial services with an ID, such as MJL

Table 2 Result of Service Domain Mapping Using the Abacus Template

ID	Service Name	Person responsible	Related Government Affairs	Goals	Metod	Business Process	RAL Level 1	RAL Level 2	RAL Level 3
MJL.07	State Property management services	BPKAD, Ministry of Communication, Information and Statistics	Electronic Based Government Administration Services	Regional Apparatus Organizations	Government to Government	MJ.01. Improving the quality of regional government governance, MJ.02. Improving the quality of regional financial management	RAL.02 Government Administration Services	RAL.02.02 Finance	RAL 02.02.05 Management of State Property
TBN.01.03	Legal documentation and information network services	Legal Bureau, Ministry of Communication, Information and Statistics	Electronic Based Public Services	Regional Apparatus Organizations, Public	Government to Citizen (G2C)	TBN.01. Guaranteeing the Fulfillment of Citizens' Basic Rights	RAL.01 Public Servic	RAL.01.29 Security	RAL 01.29.06 Security and Public Order

4.1.3 Application Mapping Result

There are two types of application categories mapped, such as special applications and general applications. The application domain is also an instance of SPBE services and SPBE

business processes, which shows that SPBE services have several applications available. This application domain is also related to the SPBE infrastructure and security domains.

Table 3 Result of Application Domain Mapping Using the Abacus Template

ID	Application Name	Service	RAD Level 3 Used	Business Process	Data Input	Suplier Data	Customer Data	Application Based	RAA Level 1	RAA Level 2
APP.010	Regional Property Unification Application Information System (SIAP BMD)	MJL.07 State Property Management Services	RAD.09.02.08 Procurement And Asset Management	MJ.01. Improving the quality of regional government governance, MJ.02. Improving the quality of regional financial management	State property data	Library and Archives Service	Regional Apparatus Organizations, Public	Web Based	RAA.01 General Application	RAA.01.02 General Applications of Government Administration
APP.019	Legal Documentation and Information Network (JDIH)	TBN.01.03. Legal documentation and information network services	RAD.05.01.01 Implementation of Regulations and Legislation	TBN.01 Guaranteeing the Fulfillment of Citizens' Basic Rights	Legislation, Legal Monographs, Legal articles Court decisions, Legal information	Regional Secretariat Legal Bureau	Public	Web Based	RAA.01 General Application	RAA.01.02 General Applications of Government Administration

4.1.4 Data and Information Mapping Result

The data and information mapped are both private and public. Data and information are also derivatives of the business process and service architecture domain, which is also related to the SPBE infrastructure and security architecture domain.

Table 4 Result of Data and Information Domain Mapping Using the Abacus Template

ID	Data Name	Nature of Data	Data Type	Data Validity	Data Generator/Data Produ	Interoperability	Business Process	Service	RAD Level 1	RAD Level 2	RAD Level 3

cer											
DDI.014	Data on State Property	Open	Other Data	Realtime	Library and Archives Service	Yes	MJ.01. Improving the quality of regional government governance, MJ.02. Improving the quality of regional financial management	MJL.07. State Property Management Services	RAD.09 General Government Information	RAD.09.02 Finance Data	RAD.09.02.08 ProcurementAnd Asset Management
DDI.023	Legal Product Data	Open	Other Data	Realtime	Regional Secretariat Legal Bureau	No	TBN.01. Guaranteeing the Fulfillment of Citizens' Basic Rights	TBN.01.03. Legal documentation and information network services	RAD.05 Public Order and Safety Information	RAD.05.01 Legal Data	RAD.05.01.01 Implementation of Regulations and Legislation

4.1.5 Infrastructure Mapping Result

The infrastructure domain consists of three parts, such as computing facilities, platforms, and system integration. The following are the results of SPBE infrastructure domain mapping.

4.1.5.1 Computing facilities

Computing facilities are the first part of the SPBE infrastructure domain division. The following are the results of mapping computing facilities to the Abacus architecture template, which can be seen in Table 5.

Table 5 Results of Computing Facility Infrastructure Domain Mapping Using the Abacus Template

ID	Computing Facility Name	Intranet Bandwidth	Internet Bandwidth	Ownership (Information)	RAL Level 1	RAL Level 2	RAL Level 3	Service Liaison System	Intra-Government Network	SPBE Technical Standards and Security Procedures	SPBE Security Awareness Education
FK.0	Data Center	100 GB	1,4 GB	Personal	RAI.01 Comp	RAI.01.01 Data	RAI.01.01.03 Regi	SPLP, API	Fiber Optic Point to	Information Security Management Guidelines	Conduct Network for

| 0 1 | | uting Facility | Center | onal Agency Data Center | | point | Electronic-Based Government Systems and Technical Standards and Security Procedures for Electronic-Based Government Systems. | Security Training |

4.1.5.2 Platforms

The platform is a component of the SPBE infrastructure, which has several divisions, such as general computing, network hardware, and security hardware. Storage media hardware, peripheral hardware, server hardware, and platform software. The following are the results of mapping the storage media hardware as part of the SPBE infrastructure platform.

a.   Storage media hardware

Storage media hardware is the fourth part of the SPBE infrastructure platform. The storage media hardware has one data storage name, which is saved into the Abacus architecture template. The following are the results of the storage media hardware mapping, which can be seen in Table 6.

Table 6 Results of Storage Media Hardware Infrastructure Domain Mapping Using the Abacus Template

ID	Data Storage Name	Ownership status	Platform Software	Storage Capacity	Data Sharing Access Method	RAI Level 1	RAI Level 2	RAI Level 3	Server Hardware	Computing Facilities	SPBE Security Awareness Education	SPBE Security Incident Handling
PKMP.001	*Network Attach Storage (NAS)*	Personal	qnap software	4 TB	FTP	RAI.03 Platform	RAI.03.01 Infrastructure and Application Framework	RAI.03.01.02 Data Storage	All Server	Data Center	Network Security Training	Google Chrome Patching Security Advisory

4.1.5.3 Integration System

The integration system is a component of the SPBE infrastructure domain which has two divisions, such as the intra-government network and the government service liaison system. The following is an explanation of the service connection system, part of the SPBE infrastructure integration system.

a.   Service Liaison System

The government service liaison system is part of the SPBE infrastructure integration system. The government service liaison system has two names of government service liaison systems. The following are the results of mapping the SPBE infrastructure government service link system which, can be seen in Table 7.

Table 7 Results of Domain Mapping of Government Service Connecting System Infrastructure Using the Abacus Template

ID	Name of Government Service Liaison System	Connecting System Description	Intra-Government Network	Application	Data and Information	RAI Level 1	RAI Level 2	RAI Level 3	SPBE Security Improvements	SPBE Security Incident Handling
SIP.001	API BKPSDM	Connecting applications Simpeg BKD, Achievement Online, Simkita Online	Data Center Internet Network to 32 Regional Devices; Data Center Internet Network to 8 Regional Devices;	-Simpegnas -Online Achievements -Simkita Online	-Civil Servant Data -Rank/position data -Work history data -Employee performance data -Academic Achievement Data -Non-Academic Achievement Data	RAI.02 Integration System	RAI.02.02 Connecting System	RAI.02.02.02 Non-Governmental Liaison System	Strengthening applications that have gone through ITSA	Handling of Regional Apparatus Organization Websites
SIP.002	API BSRE	Connecting electronic signatures with the e-Letter application	Data Center Internet Network to 32 Regional Devices; Data Center Internet Network to 8 Regional Devices; Village	e-Letter application	Correspondence Data	RAI.02 Integration System	RAI.02.02 Connecting System	RAI.02.02.02 Non-Governmental Liaison System	-Carrying out collaboration with the BSSN Electronic Certification Center regarding the use of electro	-Handling of Regional Apparatus Organization Websites -Google Chrome Patchi

ID	Name of Government Service Liaison System	Conecting System Description	Intra-Government Network	Application	Data and Information	RAI Level 1	RAI Level 2	RAI Level 3	SPBE Security Improvements	SPBE Security Incident Handling
			VPN Network Connection						nic certificates within the Taban an Regency Gover nment - Streng thenin g applica tions that have gone throug h ITSA - Inform ation Securit y Literac y	ng Securit y Adviso ry

4.1.6 Security Mapping Result

The SPBE security domain is grouped into three parts, such as technical standards and SPBE security procedures, SPBE security feasibility, and SPBE security implementation. The division of SPBE security implementation is divided into 5 parts, such as SPBE security awareness education, identification of SPBE security vulnerabilities, handling SPBE security incidents, improving SPBE security and SPBE security audits.

4.1.6.1 SPBE Technical standards and security procedures

SPBE technical standards and security procedures are the first of three SPBE security sections. SPBE technical standards, and security procedures have one name of technical standards and procedures. The following are the results of mapping SPBE technical standards and security procedures which can be seen in Table 8.

Table 8 Results of SPBE Technical Standards and Security Procedures Mapping Using the Abacus Template

ID	Name	Types of Security Standards	Description	Impleme ntation	Impleme ntation

ID	Name	Description	Results		Start Date	End Date
ST PK. 001	National Cyber and Crypto Agency Regulation Number 4 of 2021	Standards and/or regulations related to SPBE security techniques and procedures	Information Security Management Guidelines for Electronic-Based Government Systems and Technical Standards and Security Procedures for Electronic-Based Government Systems		January 2021	Now

4.1.6.2 SPBE Security Implementation

Implementing SPBE security is the second part of SPBE security, which has several more divisions, such as SPBE security awareness education, identification of SPBE security vulnerabilities, improving SPBE security, handling SPBE security incidents, and SPBE security audits. The following are the mapping results from the SPBE security audit.

a. SPBE security audit

The SPBE security audit is the final part of the SPBE security implementation. SPBE security audit has two security audit activities. The following are the results of the SPBE security audit mapping using the Abacus architecture template, which can be seen in Table 9.

Table 9 Results of SPBE Security Audit Mapping Using the Abacus Template

ID	Name of SPBE Security Audit Activity	Description of SPBE Security Audit Activities	SPBE Security Audit Results	Types of Security Audits	Security Audit follow-up	Security Audit Activity Date
AK. 001	ITSA	Audits carried out for Website Applications, Simkita, Online Achievement, Simpeg BKD, eSurat, BPHTB Online	Needs improvement	External	Some were followed up	25-29 October 2021
AK. 002	Vurnerability Assessment	Audits carried out for Applications	Needs improvement	External	Some were followed up	14-18 February 2022

4.1.6.3 SPBE Security Kelaikan

SPBE security Kelaikan is the final part of the SPBE security division. SPBE security feasibility has one name for its activity. The following are the mapping results of the SPBE security feasibility section, which can be seen in Table 10.

Table 10 Results of SPBE Security Kelaikan Mapping Using the Abacus Template

ID	SPBE Security Kelaikan Activity Name	Description of SPBE Security Kelaikan Activities	SPBE Security Kelaikan Date
KK.001	Kelaikan Application Security Feasibility	Specific Website Application Security Kelaikan Activities, Simkita, Online Achievement, Simpeg BKD, eSurat, BPHTB Online	25-29 October 2021 and 14 - 18 February 2022

4.2 SWOT Analysis Result

SWOT analysis is used to identify internal and external issues related to the creation of the SPBE Architecture. The following are the results of the SWOT Analysis with the SPBE Architecture design.

4.2.1 Recapitulation of Internal Factors

The following is a recapitulation of internal factors consisting of two parts, such as strength and weakness.

Strength
a.   The XYZ Regency Government already has a vision and mission that support complete business processes, which include managerial or government administration business processes and public service business processes.
b.   The XYZ Regency Government also has adequate services to support government administration and public services.
c.   The applications owned by the XYZ Regency Government are quite complete and include all services that support the performance of government administration services and public services.

Weakness
a.   Some applications do not have dependencies or connections to the SPBE infrastructure and security domains mapped on the Abacus architecture template.
b.   Several services that have been planned to support the performance of government administration and public services have not been implemented properly.
c.   Insufficient data is used to fill data requirements in the SPBE infrastructure and security domain.
d.   The SPBE security audit process is carried out unevenly across all applications owned by the XYZ Regency Government.

4.2.2 Recapitulation of External Factors

The following are the results of a recapitulation of external factors, which consist of two parts, such as opportunities and threats *Opportunity.*
a.   The completeness of all data entries in the SPBE infrastructure and security domain has the opportunity to become clear guidelines and plans in the SPBE implementation process so that it has the opportunity to increase the SPBE index value.

Threats
a.   There are threats to the security, confidentiality, and availability of several application systems that do not yet have a dependency or connection to the SPBE security domain.
b.   Incomplete data on the SPBE infrastructure, and security domain can affect all SPBE domains that have dependencies on the infrastructure, and security domain.

5.   Conclusion

The conclusions that can be drawn from the results of the research that has been carried out are as follows.
a.   The XYZ Regency Government's Electronic-Based Government System Architecture (SPBE) design includes 6 SPBE Architecture domains, such as the business process domain, service domain, application domain, data and information domain, infrastructure domain, and SPBE security domain.
b.   The results of SPBE Architecture domain mapping are using the Abacus Architecture template. SPBE business process mapping produced 17 business processes consisting of 3 managerial business processes. SPBE service mapping produces 44 services consisting of 33 Public Services and 11 Government Administration Services or what are called Managerial Services. SPBE application mapping resulted in 112 mapped applications consisting of general applications and general applications. SPBE data and information domain mapping produced 123 data and information of a private and public nature. SPBE infrastructure mapping has several divisions, such as computing facilities,

platforms, and system integration. SPBE security mapping has several parts, such as technical standards, and security procedures, SPBE security implementation and SPBE security feasibility.

c. Based on the results of the SWOT analysis of the SPBE architectural design, it can be concluded that the strengths are SPBE's business processes, services, and applications which are sufficient to support the performance of government administration services and public services. The lack of complete data used to fill in the completeness of SPBE's infrastructure and security domain itself is a weakness, opportunity, and threat. The opportunity of having complete data is that it can provide a clear direction in the implementation of SPBE so that it has the opportunity to increase the SPBE index value.

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