The Evaluation of E-Government Implementation DPMPTSP Denpasar Using the Level Model of SPBE Maturity

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Abstract. The implementation of e-government at the Denpasar City Investment and One-Stop Integrated Services Agency (DPMPTSP Denpasar) has never been evaluated for its role in achieving the objectives of the organization's strategic plan. Consequently, a study on an evaluation of the maturity level of SPBE has been carried out using the SPBE maturity level model according to *PermenPANRB* Number 59 of 2020. This study combined quantitative and qualitative methods (Mixed-method). Three respondents were involved in the assessment of the maturity level of SPBE, namely the Head of Department, the Secretary of Department, and the Head Division of Investment Implementation Control and Investment Information determined from the results of the identification of officials whose main duties and functions are in accordance with the aspects of SPBE maturity to be assessed. At the process capability maturity level, the SPBE Policy Domain obtained an index value of 1.60, the SPBE Governance Domain obtained an index value of 2.40, and the SPBE Management Domain obtained an index value of 1.45. The SPBE index value of DPMPTSP Denpasar was 2.73, indicated as good and above the expected maturity level of the SPBE index value, which was 2.6. This study results in 11 recommendations for SPBE implementation.

Keywords: Evaluation, E-Government, SPBE

1 Introduction

Bureaucratic reform is the first step in the implementation of structuring the government administration system to serve the community quickly, accurately, transparently, accountable, and professionally [1]. The application of industry 4.0 is also required in the implementation of government [2], namely through the implementation of e-government. E-government is a step in improving the quality of public services with the application of information technology [3][4]. E-government requires good accessibility in providing services to users [5].

The implementation of e-government makes it easier for the government to interact with the public in an efficient, transparent, accountable, and timely manner [6][7] and minimizes the risk of corruption [8][9]. There are four classifications of e-government, including Government

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to Citizens (G-to-C), Government to Business (G-to-B), Government to Government (G-to-G), and Government to Employees (G-to-G). E) [10]. Based on the 2020 E-Government Development Index (EGDI) Survey conducted by the United Nations, Indonesia is ranked 88 (eighty-eight), which is included in the EDGI Level High with a class H3 rating [11].

The e-government policy in Indonesia began with the issuance of the Presidential Instruction of the Republic of Indonesia Number 3 of 2003 concerning the National Policy and Strategy for the Development of E-Government [12]. This policy is the initial initiation of the implementation of the Electronic-Based Government System (SPBE) in Indonesia. Therefore, Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (SPBE) was then stipulated. There are several SPBE strategic initiatives, one of which is the implementation of the SPBE evaluation, which aims to determine the progress of SPBE implementation, provide suggestions for improvement to improve the quality of SPBE implementation, and ensure the quality of SPBE evaluation implementation [13] [14] [15].

In order to provide guidelines for monitoring and evaluating SPBE, the central government, through the Ministry of Empowerment of State Apparatus and Bureaucratic Reform, has issued a regulation (*PermenPANRB*) Number 59 of 2020, which takes effect in 2021 [16]. It is a revision of *PermenPANRB* Number 5 of 2018, which became a guideline in the previous SPBE evaluation. This revision was made because several mandates in Presidential Regulation 95 of 2018 have not been accommodated in *PermenPANRB* Number 5 of 2018. The SPBE evaluation was carried out to obtain an index value of the maturity level of e-government implementation [17]. One of the public service activities within the Denpasar City Government was carried out by the One-Stop Integrated Service and Investment Service (DPMPTSP), which since 2008 has implemented e-government in providing licensing services to the public. The e-government that has been implemented needs to be evaluated by measuring the maturity level of the SPBE.

In carrying out the evaluation, the appropriate e-government maturity model must be determined [18]. From several studies that have been carried out previously [19][20][21][22], research using the SPBE maturity level model according to *PermenPANRB* Number 59 of 2020 has never been conducted because this Ministerial Regulation that enacted from January 2021 is the national standard used in evaluating the maturity level of SPBE in all local governments in Indonesia. This study was conducted to determine the maturity level of SPBE at DPMPTSP Denpasar as a recommendation material in improving the quality of e-government implementation.

2 Method

In general, the stages of research were divided into four stages, namely the initial stage for observation and problem identification; planning stage for determining respondents, designing and distributing questionnaires; the analysis phase, which was validated by carrying out further discussions with the DPMPTSP Denpasar; and the final stage is the preparation of recommendations. This study combined quantitative and qualitative methods (Mixed-methods). The two methods can be combined but carried out alternately [23].

The instrument used in the maturity level assessment was a questionnaire for measuring the maturity level of SPBE according to *PermenPANRB* Number 59 of 2020. It was filled out based on interviews with the DPMPTSP Denpasar. The variables used were all process capabilities and SPBE service capabilities, using SPBE domain dimensions and indicators in the form of SPBE aspects and questions using SPBE indicators. Another instrument used was the

implementation report of the discussion results with the DPMPTSP Denpasar to deepen the results of the analysis.

The initial stage of the research aimed to carry out observations, identify problems directly to the research subjects, and get an initial picture of the conditions of e-government implementation at the DPMPTSP Denpasar. Respondents for the assessment of the SPBE maturity level were determined based on the identification of officials whose primary duties and functions are in accordance with the aspects of SPBE maturity to be assessed. There are 3 (three) respondents based on the initial identification, namely the Head of Department, Secretary of Department and Head Division of Investment Implementation Control, and Investment Information. The SPBE maturity level assessment questionnaire was prepared according to *PermenPANRB* Number 59 of 2020, and the filling was carried out based on interviews with predetermined respondents.

The analysis stage was the main stage in this research. At the analysis stage, an assessment and analysis of the maturity level and level of the SPBE gap were carried out. After obtaining the measurement values and the results of the descriptive analysis, further discussions were held with the DPMPTSP to validate the analysis results.

The SPBE evaluation was carried out by measuring the maturity level of SPBE implementation in accordance with *PermenPANRB* Number 59 of 2020 using the SPBE maturity level model, including the process capability maturity level [24] and the service capability maturity level [25]. The process capability maturity level was used to measure the maturity level of SPBE policies, governance, and management. The maturity level of service capability was used to measure the maturity level of electronic-based government administration services and electronic-based public services [16]. The assessment structure used in the assessment of the SPBE maturity level based on *PermenPANRB* Number 59 of 2020 consists of Domain (assessed SPBE application areas), Aspects (specific areas of SPBE implementation assessed), and Indicators (specific information on aspects of the assessed SPBE implementation) according to Table 1 as follows [16].

Table 1. The categorization of content validation instruments.

Domain/Aspect/ Indicator	SPBE Domain Indicator Name
1. SPBE Domain Policy	
Aspect 1 - SPBE Governance Internal Policy	
Indicator 1	The maturity level of internal SPBE architecture policies for Central/Local Government Agencies
Indicator 2	The maturity level of internal policies SPBE plan map for Central/Local Government Agencies
Indicator 3	The maturity level of internal data management policy
Indicator 4	The maturity level of internal policies for SPBE application development
Indicator 5	The maturity level of Data Center service internal policy
Indicator 6	The maturity level of internal policy of network services within Central/Local Government Agencies
Indicator 7	The maturity level of internal policies on the use of services liaison systems for Central/Local Government Agencies
Indicator 8	The maturity level of information security management internal policies
Indicator 9	The maturity level of information and communication technology internal audit policy
Indicator 10	The maturity level of internal policy of SPBE coordination team for Central/Local

Domain/Aspect/ Indicator	SPBE Domain Indicator Name
	Government Agencies
2. SPBE Governance Domain	
Aspect 2 - SPBE Strategic Planning	
Indicator 11	The maturity level of SPBE Architecture for Central /Local Government Agencies
Indicator 12	The maturity level of SPBE Plan Map for Central/Local Government Agencies
Indicator 13	The maturity level of SPBE Plan and Budget Integration
Indicator 14	The maturity level of SPBE Business Process Innovation
Aspect 3 - Information and Communication Technology	
Indicator 15	The maturity level of SPBE Application Development
Indicator 16	The maturity level of Data Center Services
Indicator 17	The maturity level of network services within Central/Local Government Agencies
Indicator 18	The maturity level of use of the service liaison system for Central/Local Government Agencies
Aspect 4 - SPBE Organizer	
Indicator 19	The maturity level of implementation of SPBE coordination team for Central/Local Government Agencies
Indicator 20	The maturity level of SPBE implementation collaboration
3. SPBE Management Domain	
Aspect 5 - SPBE Management Application	
Indicator 21	The maturity level of SPBE Risk Management
Indicator 22	The maturity level of information Security Management Implementation
Indicator 23	The maturity level of Data Management Implementation
Indicator 24	The maturity level of ICT Asset Management Implementation
Indicator 25	The maturity level of Human Resources Competency Implementation
Indicator 26	The maturity level of Knowledge Management Application
Indicator 27	The maturity level of Change Management Implementation
Indicator 28	The maturity level of SPBE Service Management Implementation
Aspect 6 - Implementation of ICT Audit	
Indicator 29	The maturity level of SPBE Infrastructure Audit Implementation
Indicator 30	The maturity level of SPBE Application Audit Implementation
Indicator 31	The maturity level of SPBE Security Audit Implementation
4. SPBE Service Domain	
Aspect 7 – Electronic-Based Government Administration Services	
Indicator 32	The maturity level of Planning Services
Indicator 33	The maturity level of Budgeting Services
Indicator 34	The maturity level of Financial Services
Indicator 35	The maturity level of Goods and Services Procurement Services
Indicator 36	The maturity level of Personnel Services
Indicator 37	The maturity level of Dynamic Archive Service
Indicator 38	The maturity level of State/Regional Property Management Services
Indicator 39	The maturity level of Government Internal Oversight
Indicator 40	The maturity level of Organizational Performance Accountability Services
Indicator 41	The maturity level of Employee Performance Services
Aspect 8 - Electronic Based Public Service	
Indicator 42	The maturity level of Public Service Complaint Service
Indicator 43	The maturity level of Open Data Services.
Indicator 44	The maturity level of Legal Documentation and Information Network (JDIH)
Indicator 45	The maturity level of Public Service Sector 1
Indicator 46	The maturity level of Public Service Sector 2

Domain/Aspect/ Indicator	SPBE Domain Indicator Name
Indicator 47	The maturity level of Public Service Sector 3

The measurement of maturity level based on the above questionnaire was constructed based on the following values: Score 1 (one) for meeting the criteria at level 1 (one); Score 2 (two) for meeting the criteria at level 2 (two); Score 3 (three) for meeting the criteria at level 3 (three); Score 4 (four) for meeting the criteria at level 4 (four); and Score of 5 (five) for meeting the criteria at level 5 (five). The SPBE maturity level value calculation was in accordance with *PermenPANRB* Number 59 of 2020, which consists of the aspect index value, domain index, and SPBE index.

The value of the aspect index was calculated based on the sum of the multiplication calculations between the value of the maturity level of the indicator and the weight of the indicator, divided by the weight of the aspect. The domain index value was calculated based on the sum of the multiplication calculations between the aspect index value and the aspect weight, divided by the domain weight. The SPBE index value, which is an index value that represents the maturity level of the SPBE application as a whole, was calculated based on the sum of the multiplication between the domain index values and the domain weights. The weight of the SPBE maturity level assessment in each Domain, aspects, and indicators were listed in *PermenPANRB* Number 59 of 2020 [16]. After calculating the SPBE index, the results were grouped based on the predicate, as shown in Table 2.

Table 2. SPBE assessment predicate.

Index Value	Predicate
4,2 - 5,0	Satisfying
3,5 ≤ 4,2	Very Good
2,6 ≤ 3,5	Good
1,8 ≤ 2,6	Enough
< 1,8	Not Good

In the final stage, some recommendations were drawn that can be used as references for improving the implementation of e-government at the DPMPTSP Denpasar based on the validation of the results of the analysis that has been carried out previously.

3 Results and Discussion

The maturity level assessment and explanations for each assessment indicator were based on the information and supporting data from an interview with the predetermined respondents and direct observations at the research site. The SPBE maturity level value calculation was carried out in accordance with *PermenPANRB* Number 59 of 2020, consisting of the aspect index value, domain index, and SPBE index. The final result of the assessment was the SPBE index value, which represents the maturity level of the SPBE application as a whole so that the SPBE predicate category in the DPMPTSP Denpasar can be discovered. The results of the calculation of the aspect index value, which is the sum of the multiplication calculation between the value of the maturity level of the indicator and the weight of the indicator divided by the weight of the aspect, can be seen in Table 3.

Table 3. Aspect index value.

Aspect/Indicator	Maturity Level Assessment	Quality (%)	Value x Quality	Index Aspect
Aspect 1 - SPBE Governance Internal Policy		13,00	20,80	1,60
Indicator 1	2	1,30	2,60	
Indicator 2	1	1,30	1,30	
Indicator 3	2	1,30	2,60	
Indicator 4	3	1,30	3,90	
Indicator 5	1	1,30	1,30	
Indicator 6	2	1,30	2,60	
Indicator 7	1	1,30	1,30	
Indicator 8	1	1,30	1,30	
Indicator 9	1	1,30	1,30	
Indicator 10	2	1,30	2,60	
Aspect 2 - SPBE Strategic Planning		10,00	22,50	2,25
Indicator 11	2	2,50	5,00	
Indicator 12	1	2,50	2,50	
Indicator 13	4	2,50	10,00	
Indicator 14	2	2,50	5,00	
Aspect 3 - Information and Communication Technology		10,00	27,50	2,75
Indicator 15	3	2,50	7,50	
Indicator 16	2	2,50	5,00	
Indicator 17	3	2,50	7,50	
Indicator 18	3	2,50	7,50	
Aspect 4 - SPBE Organizer		5,00	10,00	2,00
Indicator 19	2	2,50	5,00	
Indicator 20	2	2,50	5,00	
Aspect 5 - SPBE Management Application		12,00	19,50	1,63
Indicator 21	2	1,50	3,00	
Indicator 22	1	1,50	1,50	
Indicator 23	2	1,50	3,00	
Indicator 24	2	1,50	3,00	
Indicator 25	2	1,50	3,00	
Indicator 26	1	1,50	1,50	
Indicator 27	1	1,50	1,50	
Indicator 28	2	1,50	3,00	
Aspect 6 - Implementation of ICT Audit		4,50	4,50	1,00
Indicator 29	1	1,50	1,50	
Indicator 30	1	1,50	1,50	
Indicator 31	1	1,50	1,50	
Aspect 7 - Electronic-Based Government Administration Services		27,50	99,00	3,60
Indicator 32	5	2,75	13,75	
Indicator 33	5	2,75	13,75	
Indicator 34	5	2,75	13,75	
Indicator 35	5	2,75	13,75	
Indicator 36	3	2,75	8,25	
Indicator 37	3	2,75	8,25	
Indicator 38	3	2,75	8,25	
Indicator 39	1	2,75	2,75	
Indicator 40	3	2,75	8,25	

Aspect/Indicator	Maturity Level Assessment	Quality (%)	Value x Quality	Index Aspect
Indicator 41	3	2,75	8,25	
Aspect 8 - Electronic-Based Public Service		18,00	69,00	3,83
Indicator 42	4	3,00	12,00	
Indicator 43	3	3,00	9,00	
Indicator 44	3	3,00	9,00	
Indicator 45	5	3,00	15,00	
Indicator 46	4	3,00	12,00	
Indicator 47	4	3,00	12,00	

Based on the above calculation results, the maturity level was divided into the process capability maturity and the service capability maturity levels. Of the 8 (eight) aspects and 47 (forty-seven) indicators for assessing the maturity level of SPBE, the assessment of the maturity level of process capability was used in aspects 1 to 6, which consisted of 31 (thirty-one) indicators. The service capability maturity level assessment was used in aspect seven and aspect 8, consisting of 16 (sixteen) indicators. After obtaining the aspect index value, the domain index value was calculated. The results of the domain index value calculation, which is the sum of the multiplication calculation between the aspect index value and the aspect weight divided by the domain weight, can be seen in Table 4.

Table 4. Domain index value.

Domain/Aspect	Aspect Index Value	Quality (%)	Value x Quality	Index Domain
1. SPBE Policy Domain		13,00	20,80	1,60
Aspect 1	1,60	13,00	20,80	
2. SPBE Governance Domain		25,00	60,00	2,40
Aspect 2	2,25	10,00	22,50	
Aspect 3	2,75	10,00	27,50	
Aspect 4	2,00	5,00	10,00	
3. SPBE Management Domain		16,50	24,00	1,45
Aspect 5	1,63	12,00	19,50	
Aspect 6	1,00	4,50	4,50	
4. SPBE Service Domain		45,50	168,00	3,69
Aspect 7	3,60	27,50	99,00	
Aspect 8	3,83	18,00	69,00	

The SPBE index value is the maturity level of the overall SPBE application, which was calculated based on the sum of the multiplication between the domain index values and the domain weights. The results of the SPBE index value calculation can be seen in Table 5 below.

Table 5. SPBE index value.

Domain	Domain Index Value	Quality (%)	Value x Quality
1. SPBE Policy Domain	1,60	13,00	20,80
2. SPBE Governance Domain	2,40	25,00	60,00
3. SPBE Management Domain	1,45	16,50	24,00
4. SPBE Service Domain	3,69	45,50	168,00
Total (Value x Quality)			272,80
SPBE Index Value = 1/100 * Total (Value x Quality)			2,73

The SPBE index value of DPMPTSP Denpasar, according to Table 5, is 2.73, which indicates that the overall maturity level of SPBE application in DPMPTSP Denpasar has a good predicate

(score 2.6 ≤ 3.5). The level of the gap was assessed based on the gap between the achievement of the SPBE maturity level value obtained by the DPMPTSP Denpasar and the expected SPBE maturity level value. The expected SPBE maturity level is the minimum value for the SPBE maturity level in the good category, which is 2.6. Thus, the DPMPTSP Denpasar SPBE index value of 2.73 is still above the target.

Process capability contains 12 (twelve) indicators (2, 5, 7, 8, 9, 12, 22, 26, 27, 29, 30, and 31) with a maturity level of 1 (one) included in the pilot criteria; 14 (fourteen) indicators (1, 3, 6, 10, 11, 14, 16, 19, 20, 21, 23, 24, 25, and 28) with a maturity level of 2 (two) included in the managed criteria; 4 (four) indicators (4, 15, 17, and 18) with a maturity value of 3 (three) included in the defined criteria; and 1 (one) indicator (13) with a maturity level of 4 (four) included in the integrated and measurable criteria.

Service capability has 1 (one) indicator (39) with a maturity level of 1 (one) included in the information criteria; 7 (seven) indicators (36, 37, 38, 40, 41, 43, and 44) with a maturity value of 3 (three) included in the transaction criteria; 3 (three) indicators (42, 46, and 47) with a maturity level of 4 (four) are included in the collaboration criteria; and 5 (five) indicators (32, 33, 34, 35, and 45) with a maturity level of 5 (five) included in the optimum criteria.

Based on the assessment of the gap level of the SPBE aspect index value against the expected aspect index value, 3 (three) aspects of achievement index values were above the target (aspects 3.7 and 8) and 5 (five) aspects of achievement index values were below the target (aspects 1,2,4,5 and 6). The achievements in each aspect still indicate low maturity level value (maturity level value < 3).

In process capability, 1 (one) aspect index value was above the target (aspect 3), and 5 (five) aspects of achievement index value were below the target (aspect 1,2,4,5, and 6). In aspect 3, with a gap value of 0.15 (above the target), there was 1 (one) indicator with a maturity level value < 3, namely indicator 16 (maturity level 2). The value of the gap in aspect 2 was below the target (-0.35), and there are 3 (three) indicators with a maturity level value < 3, namely indicators 11 and 14 (maturity level 2) and indicator 12 (maturity level 1).

The value of the gap in aspect 4 was below the target (-0.60), and all indicators in that aspect had a maturity level value of 2. In aspect 5, with a gap value of -0.98 (below the target), all indicators score maturity level < 3, namely indicators 22, 26, and 27 (maturity level 1) and indicators 21,23,24,25, and 28 (maturity level 2). The value of the gap in aspect 1 was below the target (-0.1), and there were 9 (nine) indicators with a maturity level value < 3, namely indicators 2,5,7,8 and 9 (maturity level 1) and indicators 1, 3, 6, and 10 (maturity level 2). Aspect 6 obtained the highest gap value (-1.60), and the achievement of all indicators obtained a maturity level of 1.

All aspects of service capability obtained a gap value above the target, namely Aspect 7 with a gap value of 1.00 and Aspect 8 with a gap value of 1.23. Of the 16 (sixteen) indicators on service capability, only 1 (one) indicator in aspect 7 had a maturity level value of < 3, namely indicator 39, which has a maturity level of 1.

After obtaining the analysis results from the evaluation stage, discussions and further data collection were carried out with the DPMPTSP Denpasar through Focus Group Discussion (FGD) activities. FGD activities aim to get clear feedback and look for alternative solutions [26]. It was done to strengthen the research analysis results in the previous stage and material in the preparation of recommendations.

From the analysis results and the initial recommendations conveyed by the researchers, then a question-and-answer session from the DPMPTSP Denpasar and conclusions were drawn and recorded in the minutes of the meeting.

Recommendations for the implementation of the SPBE were based on the achievements in each aspect of the SPBE with indicators that obtained a low maturity level value (maturity level value < 3).

In order to prepare internal policies for the SPBE plan map, internal policies for data center services, policies for the use of service liaison systems, information security management policies, and information and communication technology audit policies as the basis for the governance process were made. This recommendation refers to indicators 2, 5, 7, 8, and 9.

It is necessary to improve the internal policies of the SPBE architecture, which includes all references to the architecture and domains of the SPBE architecture, as well as to improve the internal policies of data management, the internal policies of intra-network services, and the internal policies of the SPBE coordination team which include the integration of the implementation of the governance process. This recommendation refers to indicators 1, 3, 6, and 10.

The process of formulating internal policies for SPBE governance must be coordinated with the Denpasar City Information and Statistics Communications and Statistics Office regarding SPBE policy guidelines.

In order to prepare SPBE Architectural Documents, it is necessary to include complete SPBE references and domains and preparation of SPBE Plan Maps based on the SPBE Plan Map of Denpasar City Government. This recommendation refers to indicators 11, 12, and 14.

In order to develop standard operating procedures for data center services, it is necessary to evaluate so that data center services can be integrated with Denpasar City Government data center services. This recommendation refers to indicator 16.

It is necessary to complete the tasks/work programs of the SPBE Coordination Team, which regulates the overall management of SPBE at the DPMPTSP Denpasar, as well as collaboration with other Regional Apparatuses in implementing the SPBE, which is formally formed so that there is a clear division of tasks and responsibilities for the implementation of collaboration. This recommendation refers to indicators 19 and 20.

It is necessary to implement security management activities, apply knowledge management, modify management, and carry out their evaluations in accordance with the guidelines that form the basis for their management implementation. This recommendation refers to indicators 22, 26, and 27.

In order to improve the guidelines for SPBE risk management activities, data management, and ICT asset management to encourage the integration of the implementation of each activity, it is necessary to prepare operational service guidelines. This recommendation refers to indicators 21, 23, 24, and 28.

It is necessary to provide or increase the competence of human resources to be able to fulfill competencies in the field of SPBE business processes, SPBE architecture, data and information, SPBE security, SPBE applications, and SPBE infrastructure. This recommendation refers to indicator 25.

In order to carry out an ICT audit, which includes an SPBE infrastructure audit, an SPBE application audit, and an SPBE security audit should be based on national or international standards and follow-up improvements to the implementation process. Several frameworks for auditing can be used, such as The Open Group Architecture Framework (TOGAF), Control Objective for Information and related Technology (COBIT), and ISO/IEC 27001. This recommendation refers to indicators 29, 30, and 31.

It is necessary to develop and integrate internal monitoring services in coordination with the Information and Statistics Communications Office and the Denpasar City Inspectorate to use the Whistle Blowing System (WBS) service feature related to internal complaints. This recommendation refers to indicator 39.

4 Conclusion

At the process capability maturity level, the SPBE Policy Domain obtained an index value of 1.60, the SPBE Governance Domain obtained an index value of 2.40, and the SPBE Management Domain obtained an index value of 1.45. Meanwhile, at the service capability maturity level, the SPBE Service Domain obtained an index value of 3.69. From the SPBE domain index value, the SPBE DPMPTSP index value of Denpasar City was 2.73 and obtained a good predicate.

The expected SPBE maturity level is the minimum value for the SPBE maturity level in the good category, which is 2.6, where the SPBE index obtained was still above the target. Based on the assessment of the gap level of the SPBE aspect index value against the expected aspect index value, 3 (three) aspects of achievement index values were above the target (aspects 3, 7, and 8), and 5 (five) aspects of achievement index values were below the target (aspects 1, 2, 4, 5 and 6).

The resulting recommendations consist of 11 (eleven) recommendations, arranged based on the achievements in each aspect of the SPBE with indicators that obtain a low maturity level value (maturity level value < 3). It is hoped that the evaluation results can be used as a reference in improving the implementation of e-government DPMPTSP Denpasar and supporting the implementation of evaluations on other Regional Apparatuses within the Denpasar City Government or for further related research.

Based on the recommendations for implementing the SPBE compared to several previous studies related to the SPBE evaluation [20][21], which used several SPBE variables based on mapping the organization's business processes, the researchers carried out an evaluation using all SPBE variables to obtain a comprehensive analysis of the SPBE maturity level. The SPBE maturity level model, according to *PermenPANRB* Number 59 of 2020, is a national standard used by the government in the implementation of SPBE evaluations so that in the process, it rationally meets the elements of scientific theoretical evaluation in the IT field. Further research is expected to explore the implementation of ICT audits such as SPBE infrastructure audits, SPBE application audits, or SPBE security audits using other frameworks.

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