

Analysis and Evaluation of E-Government Maturity in West Java Regional Devices Based on SPBE of Ministry of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia

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Abstract

SPBE evaluation activities of these Government Agencies are formulated in such a way that they can be used as benchmarks to harmonize SPBE development programs and plans to produce integration, sustainability and quality of SPBE services. It is expected that all stakeholders involved in this evaluation can understand and follow the instructions set out in this book as well as possible so that the implementation of SPBE evaluations can run well and smoothly in accordance with the plans and schedules set.

Keywords: *SPBE, E-Government, West Java Regional Device, Ministry of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia*

Introduction

The implementation of the Electronic-Based Government System, hereinafter abbreviated as SPBE, at Central and Local Government Agencies is aimed at creating an efficient, effective, transparent and accountable work process and improving the quality of public services. In order for the implementation of the SPBE to run to achieve its objectives, it is necessary to conduct periodic evaluations to find out the extent of the progress of the SPBE implementation in each Central Agency and Regional Government.

SPBE evaluation is the process of evaluating the implementation of SPBE in Central and Local Government Agencies to produce a SPBE Index value that illustrates the level of maturity (maturity level) of the implementation of SPBE in Central and Regional Government Agencies. For this assessment to be carried out effectively and objectively, it is necessary to develop evaluation guidelines that can be understood by all SPBE evaluation stakeholders.

The SPBE Evaluation Guidelines are prepared to provide guidance in order to carry out an evaluation of the implementation of SPBE at Central and Local Government Agencies. This evaluation guideline regulates the planning, implementation and reporting of SPBE evaluation results. The scope of the implementation of SPBE at Central and Local Government Agencies that will be evaluated at least includes the governance of SPBE, SPBE services, and SPBE policies. Through this research, we report the results of our research on the evaluation of SPBE in one of the governments of West Java Province.

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Literature Review

SPBE Maturity Level Concept

SPBE maturity level is a framework that measures the degree of SPBE development in terms of the process capability and SPBE technical function capabilities. The level of maturity directs the development of SPBE to better outputs and impacts. A low level of maturity indicates low capability and success, while a high level of maturity indicates higher capability and success.

The maturity level method in SPBE evaluation was developed based on maturity level models that have been widely practiced, namely:

1. CMM/CMMI (Capability Maturity Model/CMM Integration) built by the Software Engineering Institute (SEI) is a model that measures the level of software development process maturity [9]. This model is the basis for the development of various other maturity models such as the maturity level of ICT governance in COBIT (Control Objectives for Information Technology)[2],[3],[4],[5], ICT architecture (Enterprise Architecture Maturity Model), risk management (Risk Maturity Model), and knowledge management (Maturity Model for Knowledge Management).
2. E-Government Maturity Models is a maturity level model that measures the evolution of SPBE from aspects of functionality and technical capability developed by many parties including Layne and Lee (2001)[8], Andersen and Henriksen (2006)[1], Kim and Grant (2010)[7], and United Nations in the UN e-Government Survey (2012)[10].

The level of maturity of the process capability consists of five levels, stub, managed, standardized, integrated and measurable, optimum. While the level of maturity in the capabilities of the technical function consists of five levels, namely information, interaction, transactions, collaboration, and optimization. Each level has different characteristics that can clearly differentiate between levels. Characteristics at a higher level include characteristics at a lower level.

Process Capability Maturity Level

The leadership has the initiative to carry out the SPBE governance process, but employees do not know the responsibilities that must be carried out. Internal policies as a basis for implementing the SPBE governance process may not yet exist or are still in draft form so that they cannot be applied yet.

Table 1 Domain, Aspect dan Rating Indicators [6]

Domain 1	SPBE Internal Policy
Aspect 1	SPBE Governance Internal Policy
Indicator 1	Internal Policy of the Government Agency SPBE Steering Team
Indicator 2	Internal Policy Integrated Business Process Innovations
Indicator 3	Internal Policy of the Government Agency SPBE Master Plan
Indicator 4	ICT Internal Budgeting and Expenditure Policy
Indicator 5	Internal Data Operations Policy
Indicator 6	Internal Application System Integration Policy
Indicator 7	Internal Policy on Use of General Applications for Sharing
Aspect 2	SPBE Service Internal Policy
Indicator 8	Internal Policy of Manuscript Services
Indicator 9	Internal Staffing Management Services Policy
Indicator 10	Internal Policy of Planning and Budgeting Management Services
Indicator 11	Internal Policy of Financial Management Services
Indicator 12	Internal Policy of Performance Management Services
Indicator 13	Internal Procurement Services Policy
Indicator 14	Internal Public Service Complaints Policy
Indicator 15	Internal Policy Documentation and Legal Information Services
Indikator 16	Internal Policy of the Whistle Blowing System Service
Indicator 17	Internal Policy of Public Services of Government Agencies

Domain 2	SPBE Governance
Aspect 3	Institutional Governance
Indicator 18	Government Agency SPBE Steering Team
Indicator 19	Integrated Business Process Innovations
Aspect 4	Strategy and Planning
Indicator 20	Government Agency SPBE Master Plans
Indicator 21	ICT Budget and Expenditures
Aspect 5	Information and communication technology
Indicator 22	Data Centre Operations
Indicator 23	Application System Integration
Indicator 24	Use of General Applications Sharing
Domain 3	SPBE Services
Aspect 6	Electronic-based Government Administration Services
Indicator 25	Service Manuscript Services
Indicator 26	Staffing Management Services
Indicator 27	Planning Management Services
Indicator 28	Budgeting Management Services
Indicator 29	Financial Management Services
Indicator 30	Performance Management Services
Indicator 31	Procurement Services
Aspect 7	Electronic Based Public Services
Indicator 32	Public Complaints Service
Indicator 33	Legal Documentation and Information Services
Indicator 34	Whistle Blowing System Services
Indicator 35	Public Service Government Agencies

SPBE Function Capability Maturity Level

The level of maturity in the capability of the SPBE function is applied to the SPBE service domain. The characteristics of the level of maturity can be seen in Table 2.

Table 2 Maturity Level in the SPBE Service Domain [6]

Level	Criteria
1 - Information	SPBE services are provided in the form of one-way information.
2 - Interaction	SPBE services are provided in the form of two-way interactions.
3 -Transaction	SPBE services are provided through the exchange of information and services.
4 - Collaboration	SPBE services are provided through integration with other SPBE services.
5 - Optimization	SPBE services can adapt to changing needs in the internal and external environment.

Maturity Level Assessment and Weight

Measurements of each level of maturity are given the following values [6]:

1. Level 1 (one) is given a value of 1 (one).
2. Level 2 (two) are given a value of 2 (two).
3. Level 3 (three) is given a value of 3 (three).
4. Level 4 (four) is given a value of 4 (four).
5. Level 5 (five) is given a value of 5 (five).

Index Value

The index value is calculated in aggregate from the value of the level of maturity on the indicator. Index values consist of several types, namely [6]:

Table 3 SPBE Index and Predicate Value [6]

No	Index value	Predicate
1	4,2 – 5,0	Excellent
2	3,5 – < 4,2	Very Good
3	2,6 – < 3,5	Good
4	1,8 – < 2,6	Fair
5	< 1,8	Poor

Method

SPBE evaluation is carried out through independent evaluation and external evaluation. The method of carrying out self-evaluation and external evaluation can use one or a combination of the following methods [6]:

1. Evaluate documents, i.e. evaluators evaluate their answers, explanations and supporting evidence provided by respondents.
2. Interview, the evaluator asks and / or clarifies the respondent's answers, explanations and supporting evidence given respondent.
3. Field observations, namely evaluators make visits to work unit's respondent at the Central Agency and Local Government to validate the answers, explanations, supporting evidence provided by the respondent, or the results of clarification.

Findings

Recapitulation of Total Value per Domain

Table 4 Analysis and Evaluate of Maturity Level in West Java Regional Device

Domain 1	SPBE Internal Policy	Index	Predicate
Aspect 1	SPBE Governance Internal Policy		
Indicator 1	Internal Policy of the Government Agency SPBE Steering Team	0,01	Poor
Indicator 2	Internal Policy Integrated Business Process Innovations	-	Poor
Indicator 3	Internal Policy of the Government Agency SPBE Master Plan	0,02	Poor
Indicator 4	ICT Internal Budgeting and Expenditure Policy	0,02	Poor
Indicator 5	Internal Data Operations Policy	0,02	Poor
Indicator 6	Internal Application System Integration Policy	0,02	Poor
Indicator 7	Internal Policy on Use of General Applications for Sharing	0,02	Poor
Aspect 2	SPBE Service Internal Policy		
Indicator 8	Internal Policy of Manuscript Services	0,04	Poor
Indicator 9	Internal Staffing Management Services Policy	0,02	Poor
Indicator 10	Internal Policy of Planning and Budgeting Management Services	-	Poor
Indicator 11	Internal Policy of Financial Management Services	0,01	Poor
Indicator 12	Internal Policy of Performance Management Services	0,02	Poor
Indicator 13	Internal Procurement Services Policy	0,02	Poor

Indicator 14	Internal Public Service Complaints Policy	0,02	Poor
Indicator 15	Internal Policy Documentation and Legal Information Services	0,05	Poor
Indikator16	Internal Policy of the Whistle Blowing System Service	0,06	Poor
Indicator 17	Internal Policy of Public Services of Government Agencies	0,06	Poor
Domain 2	SPBE Governance		
Aspect 3	Institutional Governance		
Indicator 18	Government Agency SPBE Steering Team	0,01	Poor
Indicator 19	Integrated Business Process Innovations	0,02	Poor
Aspect 4	Strategy and Planning		
Indicator 20	Government Agency SPBE Master Plans	0,02	Poor
Indicator 21	ICT Budget and Expenditures	0,03	Poor
Aspect 5	Information and communication technology		Poor
Indicator 22	Data Centre Operations	0,02	Poor
Indicator 23	Application System Integration	0,03	Poor
Indicator 24	Use of General Applications Sharing	0,05	Poor
Domain 3	SPBE Services		
Aspect 6	Electronic-based Government Administration Services		
Indicator 25	Service Manuscript Services	0,03	Poor
Indicator 26	Staffing Management Services	0,03	Poor
Indicator 27	Planning Management Services	0,03	Poor
Indicator 28	Budgeting Management Services	0,03	Poor
Indicator 29	Financial Management Services	0,03	Poor
Indicator 30	Performance Management Services	0,04	Poor
Indicator 31	Procurement Services	0,04	Poor
Aspect 7	Electronic Based Public Services		
Indicator 32	Public Complaints Service	0,01	Poor
Indicator 33	Legal Documentation and Information Services	0,02	Poor
Indicator 34	Whistle Blowing System Services	-	Poor
Indicator 35	Public Service Government Agencies	0,14	Poor

Conclusions

Overall, Maturity level in West Java Regional Device is mostly poor, which is still far from mature level. It is necessary to develop in the domains that are categorized as poor, and there must be a change from zero to exist for the domains that are categorized are zero.

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