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ELECTRONIC GOVERNMENT ASSESSMENT IN WEST JAVA PROVINCE, INDONESIA

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ABSTRACT

In the view of public administration, electronic Government (eGovernment) is the use of information and communication technology (ICT) to improve the activities of public sector organizations. Understanding eGovernment, is not only related to ICT, but all public sector activities are included. In relation with the excellent service that must be delivered by public institutions, the government began to concern about the application of Information and Communication Technology (ICT) for various services. With regard to the readiness of the Regional Device Work Unit (SKPD) to deliver services, the authors are interested in analyzing the readiness of some districts / cities in the West Java Province to see how far the SKPD is prepared in Bandung, West Bandung regency, Cimahi and Garut regencies in preparing everything to achieve an optimum service based on electronics. The method used is Quantitative method based on Hee Joon Song (2006) theory on 3 phases of eGovernment Action Plan (Pre-Implementation, Implementation, Post-Implementation) and he also does similar things in South Korea. For the pre-implementation stage, West Bandung regency occupies the first position with a value of 3.44 far above the other Regencies / Cities, and the lowest is the city of Bandung. In the implementation phase, Bandung still gets the lowest value even far below the average. It is quite getting attention is West Bandung regency, which in the pre-implementation phase gets the highest value, but in the implementation it is far below the average. This is caused by the lack of experience of the implementation process because West Bandung is the youngest area among others. For the post-implementation stage, Cimahi City domination is seen as the city with the best implementation and post-implementation phases, followed by Garut regency. This is quite reasonable considering that Cimahi is the best city for eGovernment implementation in 2011, and became a pilot city project for eGovernment implementation in 2014. It's just that the city of Bandung as a city that is also initiated as the will of Silicon Valley city of Indonesia seems to be trying to improve services in the field of eGovernment for even better. Given Bandung is the capital of the province as well as an icon of West Java.

Keywords:- *ICT; e-Government, Indonesia, Public Administration, Services*

1. INTRODUCTION

Electronic government (e-government) is a new breakthrough that governments use around the world to serve and meet the needs of their communities directly and quickly in today's world. eGovernment is the use of information technology systems such as the Internet and the web as a tool to achieve good governance by producing better policies, high quality of service, and high commitment with the community. This means that the use of information technology by government officials can improve relationships with citizens, business people and with the inter-government itself. IT provides many benefits in the areas of improving government services, increasing interaction with business and industry, and empowering citizens through information or making effective and efficient governance [1]. A similar point is expressed by [2], where Hee Jung Soong [2] says that to have a mature eGovernment organization or country should look at the following factors: (1) There must be a change within the organizational environment that implements eGovernment; (2) The organizations / agencies and countries in the implementation process of eGovernment should identify SWOT (Strengths, weaknesses, opportunities, and Threats); (3) In the implementation process should focus on

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management of development process, and; (4) The stage of monitoring and evaluation made based on the views of users / citizens is not from the organization/ institution itself.

It is interesting to see West Java Province in implementing eGovernment. This is because West Java Province occupies the first position for the implementation of eGovernment in Indonesia with the City of Cimahi as a candidate for Pilot Project eGovernment National 2014. Based on the document E-Government Rating Indonesia Regency / City In West Java Province Year 2012 [2] mention that the City Cimahi indeed occupies the first position for the implementation of eGovernment in West Java, followed by Cirebon regency as two cities in good category, followed by fifteen districts / cities in the category Less and four districts / cities in the category is very less.

Based on this, the authors are interested to examine more related to the topic Action Plan eGovernment in West Java Province, especially Cimahi City, Garut City, Bandung City and West Bandung regency. This research tries to map Action Plan to e-government applied in South Korea, where we know that South Korea occupies the first position in the world for its eGovernment implementation.

2. RELATED WORKS

Related to the topic of research, the author tries to analyze similar research Marijn Janssen [5] which proposed the concept to design and analyze eGovernment business process. Use the framework they design where the indicators include (1) the organizations participating in the public service network; (2) Offer of services; (3) network coordination; (4) business processes; (5) shared resources; (6) Network capability. Then test it in dutch to prove 3 types of eGovernment model, namely portal, orchestration and shared service where he can then do a working relationship with. The case study was in the Netherlands and was investigated with a total of 22 interviews of respondents. All interviews are recorded and transcribed for later re-check by the resource person for approval. 5 interviews were conducted for portal case studies and 8 interviews for orchestral performance and shared service models. Can not one public sector manager, information manager, citizen representatives and project managers be responsible for creating business models interviewed. Their findings have an accessible business model while networking capabilities can further enhance the mixing of resources toward a publicly oriented business model. The method used by Janssen is a qualitative method through action research. This method combines the findings of theoretical knowledge and the field of work of the authors. Using a variety of models to analyze existing problems, there are business models, business portal models, orchestration models. Janssen's writings provide insight and an overview for governments that will apply the principles of eGovernment. Janssen's research concludes that knowledge transfer management is a necessary condition to illustrate the relationship between services.

Furthermore, Keng Siaun et al (2005) look at the evolving developments in eGovernment of Alberta on the stages of questioning in eGovernment development. In this study Keng Siaun, et al (2005) synthesized the eGovernment stage model into a common scheme for researchers and practitioners in the region. Keng Siaun, et al (2005) uses qualitative methodologies for different models of each other and the development of the new eGovernment phase model. The eGovernment stage model that has the following five entities: the web, interaction, transactions, transformation and e-Democracy. The results of Keng Siaun, et al (2005) provide five new phases in the eGovernment model that can serve as examples of conceptual work for researchers to build and understand eGovernment development. the eGovernment stage model that incorporates a map map for practitioners to guide in its eGovt projects. Keng Siau believes this strategic vision covers four main areas of eGovernment development, government government (G2C), government to government (G2B), government government (G2G), and government to employees (G2E). G2C and G2E dispatch related interaction and cooperation between government and individuals, while G2B and G2G are linked between government and organizations. In addition, G2C and G2B involve external interaction and collaboration between governments and overseas, such as citizens and businesses, while G2E and G2G involve internal interaction and cooperation between government and employees, as well as between different levels of government and location. E-Government can be accepted as a call portal and an interactive integration of internal government and external users. Indeed, research on eGovernment is still in its infancy. There is a need to implement how to build an effective and efficient eGovernment system and the ability to build the mapping of desired service capabilities.

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The problems raised by Keng Siau, et al (2005) discuss about the stages of e-government development. Given that so far the results of research show different results hence the discussion of the journal leads more to find a model of new stages of e-government development. The problem solving method uses a qualitative meta-synthesis approach, Meta-synthesis is a research method used to generate interpretive translations, land narratives or theories by integrating and comparing the findings or methapors of different qualitative studies. Writing contributions and results presenting a road map for practitioners to follow the e-government project and generate a discussion of the new e-government development stages of the five stages of e-governemnet in the form of web presence, interaction, transactions, transformation and e-democracy. The limited journals discussed are limited to the new five-stage model providing a conceptual framework synthesized for researchers to evaluate and understand e-government development.

Then Warda Allouache and Abdelaziz Khadraoui (2011) tried to argue that the provision and improvement of services by public administration is a fundamental issue of e-Government in terms of quality, efficiency and transparency.The research is conducted in the Algerian region where citizens and companies suffer because existing public institutions maximal in quality, inaccessible and non-transparent of services rendered The method used to solve the problem based on service model ontology for the approach to the identification and development of eGovernment services in accordance with the legal framework proposed by khadraoui, et al. (2008) The Concept of Information Systems Components ISC) consists of three asper, among others: a static aspect that determines the structure of the Information System (IS) data, a dynamic aspect that expresses the behavior of different elements of the IS and aspects of integrity constraints that define rules governing the behavior of IS elements. research shows how the identification process for establishing eGovernment services in accordance with the legal framework can be applied, which in its hope ensures the transparency and accessibility of services to citizens. The contribution of the research is able to apply the approach proposed by khadraoui et al (2008). Where they have formulated a process of identification and construction of government electronic services using maps, then apply different steps from approaches to build referential services provided by social insurance organizations in Algeria in the framework of health insurance services.

Unlike before, Carlos Serrano-Cinca, et al. (2008) describes the factors that support eGovernment expansion. This paper includes a short case study of the Saragossa parliament, one of the leading legislation in Spain, regarding the eGovernment initiative. The hypothesis proposed is the role of urban resources, politicians and the environment as elements that support eGovernment. It aims to argue that larger cities have more resources available to implement technological initiatives, politicians readily accept the use of technology to communicate thus encouraging the use of eGovernment by communities, and the local environment. The proposed model was tested using data from 92 Spanish city councils. Using SEM (Structural Equation Model) modeling, the calculation uses the smallest partial squares used as an analysis tool. Their findings are that the emphasis of city resources is the most important factor. Limitations of the study only analyze the data of a particular year from one country. Models can be used to improve policy-making in a practical way. The origin of this research analyzes the influence of each factor separately. The proposed structural equation model allows for the analysis of the impact of various factors simultaneously. The variables used are modeled as latent variables, as they show that this is the most appropriate way to represent the complex reality of eGovernment.

3. PROPOSED METHOD

The study, which took place in 2016, uses a quantitative method. Performed by spreading a questionnaire related to the three phases of the eGovernment Action Plan that Hee Joon Song [2] in South Korea. Three phases are divided into 12 stages with 36 activities. Three phases are described in Table I. The object of the study is four Regional Device Work Units (SKPD) in the environment of West Java Province which include:

a. Office of Archives Library and Electronic Data Management (KAPPDE) Cimahi City

b. Regional Secretariat Garut District Informatics Section,

c. Department of Communication and Informatics Bandung, and

d. Department of Communication and Informatics West Bandung regency.

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Selection of this research object based on the consideration that the four objects are SKPD that is responsible for the implementation of eGovernment in the district / city in the region.

Table 1: Phase of e-Government Assessment [2].

Phases	Steps	Activities
Pre-implementation	1. Leadership & awareness	1. Mission and mandates, 2. Political leadership, 3. Social awareness: policy network
	2. Institution building	1. Core institution building, 2. Partnership: committee, PPP
	3. Analyze environment	1. Natural factors: Geography, 2. Human factors: literacy,digital divide, 3. Political and administrative culture
	4. Benchmarking	1. Past cases, 2. Foreign countries
Implementation	5. Vision statement	1. Vision statement, 2. Strategic goals
	6. Develop roadmap	1. Hierarchical structure, 2. Prioritization of projects, 3. Description of unit project
	7. Build strategy	1. Reform: automation vs. reengineering, 2. Empowerment: top-down vs. bottom-up, 3. Customer definition
	8. Manage critical factors	1. Human resources, 2.Financial resources, 3. Technological resources, 4. Laws and regulations, 5. Stakeholder analysis 6. Outsourcing management
	9. System development	1. BPR, 2. ISP, 3. System development
Post-implementation	10. Evaluation	1. Project monitoring, 2. Evaluation
	11. Operation	1. Operation and maintenance, 2. Information resources management
	12. Feedback	1. Public relations for system utilization, 2. Feedback

4. DISCUSSION AND EVALUATION

This section discusses step-analysis, which consists of 12 steps / Dimension to measure the readiness of eGovernment process in West Java Province. For the measurement scale, used scale 1 to 5, where 1 represents the condition is not ideal and 5 is the ideal conditions that occur in the District / City of each object of research.

4.1. Pre-Implementation

Hee Joon Song [2] explains that in the pre-implementation phase there are several steps, namely (1) Leadership & Awareness, (2) Institution Building, (3) Analyze Environment, and (4) Bencmarking. For the first stage of Leadership & Awareness, there are several activities that serve as the basis of assessment indicators, namely the implementation of mission and e-government mandate, political leadership will, and social awareness. Based on the questionnaire data, the stages of leadership & awareness look like in Figure 1. In the picture shows the tendencies of 4 districts / cities have values that are close to each other. For the first activity of Mission and Mandates, the average score is at 3.83. in this position only the city of Bandung which has a number below the average, the rest Cimahi City, Garut regency and West Bandung regency above average. For the second activity of Political Leadership, it seems that only Garut Regency has above average value (3.31). The third activity of Social Awareness Policy Network is only Garut regency and West Bandung regency which has above average value (2.79).

See Figure 1

See Figure 2

In the second phase, Institution Building (Figure 2), the assessment is based on several activities, namely, the first activity of the Core Institution Building and the second is Partnership (partnership). Based on Figure 2, the first activity of Core Institution Building has an average value of 3.21. Three districts / cities are quite good with numbers above average, but Garut regency is still below the average with 2.00 points. For the activation of both Partnership (partnership), with an

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average value of 3.81 only Garut regency that has been better with a value of 5.00, the rest is still below the average value.

See Figure 3

For the next stage, the Analyze Environment (Figure 3), there are 3 activities. For the first activity, the natural factor (geographical) with an average value of 2.69 only West Bandung Regency which is above average nilaniya (4.33), the rest is still below average. For the second activity is the human factor (literacy and digitalization), with an average value of 2.58 Garut regency (3.00) and West Bandung regency (2.67) which has above average value. Then the third activity is Culture of administration and politics with an average value of 4.56 only Cimahi City (5.00) and Garut regency (5.00) which has above average numbers.

See Figure 4

In the last stage of the pre-implementation phase, namely Bencmarking (Figure 4) there are several activities, the first of past activities and cooperation with other countries. The purpose of this activity is to assess the past events of the eGovernment process as an evaluation of the implementation of eGovernment in the future. In addition, the implementation of the process by making other countries as a mecca of eGovernment development also be taken into consideration. From the result of the conclusion of the questionnaire and the interview description, the researcher got information that Kota Cimahil more experienced for e-Government / past-cases learning process (Figure 4) with Cimahi City value 5.00 and Garut regency 5.00 above average value (4.56). However, for cooperation with other countries, the results of the questionnaire show that the West Bandung regency more cooperate with the value of 3 above average (1.69).

4.2. Implementation

For the implementation phase, there are 4 stages: Vision statement, Develop roadmap, Build strategy, Manage critical factors, and System development, with each activity. For the first stage, the Vision statement, as shown in Figure 5, there is the first activity of vision statement with the average value at 4.75. only the city of Bandung is still below the average with a value of 4.00, the rest is good enough that Cimahi City (5.00), Garut regency (5.00) and West Bandung regency (5.00). For the second activity of strategic goals, with an average score of 4.08, only Garut regency (5.00) and West Bandung regency (4.33) are above average.

See Figure 5

See Figure 6

Furthermore, at the stage of Develop Roadmap (Figure 6) with three activities namely Hierarchical Structure, prioritization of project and description of unit project. We value through the respondent's statements, website, and regional planning data. The results show for the first activity that is Hierarchical Structure with an average value of 2.79, only Garut regency (3.00) and West Bandung regency (3.00) are already high. Furthermore, the second activity is prioritization of projects, with an average value of 3.96, for the three districts / municipalities is already quite good only the city of Bandung is still below the average of 3.50. For the next activity is the Description of Unit Project with an average value of 3.00 West Bandung Regency only that is still below the average is the value of 2.33, the rest is better.

See Figure 7

For the category of build strategy, the numbers tend to fluctuate from around two to five. Category five is achieved by Garut regency for the assessment of customer definition readiness, where they are able to read the needs of the community will be electronic-based services.

See Figure 8

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The next stage of Manage Critical Factor (Figure 8) with five activities of human resources, financial resources, technological resources, laws and regulations, stakeholder analysis and outsourcing management. For the first activity, namely human resources with an average value of 3.13, only Cimahi City (3.33) and West Bandung regency (3.67) are already above average. Then for the second activity of financial resources with an average value of 2.81 turns out only West Bandung regency that is still below the average of 1.00, the rest is very good that is Cimahi City (3.33), Garut regency (5.00) and Bandung (3.00). The next activity is technological resources with an average value of 2.81 only Kota Cimahi (3.00) and Garut regency (4.00) whose value is above average, the rest is still below average. The third activity is law and regulation with an average value of 2.75 Kota Cimahi (4.00) and Bandung (4.00) which is better. The next activity is stakeholder analysis with an average value of 4.31 turns out only Cimahi City (4.67) and West Bandung regency (4.33) which is already good. The last is outsourcing management activity with an average value of 2.88, only Bandung (4.00) and West Bandung Regency (4.00) which is better, the rest is still below the average of Cimahi City (1.50) and Garut regency (2.00).

See Figure 9

For the next stage, System development (Figure 9) with three activities: business process reengineering, internet service provider and system development. For the first activity is business process reengineering with an average value of 2.69 Cimahi City is still below the average with a value of 2.00, the rest Garut regency (3.00), Bandung (2.75) and West Bandung District (3.00) is good enough. For the provision of internet (Internet Service Provider), it was at number 3.27 for the average value. For some districts / cities is good enough, but the city of Bandung is still lacking in the provision of internet access with a value of 1.75 below the average. Finally, for system development activity the number is good even maximal is 5 for each regency / city.

4.3. Post-Implementation

The post-implementation phase (Figure 10) consists of several stages that are used as an assessment indicator. The stages are evaluation, operation, and feedback. For the first stage of evaluation, where there are some activities such as; Project Monitoring and Evaluation, based on the results of questionnaires obtained, Project Monitoring stages performed by SKPD each District / City on average reached the number above four which means it is done fairly well although the average value ranges in figure 4.85. The best is Garut regency and West Bandung regency with a maximum number of 5.00. In contrast to the previous results, the evaluation results are still not good. Evident from the results of data processing where the average figure for the evaluation activity is 3.08 and only Cimahi City which is good enough in evaluating with the value of 3.33, the rest is still below the average of 3.00 for the three other districts / cities.

See Figure 10

See Figure 11

The second stage in the post-implementation phase is the operation stage (Figure 11). At this stage there are several activities such as; Operation and Maintenance and Information resources management. Based on the results of questionnaires that have been processed, the stages of this operation reached an average of 3.63 with Garut regency (5.00) as the champion followed by Cimahi City (4.00) and the remaining two cities of Bandung (3.50) and West Bandung Regency (2.00) which are still below average. For information resources management activities, it turns out that the average rate is very high at 4.31 where only Cimahi City (5.00) is able to reach the lift, and the rest is still below the average mesktipun Bandung (4.25) has reached the number above 4.00 and the rest still below 4.00.

See Figure 12

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The last stage in the post-implementation phase is the feedback stage (Figure 12). In this feedback stage there are several activities such as; Public Relations for system utilization and feedback. The results of questionnaires for public relations for system utilization averaged around 3.77. With this number Kota Cimahi (4.33) has exceeded the average figure, followed by Garut regency (4.00) and West Bandung regency (4.00). only the city of Bandung (2.75) is still below the average. For feedback activity, the average number is around 3.25. With this average number Cimahi City (3.67) and West Bandung regency (3.33) is still quite well above average. However, Bandung (3.00) and Garut City (3.00) are still below average.

5. DISCUSSION AND EVALUATION

This Phases-Analysis section, the author will display the processed resume of each phase. Based on the data obtained, then the authors processed using a statistical approach to see the tendency of each implementation phase and as a comparison material each region involved as a research object.

See Figure 13

For the pre-implementation stage (Figure 13), West Bandung Regency occupies the first position with a value of 3.40 well above the average value of 3.22. The next position is the City of Garut with a value of 3.35 and City Cimahi with a value of 3.24. Unlike the three districts / cities, Bandung is in a less good position that is 3.15 below the average value. This can happen because the city of Bandung during this period is still in the transition period and the preparation of a good e-Government system, so in those times it is possible to overhaul the system and so on which resulted in the value for pre-implementation slumped down drastically where they should start with something new.

See Figure 14

In the implementation phase (Figure 14), Bandung still get the lowest score 3.27 even far below the average of 3.47. It has been explained also in the previous section why the city of Bandung get enough value plummeted. However, it is enough to get attention is West Bandung regency, where in the pre-implementation phase to obtain the highest value, but the implementation is far below the average of 3.32 from the average value of 3.47. This is caused by the lack of experience of the implementation process because West Bandung is the youngest area among others. For Garut Regency experienced the same thing. Where in the pre-implementation phase is good enough but in the implementation is far from expectations with a value of sebsar 3.40 below the 3.47 average. Best is Kota Cimahi, where the city is quite consistent to carry out public services using e-Government services so not strange, in this implementation phase Cimahi City get the highest number with a value of 3.50 well above the average of 3.47.

See Figure 15

For post-implementation stage (Figure 15), Cimahi City still dominated as the city with the best implementation and post-impelementation phase, followed by Garut regency. This is quite reasonable considering Cimahi is the best city for eGovernment implementation in 2011 until 2014, and become pilot city pilot project for eGovernment implementation of 2014 this year. It's just that the city of Bandung as a city that is also initiated as the will of Silicon Valley city of Indonesia seems to be trying to improve services in the field of eGovernment for better. Given Bandung is the Provincial Capital as well as an icon of West Java Province.

6. CONCLUSION

Early application of web technology applications tends to automate existing business processes with re-design and innovation. An approach involving automation triggers e-commerce activity, but fails to integrate and redesign the business as a whole in order to make it truly web-based. The same is true in the first step of eGovernment, where there is work to initiate the form of web services with quality and level of service that impressed what it is. However, Burns and Robins [3] observed, "eGovernment is not just about putting online forms and services in. It provides an opportunity to rethink how the government is delivering services and how to connect them in ways that are tailored to the

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needs of users, more sophisticated than the people who exist to serve as an integral part of the approach towards eGovernment and provide more freedom of information [3].

Symonds also said that if the government can achieve a radical new conception, then there is the potential for eGovernment to change not only the way in which public services are done, but also the fundamental relationship between government and citizens [4] . This means not only eGovernment, but also eGovernance if the real power will actually be left to the citizens.

The same thing is experienced by the City of Cimahi, Garut regency, Bandung City and West Bandung regency, which continue to struggle to show the best service to satisfy the society's thirst for optimal service, sustainable and integrated, so that ultimately the effectiveness and efficiency of service will be achieved [5].

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Appendix:

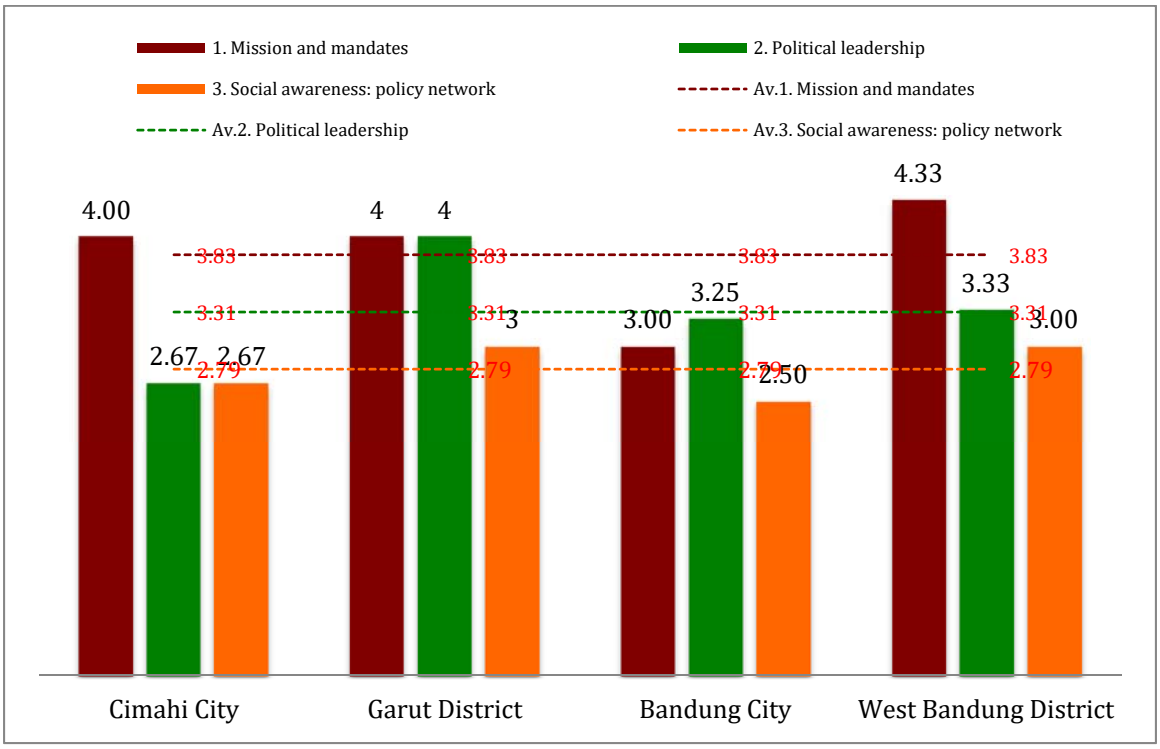

Figure. 1. Leadership & Awareness

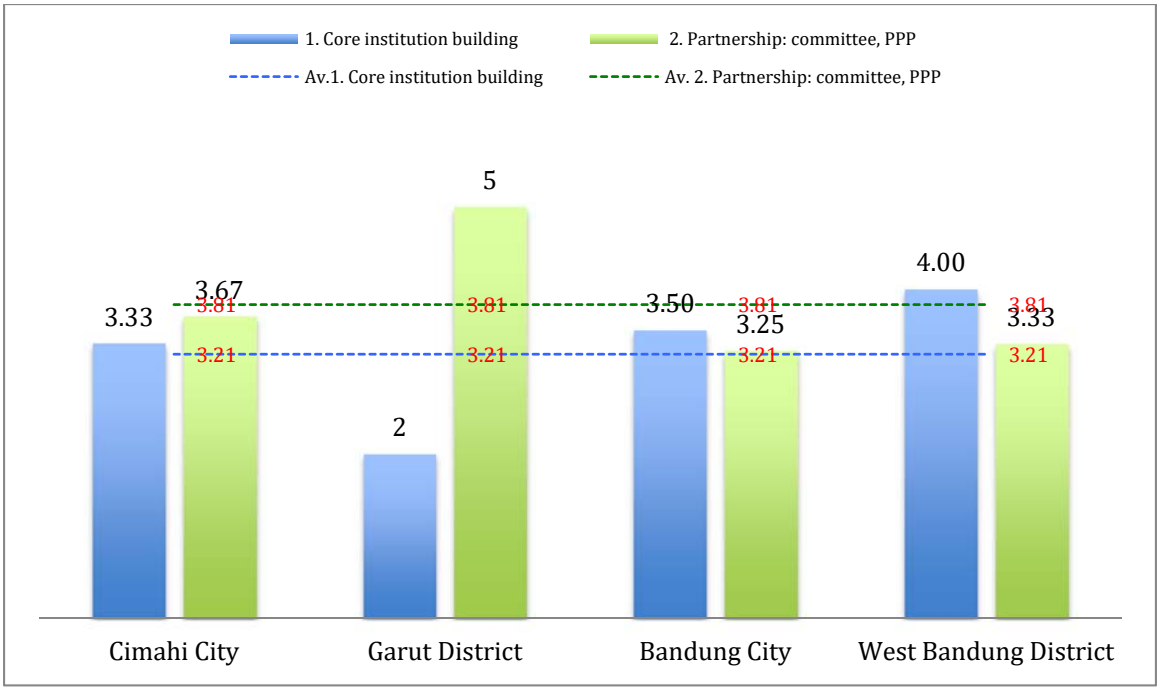

Figure. 2. Institution Building

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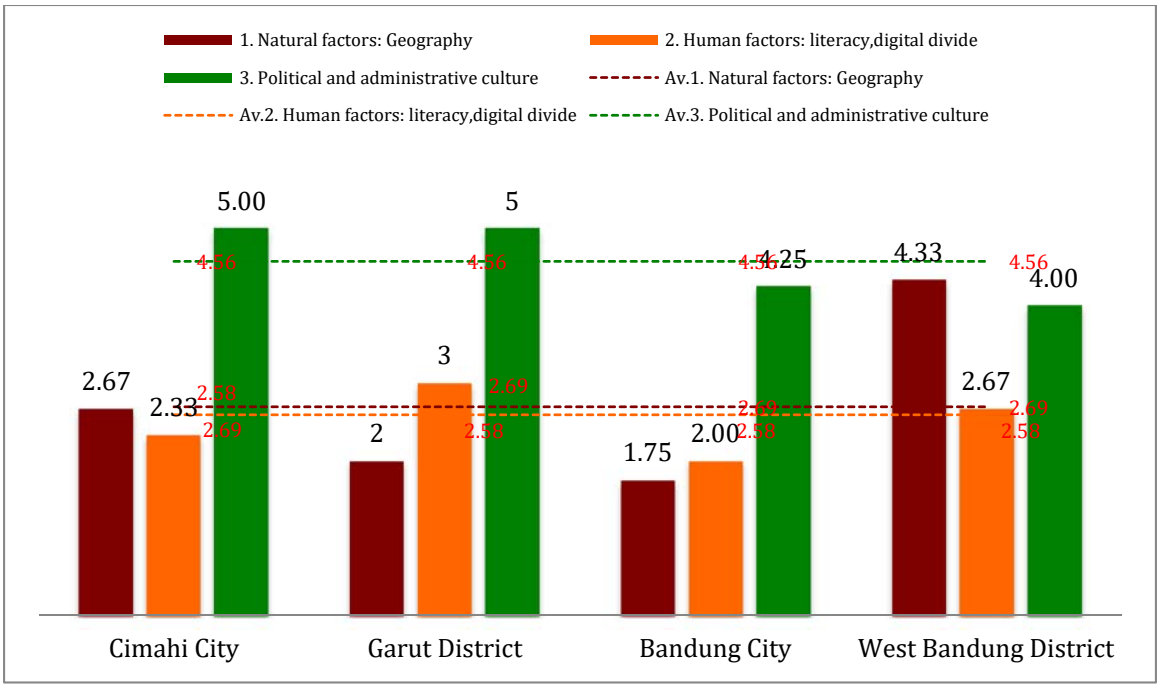

Figure. 3. Analyze Environment

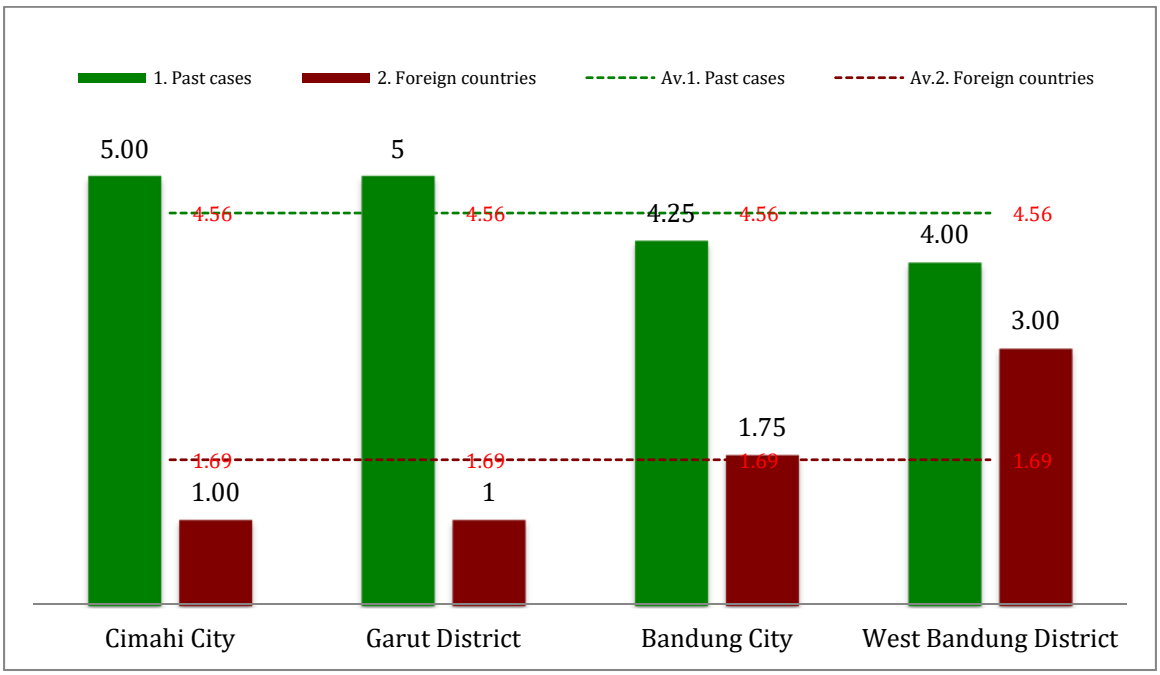

Figure. 4. Benchmarking

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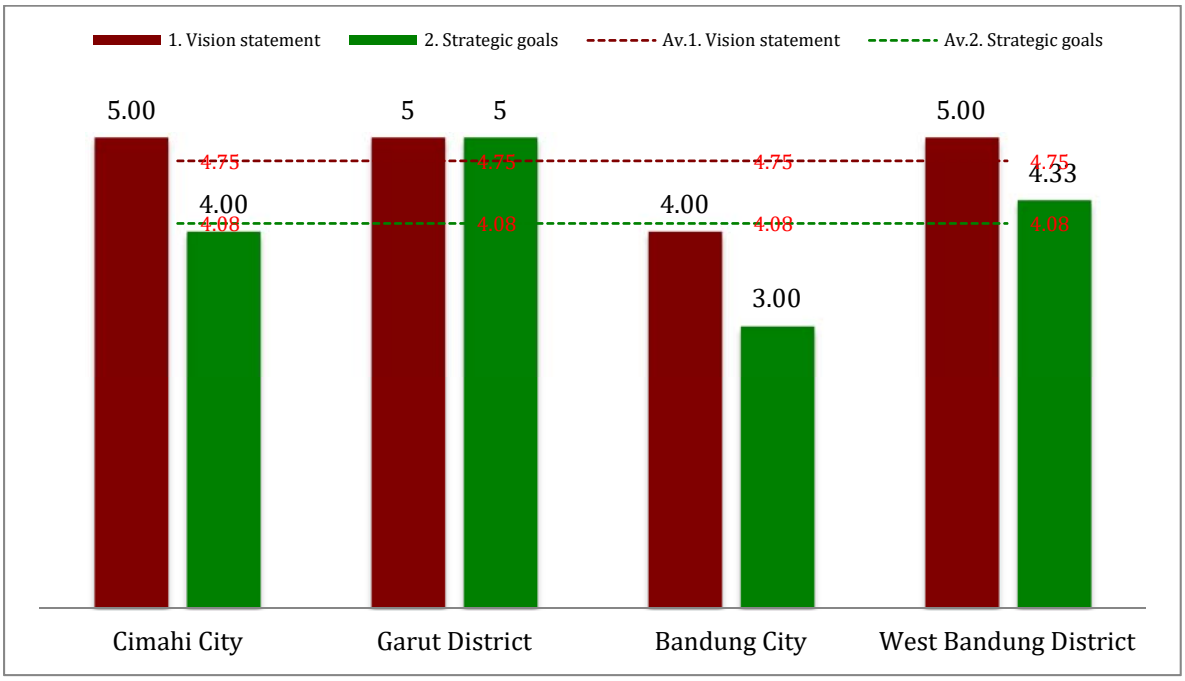

Figure. 5. Vision Statement

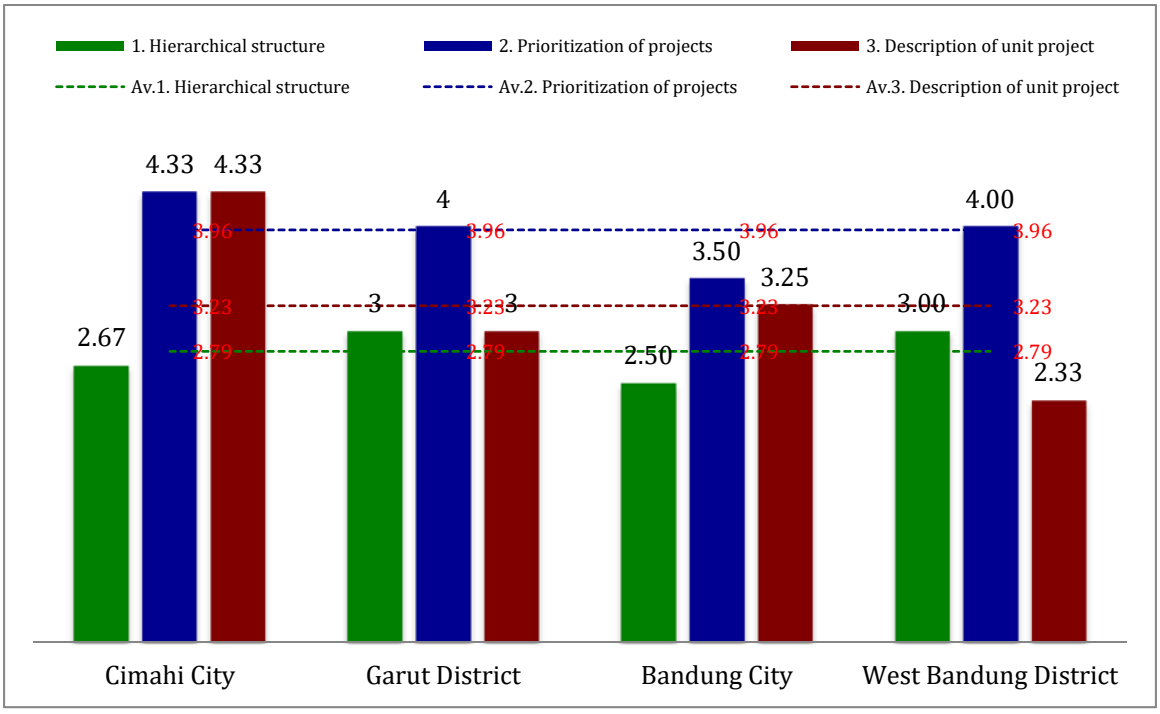

Figure. 6. Develop Roadmap

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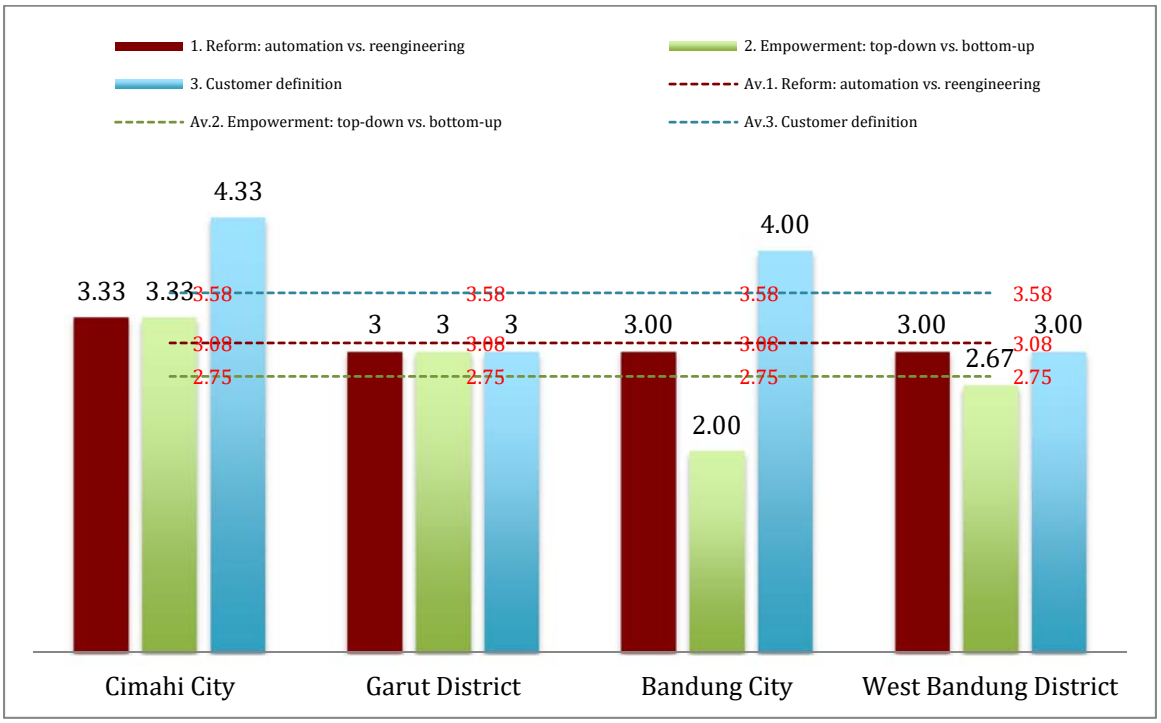

Figure. 7. Build Strategy

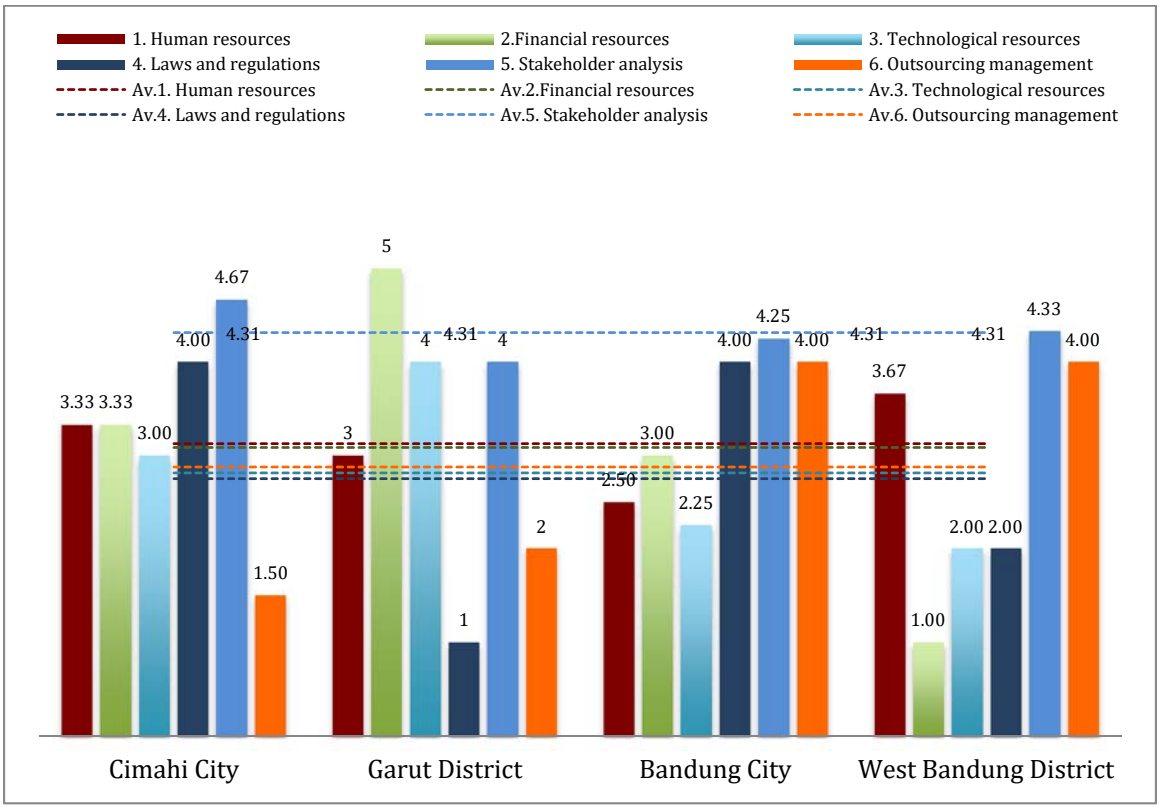

Figure. 8. Critical Factors

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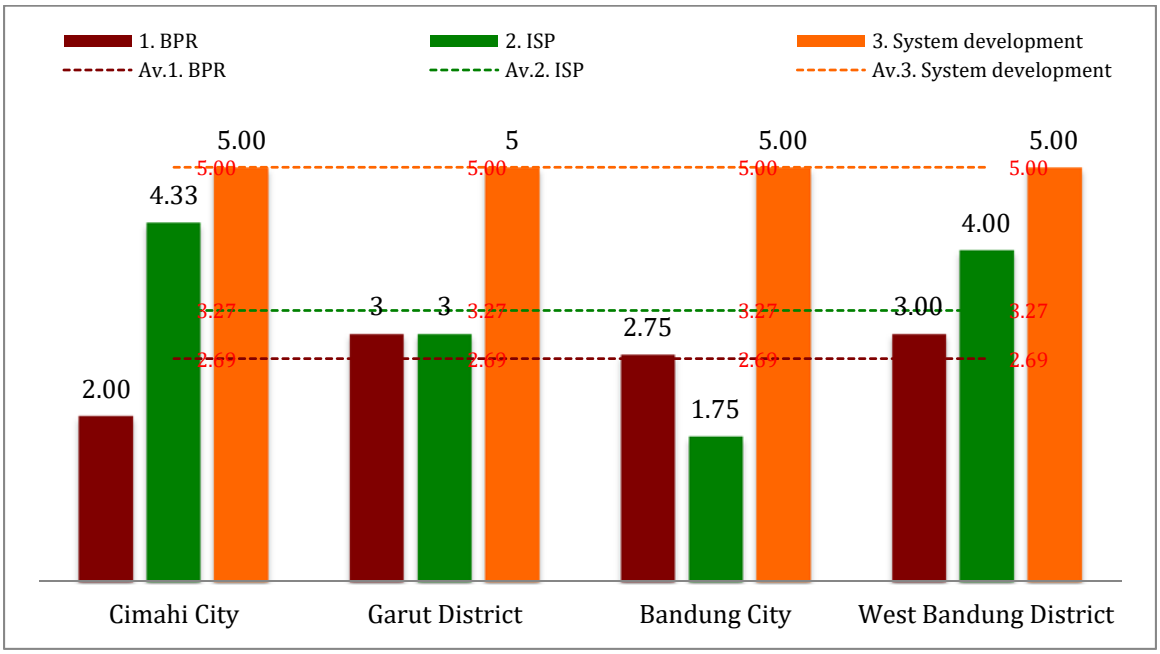

Figure. 9 System Development

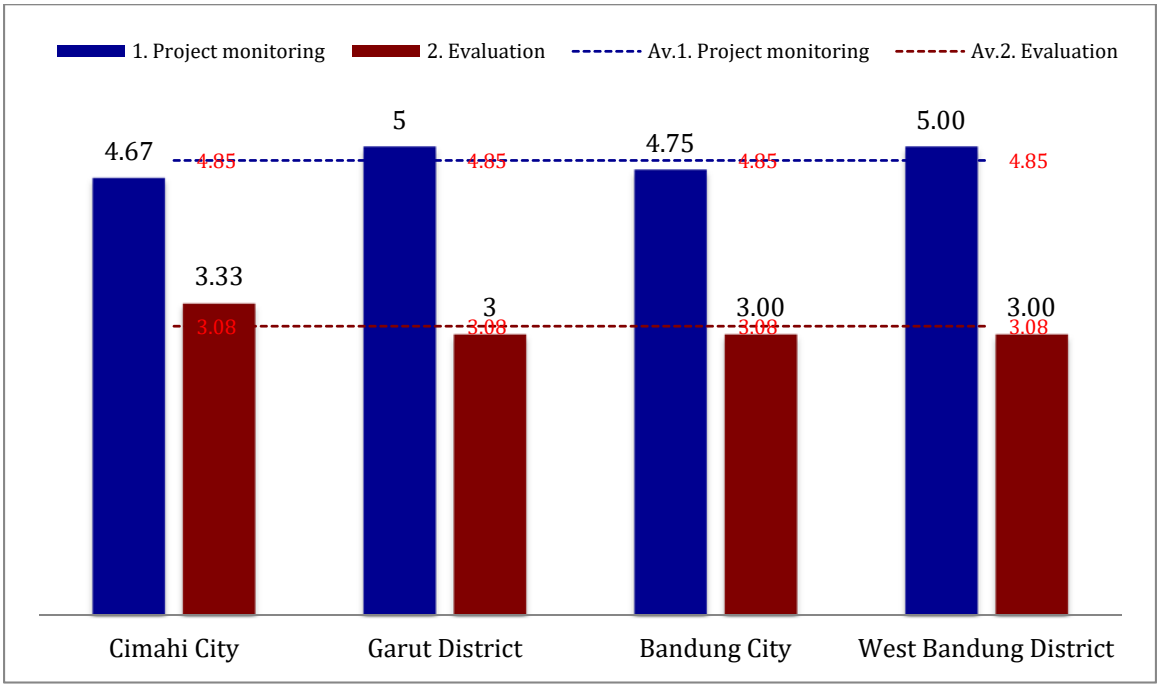

Figure. 10. Evaluation

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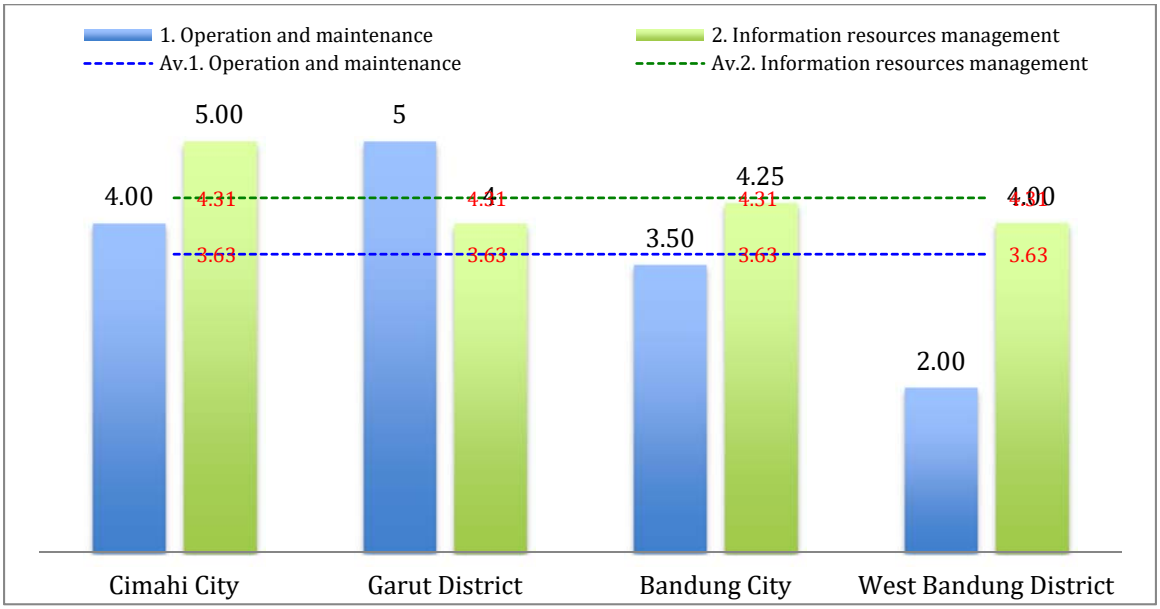

Figure. 11. Operation

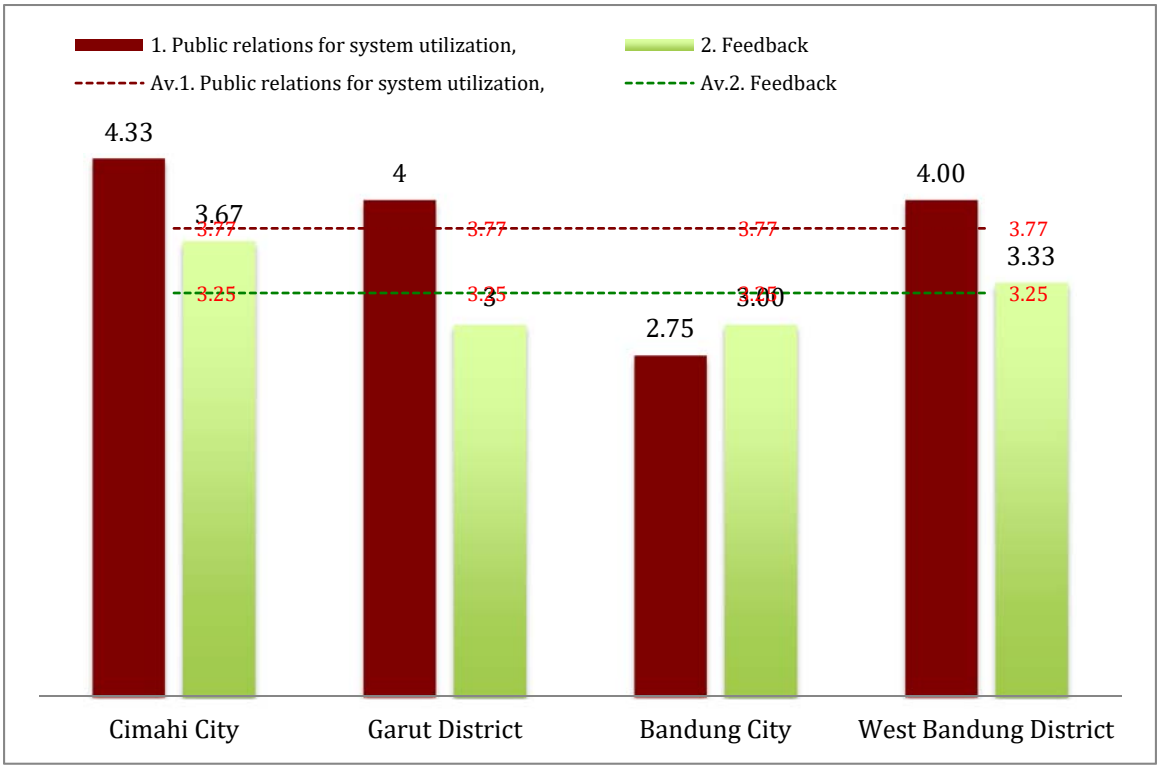

Figure. 12. Feedback

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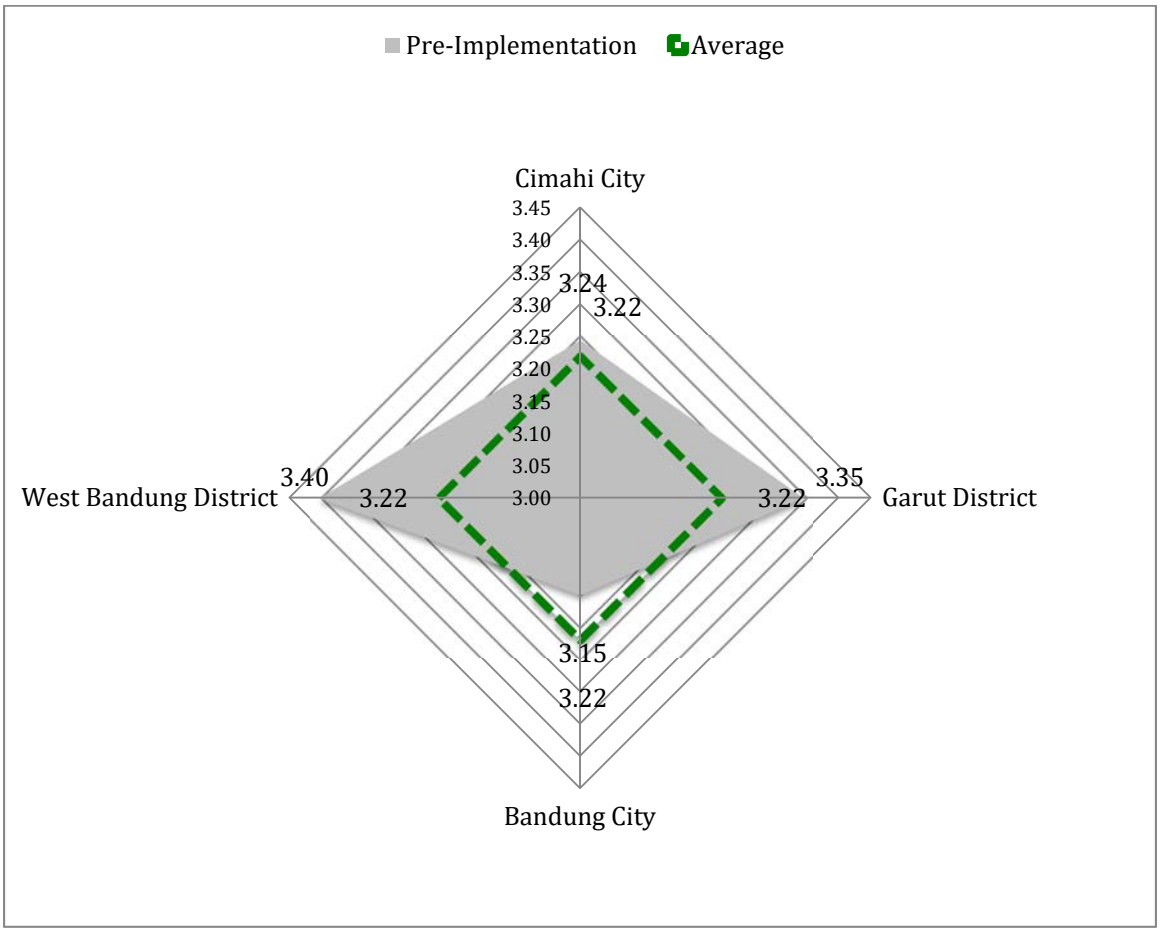

Figure. 13. Pre-Implementation Phase

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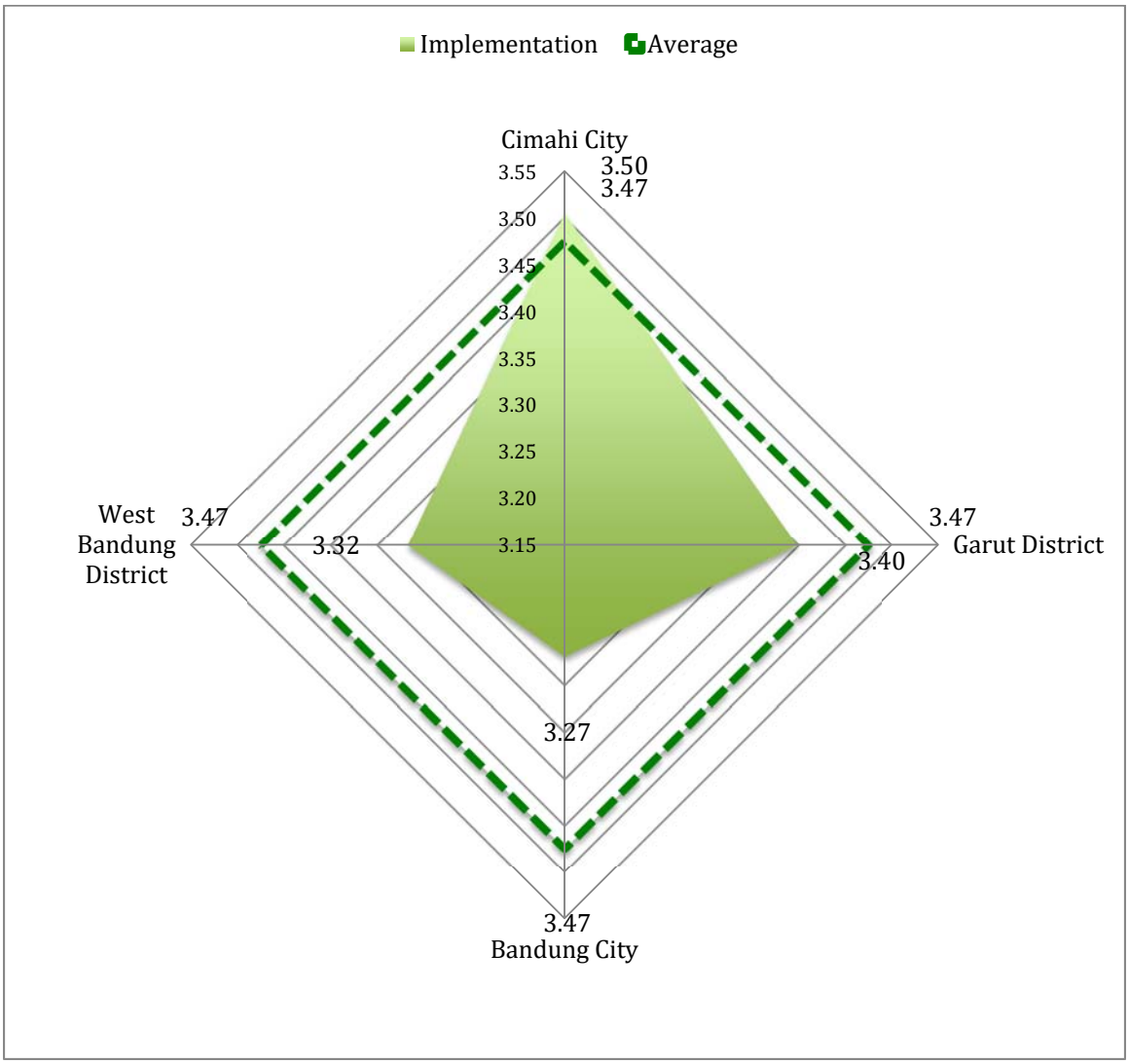

Figure. 14. Implementation Phase

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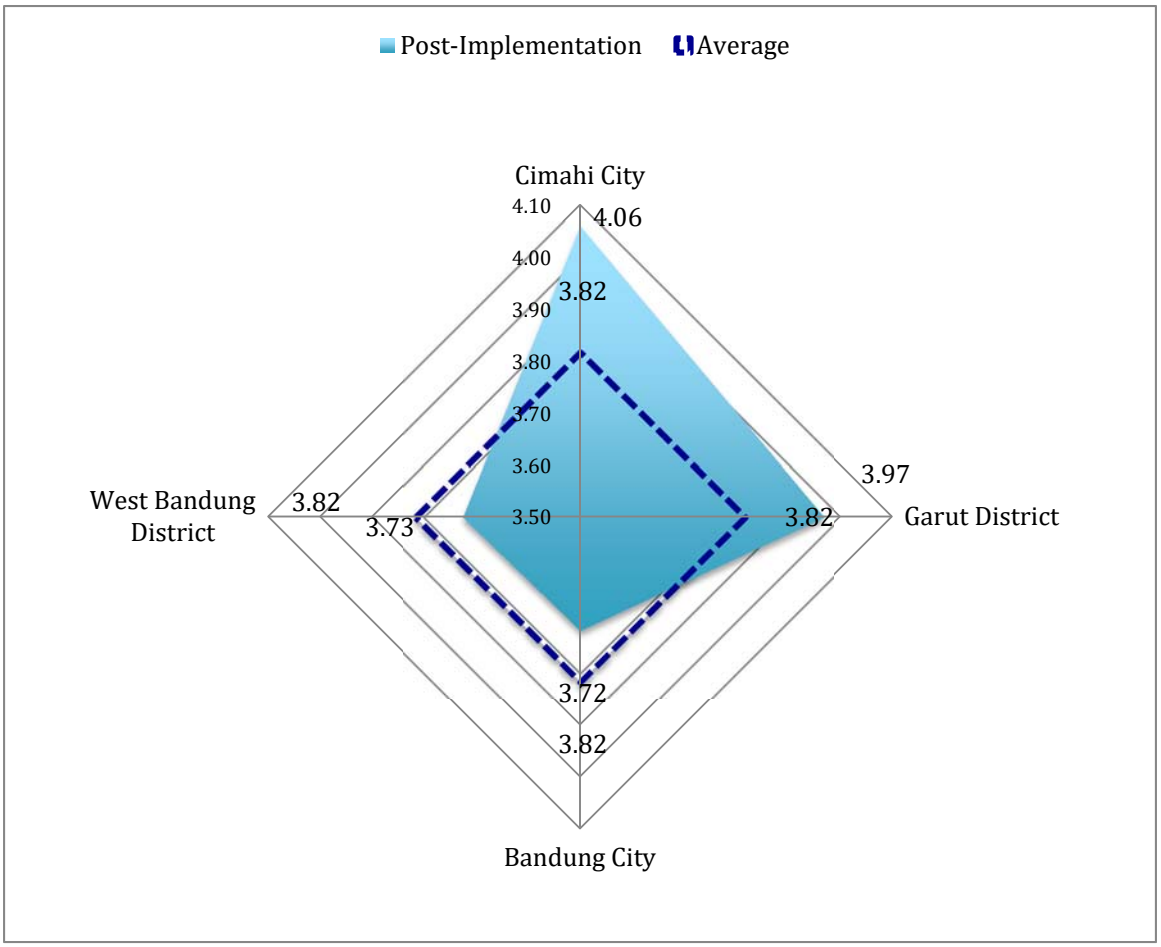

Figure. 15. Post-Implementation Phase