

PROGRAM IMPLEMENTATION OF E-GOVERNMENT-BASED VILLAGE ADMINISTRATION AND INFORMATION SYSTEM IN WEST SUMBA REGENCY

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ABSTRACT

This study is focused on determining and analyzing the program implementation of E-Government-based Village Administration and Information System (VAIS), determining and analyzing the supporting and inhibiting factors on the implementation of E-Government-based VAIS in West Sumba Regency, East Nusa Tenggara Province. Grindle theory was used to determine the extent of program implementation viewed from Content of Policy and Context of Implementation. This study used descriptive qualitative data which were collected through interview, documentation and observation. Informants were 6 regional leaders and 35 village chiefs. The results indicated that program implementation of E-Government-based VIAS in terms of Content of Policy can be developed by considering several factors; Interests parties, the benefits of VAIS policy, Extent of change envisioned, Site of decision making, Program implementers, Resources committed. In addition of Content of policy, a policy is also developed by considering Context of implementation, which includes factors of Power, interest and strategy of actors involved, Institution and regime characteristics, Compliance and responsiveness. The implementation of E-Government-based VIAS has both supporting inhibiting factors. Efforts of West Sumba Regency Government to overcome the inhibiting factors in the program implementation of E-Government-based Village Administration and Information System are through the Top-down approach and also the Bottom-up approach.

Keywords: Policy implementation, E-Government, VIAS, Village, West Sumba Regency.

INTRODUCTION

The Progress of human life in globalization era has brought us to the increasingly advanced science and technology. People are required to know and understand technology. Technology in daily life has provided easiness in running activities. Current technological advancement is inevitable because the needs for quick and accurate information has become primary in all aspects. One of the most advancing technologies is web-based technology or better known as internet. This technology has been used in various sectors: business, government, health, education, etc. This technology has also include e-government. Central and local governments are required to develop and make use of the advancement of information technology in public administration according to Presidential Instruction No. 3 of 2003 on National Policy and Strategy for Development of E-Government with reference to the 1945 Constitution of the Republic of Indonesia, Article 28F that states:

Each person shall have the right to communication and to acquire information for his/her own and his/her social environment's development, as well as the right to

seek, obtain, possess, store, process, and distribute information via all kinds of channels availableⁱ.

The Presidential Instruction No. 3/2003 became the milestone in the development of E-Government in Indonesia. It consists of policy and strategy on the E-Government development. As the result, we can see rapid changes along with the development of E-Government in Indonesia, such the increasing number of central government sites since local government, ministry, province, regency, city, district, sub-district and up to village governments. Indonesia is one of the countries with the slowest, and even declining, the rate of development of E-Government. This can be seen in data of E-Government Development Index (EGDI), the result of survey by United Nations, as informed by the Information and Communication Technology Development and Training Center (Widowati, 2016), which show Indonesia slipped from rank 106 in 2014 to rank 116 in 2016. It was even much lower than other Southeast Asian countries such as Malaysia that ranked 60th, the Philippines that ranked 71st and Brunei Darussalam that ranked 83rd. In Indonesia itself, an important issue of why the implementation of E-Government is still considered far behind other Southeast countries is because of unequal competitiveness of its implementation across Indonesia. One small example we can see is the statistical data of websites of Local Government as released by the Ministry of Home Affairs (2015) as seen in the table below.

Table 1. Statistic of Website of Local Government

Number of Active Website of Provincial/Regency/City Government	Number of Inactive Website of Provincial/Regency/City Government	Number of Provincial/Regency/City Government with no Official Website
455	59	16

Source: Data of Ministry of Home Affairs, 2016

From the data above, there are provincial, regency/city governments that inactively use their own website and, even, don't have their own official website. While with the official website, Local Government is enabled to develop e-government in its region. In relation with the implementation of E-Government in Indonesia, despite still being in the category of underdeveloped, many provinces have successfully developed good E-Government service, such as one-stop service provided by Sragen Regency which is an innovation in providing integrated service to reduce poverty (Wahyudi, 2015). As well as Surabaya Government with its e-procurement service due to facilitating community and projects monitoring in Surabaya (Tempo, 2013).

The spirit of Joko Widodo's current administration as stated in Nawa Cita, seeks to achieve Indonesia that is politically sovereign, economically independent, and culturally principled. One agenda in Nawa Cita is to build Indonesia from its peripheries by consolidating regions and villages within the framework of the unitary state. This agenda provides a breath of fresh air for villages with the enactment of Law No. 6 of 2014 on Village. Article 86 of the law states about Village and Rural Development Information System. In here, it is clearly explained that village has the right to obtain information through village information system that should be developed by local government of regency/city and then managed by village government to be accessible by villagers and all stakeholders. The article implies that E-

ⁱ The 1945 Constitution of the Republic of Indonesia, Article 28F

Government should be implemented not only at the provincial and regency/city level, but also until village level. Village is element of government directly in contact with community and, therefore, the essence of public service provided to villager should be the optimum service. In order to achieve optimum service, it is necessary to consider the use of technology through the implementation of E-Government. This is the particular challenge faced by local government in making a strategy for implementation of E-Government at village level. West Sumba Regency itself consists of 6 districts, 63 villages and 11 sub-districts, which by the development level can be seen in table below.

Table 2. Number of Village/Sub-district based on its Development Level

No	District	Development Rate			Number
		Self-supporting	Self-developing	Self-sufficient	
1.	Lamboya	3	5	-	8
2.	Wanukaka	3	11	-	14
3.	West Laboya	1	3	-	4
4.	Loli	1	8	5	14
5.	Waikabubak city	1	6	6	13
6.	Tanarighu	7	11	-	18
	Number	16	47	11	74

Source: BPS of West Sumba Regency 2016

16 villages are at self-supporting level, which means that they are still bound by tradition because the level of education is relatively low, the production is still focused to meet primary needs of the family, and communication to the outside is limited. This type of village is sedentary, which means that family groups have been long settled down there. A total of 47 villages at the development level of Self-developing, where this type of village is more advanced than self-supporting village, where village customs are undergoing a transition and outside influences begin to integrate, resulting in changes in way of thinking and increasing employment, community livelihoods begin to develop from primary to secondary sectors, increasing productivity along with increase in village infrastructures. At the development level of self-sufficient, which is even more advanced and able to optimally develop all available potentials, there are 11 sub-districts.

Village Administration and Information System (VAIS) is essential part in village development as it is the vital source of data and input containing all information related with potentials of the village. Good development planning derives from accurate data, thus, administration and information system used should be able to present accurate data. One way to obtain it is through the use of E-Government-based technology. One of a number of problems and obstacles generally confronted in Indonesia is the insufficient quality of human resources. Public awareness of the benefit of information technology is still low, as suggested by DT Palekahelu in his journal entitled “Problems and Needs in Education Development in West Sumba Regency (2012). This also happens particularly in West Sumba Regency, as seen from the percentage of population above the age of 10 years according to the certificate of highest education level in 2014-2015.

The table 3 shows that the highest percentage and number of population in West Sumba Regency are at middle to the high school level. Moreover, there is the tendency of increasing in number of population with no certificate, with certificate of middle school, high school and graduate school.

Table 3. Percentage of +10 Years old Residents based on thier Education Level 2014-2015

Certificate of Highest Education	2014			2015		
	M	F	M+F	M	F	M+F
No certificate	35.46	33.94	34.73	41.73	40.72	41.24
Elementary (SD/MI/Equal)	28.39	28.06	28.23	16.91	22.01	19.35
Middle (SLTP/MTs/Equal)	14.82	16.40	15.58	16.37	16.16	16.27
High (SLTA/Equal)	17.42	16.91	17.18	18.95	16.68	17.86
D-I/D-II	0.12	0.45	0.28	0.18	0.00	0.09
D-III/Associate Degree	1.03	1.32	1.17	0.45	0.95	0.69
D-IV/Bachelor/Master/Doctorate	2.76	2.91	2.84	5.42	3.47	4.49

Source: BPS of West Sumba Regency 2016

This is because of increasing number of population of West Sumba Regency due to the fact that native people who had gone or finished the study in other regions are returning home, and also migration of a large number of people especially trader from outside of West Nusa Tenggara. Therefore, Local Government should pay serious attention to this matter, because it is known that, for sustainable development, the need for highly educated human resources is urgent, especially in village. Government, in general, rarely has skillful human resources in E-Government sector. Unequal understanding of community on the use of E-Government is because the majority of people are at the lower middle level of education. In addition to population size, another problematic important factor is human resources as the implementer of village administration and information system in West Sumba Regency, i.e. State Civil Apparatus under Village Community Empowerment Office of West Sumba Regency.

Table 4. Village Community Empowerment Office based on education level

Education Level	Number of Civil Servant
Middle School (SLTP)	1 person
High School (SLTA/Equal)	9 persons
Diploma III (D-III)	4 persons
Bachelor Degree (S1)	12 persons
Master Degree (S2)	1 persons
Total	27 persons

Source: Education and Training Agency of West Sumba Regency, 2016

Among the 27 Civil Servants in Village Community Empowerment Office of West Sumba Regency, it is noted that there is only 1 person with education background of Information Technology, which obviously means that implementation of policy related with E-Government-based Village Information System in West Sumba Regency will not be optimal. Other problem that inhibits the implementation of E-Government is the limited availability of adequate infrastructures in terms of networking, hardware and provider, and unequal delivery of information technology service to regions. In West Sumba Regency, internet connection in capital of regency and districts, based on data published by BPS West Sumba Regency (2016), there has not been any internet connection used at all by the government, private sector, society and household. In order to satisfy the needs for information and internet, both government and private sectors still rely on personal modem using cellular network of private provider with fairly high cost. Next think related with infrastructures which is a component of

basic needs in implementation of E-Government-based Village Administration and Information System is the needs for laptop and computer and network. Data obtained from snippet of assets report of Village Community Empowerment Office is that there are total 47 laptop units and 63 personal computer units in all 74 villages and sub-districts, including the ones used in the Village Community Empowerment Office building. This number is obviously unable to meet the requirement for adequate implementation of E-Government-based Village Administration and Information System. To date, number of villages that have implemented Village Administration and Information System is 3, i.e. Mamodu, Taramanu and Tebara.

In addition, relatively high cost is also one of inhibiting factors in development of infrastructures, as explained in Amin in (Redaksi, 2016). This problem also occurs in West Sumba Regency where adequate infrastructures and internet connection to support implementation of E-Government are not yet available, and thus it requires serious attention and action from government to act according to mandate from legislation. Budget-related problems are apparent in realization of local revenue of West Sumba Regency, as published by BPS of West Sumba Regency in West Sumba in Numbers, (2016), in which is stated that local revenue of West Sumba Regency in 2015 was Rp 554,290,855,018 deriving from Local Own Source Revenue (Pendapatan Asli Daerah) by Rp 46,996,427,274 or 9% of total revenue, Balance Fund by Rp. 462,543,542,450 or 83% of total revenue, and from other sources of legal revenue by Rp. 44,750,885,294 or 8% of total revenue. From data above, it is apparent that West Sumba Regency is still fully dependent on balance fund from central government to finance local expenditure.

Regulation is a supporting factor in the implementation of a policy and, therefore, it is necessary to pay attention to prepare a policy with clear regulation and legal standard. West Sumba Regency, since the enactment of Law No. 6 of 2014 on Village that is furthermore explained in Government Regulation No. 47 of 2015 on Amendment of Government Regulation No. 43 of 2014 on Implementing Regulation of Law No. 6 of 2014 on Village and its derivative, i.e. Regulation of Minister of Home Affairs No. 81 of 2015 on Evaluation of Village and Sub-district Development, has not yet enacted specific regulation and legal standard either in form of Regional Regulation or Regent Regulation that directly address the facilitation and development of village information system.

Referring to background and explanation above, in order to implement mandate in Law No. 6/2016 on Village as well as to support government strategic program through Nawa Cita to build Indonesia from its peripheries by consolidating regions and villages within the framework of unitary state, especially in West Sumba Regency, this study proposed to disclose the Program Implementation of E-Government-based Administration and Information System in West Sumba Regency.

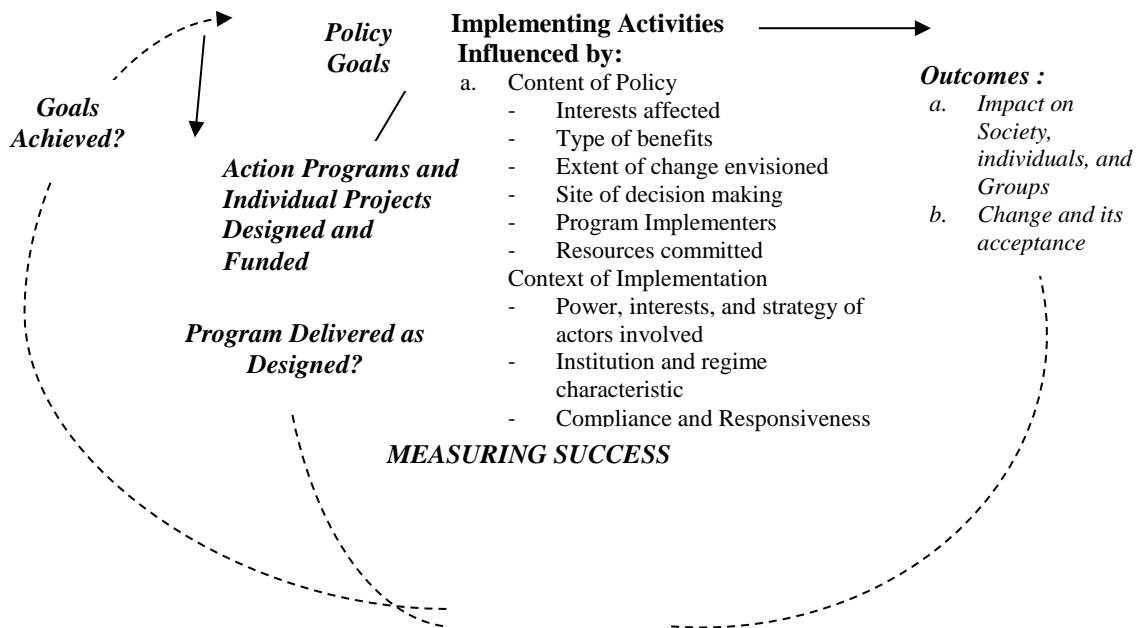
1. How is the program implementation of E-Government-based VAIS in West Sumba Regency?
2. What are supporting and inhibiting factors and it overcome in the program implementation of E-Government-based VAIS in West Sumba Regency?
3. What are the efforts to overcome the inhibiting factors in the program implementation of E-Government-based VAIS in West Sumba Regency?

THEORITICAL DESIGN

Implementation theory that is relevant to be used in process of program implementation of E-Government-based Village Information System is implementation theory by Grindle (1980:

11) with his approach known as Implementation as Political and Administrative Process that can be seen in figure below:

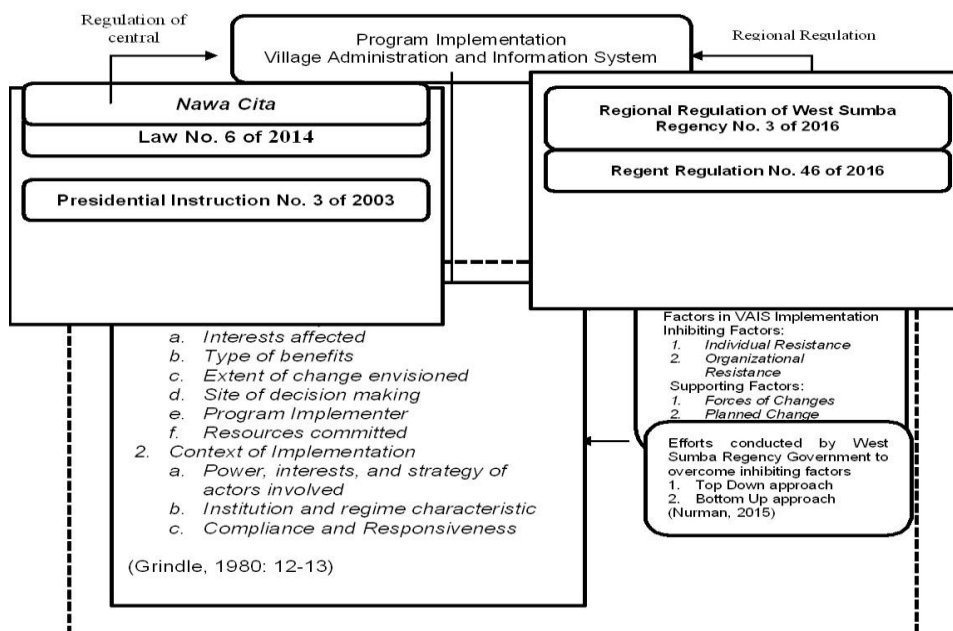
Figure 1. Implementation as A Political and Administrative Process



Source: Politics and Policy Implementation in the Third World. (Grindle, 1980)

The model describes ongoing process of decision making by a variety of actors, the ultimate outcomes of which is determined by the content of the program being pursued and by interaction of the decision makers within a given politico-administrative context. Political process can be seen through process of decision making that involves a variety of actors, and administrative process can be seen through general process on administrative action studied at certain program level.

Figure 2. Theoretical Framework



Source: Developed by researcher based on available references

RESEARCH METHOD

This study used descriptive qualitative method. the conceptual operationalization in this study is as follows:

Table 4. Conceptual Operationalization

Title	Theme	Subtheme	Sub-subtheme
1	2	3	4
Program Implementation of Village Administration and Information System (Case Study of Implementation of E-Government-based Village Administration and Information System in West Sumba Regency, East Nusa Tenggara Province)	Implementation	1.(Content of Policy	1. (Interest affected). 2. (Type of Benefits). 3. (Extend of Change Envision) 4. (Site of Decision Making) 5. (Program Implementer) 6. (Resources Committed)
		2. (Context of Implementation)	1. (Power, Interest, and strategy of actor involved) 2. (Institution and Regime Characteristic) 3. (Compliance and responsiveness)
	Supporting and Inhibiting Factors	1.Supporting Factors	1. Forces of Changes 2. Planned Change
		2.Inhibiting Factors	1. Individual Resistance 2. Organizational Resistance
	Efforts to overcome Inhibiting Factors	1. Effort	1. Top Down approach 2. Bottom Up approach

According to Simangunson (2017), source of data can be classified into 3P/ Person, Paper, and Place:

1. Person; persons as source of data are Regent/Vice-Regent, Head of Regional Legislative Council (DPRD) of West Sumba Regency, Local Secretary, Administrative Department of Regional Secretariat of West Sumba Regency, Head of Regional Development Planning Agency and local government agencies, Head of Village Community Empowerment Office (DPMD), District heads in whole West Sumba Regency by 6 persons. 35 village chiefs as representatives of each district related with program implementation of E-Government-based Village Administration and Information System in West Sumba Regency.
2. Paper; consisting of documents, archives, guidelines, decrees, and others as sources that researcher read and study, including the ones related with data of study, i.e. documents at regency level such as Regional Medium Term Development Plan of West Sumba Regency, Regional Regulation and Regent Regulation, Vilage Medium Term Development Plan, Village Budget, and several other supporting documents that may be found while conducting the study.

3. Place, i.e. locations where the study is conducted. In this study, they are in Village and Subdistrict Community Empowerment Office, Regional Planning Agency, Districts in whole West Sumba Regency, and also villages in all districts in whole West Sumba Regency.

FINDING AND DISCUSSION

Based on the research and results of analysis conducted, conclusions of research on program implementation of Village Administration and Information System in West Sumba Regency can be drawn with results below.

1. Program implementation of E-Government-based VAIS in West Sumba Regency driven into two terms; Content of Policy and Context of Implementation;

A. Content of Policy

- a. Based on Interests Parties, it can be concluded that any interests underlie the policy of VAIS implementation in West Sumba Regency are the ones policy to create better villages in West Sumba Regency in future as well as encourage them to be independent and to eventually achieve social welfare and equal development.
- b. Based on the beneficial types, it can be concluded that benefits of VAIS program implementation of are substantial in supporting development. In addition to administrative services, providing accurate data related to potentials of the village is also very important in the process of development planning in the village. Through village information program, all data related to potentials of the village are summarized and made as reference in policy making, particularly for development of infrastructures at village level. With accurate data on potentials, target of development of both infrastructures and human resources certainly will be more effective and have positive impact for its development and advancement.
- c. Based on the envisioned changes, it can be concluded that change envisioned by West Sumba Regency Government through VAIS is a condition where village community can have quick access to information and also public services, which eventually leads to change in social order and bureaucratic services in the village from slow, traditional and outdated to modern and up to date without disregarding local values and traditions.
- d. Based on the decision making site, it can be concluded that the policy made by West Sumba Regency Government related to VAIS implementation which is specifically conducted by Village Community Empowerment Office of West Sumba Regency, is appropriate per se; however, for optimal implementation, it still lacks of strategic actions. Village administration orderliness and accurate data related potentials of the village are targets to achieve if West Sumba Regency Government expects to improve social standard of living and to optimize effective development so that it can support government programs in preparing information technology-based government services through e-government.
- e. Based on Program Implementation, it can be concluded that VAIS program implementers have adequately understood the purpose and aims of the policy and have obtained legality in the policy implementation because the concerned organization or institution is the West Sumba Regency Government agency.
- f. Based on the Human resources, it can be concluded that the main problem West Sumba Regency Government on VAIS is the lack of quality of human resources. Whereas, VAIS requires physical facilities in its management, and non-physical

facilities in form of expertise and skills of the personnel (operator) and other related elements in implementation of VAIS.

B. Context of Implementation

- a. Based on the related parties due their Power, interests and strategy, it can be concluded that the policy of VAIS implementation in West Sumba Regency is considered as an important thing in improving the village. In a policy, it is necessary that power, interests, and strategy of actors involved are all considered to facilitate its implementation. Otherwise, the program will most likely fail to achieve expected results and give significant change.
 - b. Based on the Institution and regime characteristic, it can be concluded that the leading sector, in this terms is Village Community Empowerment Office, has full support from West Sumba Regency Government to implement the VAIS in order to improve the development and provide public services.
 - c. Based on the Compliance and responsiveness, it can be concluded that compliance in the program implementation, at the level of both implementer and target group (village), has good response to the program implementation.
2. Supporting and inhibiting factors in the program implementation of E-Government-based VAIS in West Sumba Regency, East Nusa Tenggara are as follows:

A. Supporting factor

- a. Based on the changes powerness, it can be concluded that component acting as implementer, in this term is district head, is included in category of changes powerness with great commitment in supporting the succesful implementation of VAIS in West Sumba Regency.
- b. Based on Planned change, it can be concluded that VAIS implementation plan System in West Sumba Regency will be regularly evaluated in accordance with the progress and needs.

B. Inhibiting Factors

- a. Based on the Individual resistance, it can be concluded that individual resistance against the VAIS implementation in West Sumba Regency is due to lack of understanding in target group, i.e. village chiefs, regarding e-government development model and the supporting human resources at village level.
 - b. Based on the Organizational resistance, it can be concluded that organizational resistance that inhibits the VAIS implementation is due to the lack of supporting facilities and infrastructures in villages.
3. West Sumba Regency Government to overcome the inhibiting factors in the program implementation of E-Government-based VAIS are as follows:
- a. Top Down approach;
 - Organizing training for village apparatus on how to operate the system;
 - Assigning honorary personnel with sufficient skill to adequately operate computer in supporting the implementation of information system in village;
 - Providing supporting equipment from either village fund or grant by Regional Development Planning Agency of West Sumba Regency.
 - b. Bottom Up approach are;
 - Optimizing available potentials of both human and organizational resources;
 - Encouraging through giving input in Development Planning Consensus (Musrenbang) related with development of information system;

Participating in efforts to educate community and village apparatus regarding development of e-government.

RECOMENDATION

1. Recommendations on Program implementation of E-Government-based VAIS in West Sumba Regency divided into two terms; Content of Policy and Context of Implementation;

A. Content of policy

- a. Based on the Interests parties, it is recommended that, in order to fulfill the interests in VAIS implementation in West Sumba Regency, it is necessary to follow up with regulations to support the efforts of further development.
- b. Based on the beneficial types of VAIS implementation, it is recommended that information regarding these benefits can be publicized appropriately so that, gradually, community can fully understand the purpose and aims of the program implementation.
- c. Based on the envisioned changes, it is recommended that organizational consolidation at village level should be continued in order to maintain moral and custom values from being eroded as time passes by flow of information in the future.
- d. Based on the decision making, it is recommended to continuously take strategic actions to optimize the policy implementation.
- e. Based on the Program implementation, it is recommended that implementation of the duty should stay consistent with rules and regulations that have been jointly agreed by the actors from regency level to village level.
- f. Based on the human resources, it is recommended that the providing of supporting facilities needed in implementation of this village information policy should be realized not only in physical term but should also be balanced with preparation of adequate human resources.

B. Context of Implementation

- a. Based on the related parties due their Power, interests and strategy, it is recommended that actors who are power holder and decision maker in West Sumba Regency can thoroughly consider what public really needs and respond to them through implementation of this village information system.
 - b. Based on the Institution and regime characteristic, it is recommended that full support from local government through Village Community Empowerment Office can be interpreted appropriately in technical implementation of information system in village.
 - c. Based on the Compliance and responsiveness, it is recommended that the good compliance should be continued in order to maintain good condition of work for successful policy implementation of village information system in West Sumba Regency.
2. Recommendations on supporting and inhibiting factors in the program implementation of E-Government-based VAIS in West Sumba Regency are as follows:

A. Supporting factors

- a. Based on the changes power, it is recommended that implementer should continue providing motivation and direction to village chiefs as the spearhead to understand the significance and benefits if this VAIS run well.

- b. Based on the Planned change, it is recommended for Regency Government through Village Community Empowerment Office to actively and periodically monitor and control to enable quick and proper identification on any problem that may occur in the villages in relation with implementation of VAIS in West Sumba Regency.

B. Inhibiting Factors

- a. Based on the Individual resistance, it is recommended for local government of both Village Community Empowerment Office and districts to intensively provide understanding to village chiefs regarding development of e-government and to provide training to village apparatus and assign supporting administrative personnel to operate personal computer and system in the village.
- b. Based on the Planned changes, it is recommended to provide supporting facilities and infrastructures needed in implementation of information system at village level.

Recommendations on efforts conducted by West Sumba Regency Government to overcome the inhibiting factors in implementation of E-Government-based VAIS in West Sumba Regenc through Top Down approach, local government should provide support optimally with consolidation of personnel, equipment, funding and documentation directly, and, through Bottom Up approach, E-Government should be supported by all social elements, religious leaders, public figures, educational leaders, youth leaders and female leaders.

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