

# Master Plan of local E-government for Village Office Information System Refer to Ministerial Regulations on Work Procedures

Meme Susilowati<sup>a,\*</sup>, Yudhi Kurniawan<sup>a</sup>, C Lenny<sup>a</sup>, Weda Adistianaya Dewa<sup>b</sup>, Moh. Ahsan<sup>c</sup>

<sup>a</sup>Sistem Informasi, Universitas Ma Chung, Villa Puncak Tidar N-1, Malang, Indonesia

<sup>b</sup>Sistem Informasi, STMIK PPKIA Pradnya Paramita, Jl. Laksda Adi Sucipto 249A, Malang, Indonesia

<sup>c</sup>Teknik Informatika, Universitas PGRI Kanjuruhan Malang, Jl. S. Supriadi No.48, Malang, Indonesia

\*correspondence email : [me2s2006@gmail.com](mailto:me2s2006@gmail.com)

**Abstract**—This article contains a local e-government master plan with a case study in a village in Malang district. The master plan referred to the Ministerial regulation regarding the Organizational Structure and Work Procedure of Village Administration. This research method will begin with data gathering (literature study, observation, interview), analysis of SRS (Software Requirement and Specification) documents for synchronization with the division of work tasks, creating focus groups, making Master Plan. This article also will present a focus group diagram on the division of labor results based on the 2015 ministerial regulation. Then proceed with a master plan diagram based on the requirement of the actor system in the village office. Namely the village head, village secretary, three heads of affairs (administration, finance, planning) and a section head. This article will present 13 names and descriptions of applications needed to support the administrative system at the village office. This article also provides 58 tables needed for a Master Plan of Local E-government for village office information system refer to ministerial regulations on work procedures

**Index Terms**—*information system; master plan; Egovernment; administration*

**Abstrak**—Artikel ini berisi master plan e-government lokal dengan studi kasus di sebuah desa di kabupaten Malang. Rencana induk mengacu pada Peraturan Menteri tentang Susunan Organisasi dan Tata Kerja Pemerintahan Desa. Metode penelitian ini akan dimulai dengan pengumpulan data (studi pustaka, observasi, wawancara), analisis dokumen SRS (Software Requirement and Specification) untuk sinkronisasi dengan pembagian tugas kerja, pembuatan focus group, pembuatan Master Plan. Artikel ini juga akan menyajikan diagram kelompok terarah pembagian hasil kerja berdasarkan Peraturan Menteri 2015. Kemudian dilanjutkan dengan diagram rencana induk berdasarkan kebutuhan sistem aktor di kantor desa. Yaitu kepala desa, sekretaris desa, 3 kepala urusan (pemerintahan, keuangan, perencanaan) dan seorang kepala bagian. Artikel ini akan menyajikan 13 nama dan deskripsi aplikasi yang dibutuhkan untuk mendukung sistem administrasi di kantor desa. Artikel ini juga menyediakan 58 tabel yang diperlukan untuk Rencana Induk E-Government Daerah untuk sistem informasi kantor desa mengacu pada peraturan menteri tentang tata cara kerja.

**Kata Kunci**—*sistem informasi; master plan; Egovernment; administrasi*

## I. INTRODUCTION

One of the instruments of planning is master plans [1]. Even the master plan, especially on information and communication technology, guides ICT construction [2]. Some explain how vital this master plan is. He said if The IT master plan is a long-term plan in an organization. This plan creates to support the organization's vision and mission [3]. This fact is present if the master plan is essential to developing an information system. As well as the process of developing an information system in the village is essential. The local e-government needs the master plan to know how to plan and develop the schedule for the implementation information system.

So this research will concern to create a master plan of local E-government for village office of information system refers to ministerial regulations on work procedures. Many years ago, The E-government became an essential topic of interest for academics and practitioners. Because the study of the success of e-government implementation is part of the successful study of the IS application [4], the implementation of E-government development may not be comprehensive from the outset. However, it will continue to grow steadily over time, in tune with the readiness of each layer of bureaucracy that

would be expropriated E-government and socialization to people. The reason is also that the reference and direction must be correct to reach the goal. There is no manual service to the public, both individuals and institutions, and there is no manual interaction among institutions, and there should be no redundancy process and data [5].

This article contains a local e-government master plan with a case study in a village in Malang district. The master plan referred to the Ministerial regulation regarding the Organizational Structure and Work Procedure of Village Administration. This research method will begin with data gathering (literature study, observation, interview), analysis of SRS (Software Requirement and Specification) documents for synchronization with the division of work tasks, creating focus groups, making Master Plan. This article also will present a focus group diagram on the division of labour results based on the 2015 ministerial regulation. Then proceed with a master plan diagram based on the requirement of the actor system in the village office.

## II. METHODS

### A. Object of research

This research will concern implementing ministerial regulation on procedures to be the object of research. The ministerial regulation is the primary document that is the basis for requirement analysis to create a master plan. The main document is Peraturan Menteri No. 84 Tahun 2014 about Susunan Organisasi dan Tata Kerja Pemerintahan Desa [6] this document from Ministry of Home Affairs.

Chapter two from this document shared about organization structure, duty and function of local e-government. Mean is personnel of village office.

- Organization structure. Chapter two, section two, describes the organizational structure of the village officials. There is Chief of the village, Secretary of the village, Regional Staff, Technical Staff.
- Task and functional. Chapter two-section six describes the duty and function of the Chief of the village, Secretary of the village, Regional Staff, Technical Staff.
- The village chief task. Is organizing Village Administration, implementing development, community development, and community empowerment.
- The Secretary of village task. Is in charge of assisting the Chief of Village in government administration.
- The Head of affairs serves. As an element of the secretariat staff, Secretary of village task. The Head of affairs is Head of administration and general, Head of finance, Head of planning.
- The section head serves as the technical executing element. The section head helps the Chief of Village with operational technology. There is a section head of government, Head of social, Head of services.
- The Head of regional. Help Chief of Village to do the task on their regional.
- The technical executing element. The section head helps the Chief of Village with operational technology. There is a section head of government, Head of social, Head of services.

### B. Method

This research method will begin with data gathering (literature study, observation, interview), analysis of SRS (Software Requirement and Specification) documents for synchronization with the division of work tasks, creating focus groups, making Master Plan. For detailed step can explain in Figure One about the method. In Figure One, we can see step by step that did in this research.

The first step was data gathering with tree activities. There are literature studies, observations and interviews. The literature study found many examples of master plans about local E-government implementation in other places from Indonesia and many countries [7] [8]. The literature study step finds many official documents that output from the business process in the office of Local E-government [9]. The observation step was visiting the office village to know business processes, especially day-to-day operations in every division. The result of observation was compared with theory from study literature and concluded. The conclusions from compare process were explained with the interview to clear the business process component.

The second step is Analysis of SRS (Software Requirement Specification). This step starts with making document SRS know the detail of requirements from the business process. SRS recommends developing an information system too because we can know functional requirements from every user in business

need and logical database in this document.

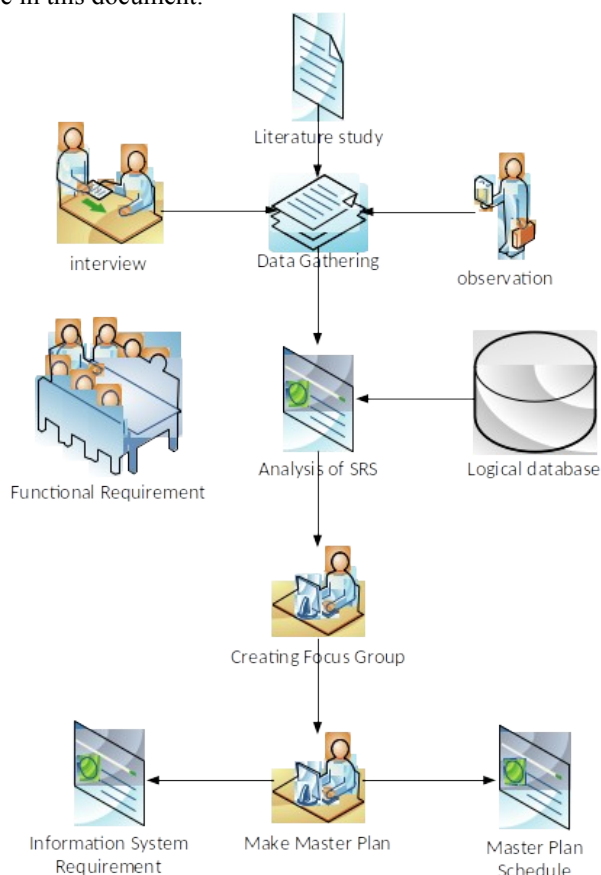


Figure 1. Method

The third step is creating a focus group. The focus group is a diagram that explains many modules and sub-modules recommended by SRS. Module and sub-modules like menus on the application of information system, because Focus Group Diagram content about transaction or activities on every business process in every division or users. This article also will present a focus group diagram on the division of labour results based on the 2015 ministerial regulation. Then proceed with a master plan diagram based on the requirement of the actor system in the village office the village head, village secretary, three heads of affairs (administration, finance, planning) and a section head. This article will present 13 names and descriptions of applications needed to support the administrative system at the village office. This article also provides 58 tables required for a Master Plan of Local E-government for village office information system. The Focus Group Diagram can saw in Figure two.

The last step is creating the master plan by creating tables and the information system requirement schedule.

1. Kepala Desa	2. Sekretaris Desa	3. Kepala Urusan	4. Kepala Seksi
<p><b>Administrasi Surat - Menyurat</b> KD53A6. Mengontrol dan Memvalidasi Administrasi Kependudukan</p> <p><b>Kegiatan Operasional Lainnya</b> KD53A2. Melakukan Penetapan Perdes</p>	<p><b>Administrasi Surat - Menyurat</b> SD63A3. Menyimpan Arsip</p> <p>SD63D4. Menyusun Laporan</p> <p>SD63A2. Melakukan Administrasi Surat-Menyurat</p> <p>SD63C3. Melakukan Verifikasi Administrasi Keuangan</p>	<p><b>Administrasi Surat - Menyurat</b> KU73A3. Menyimpan Arsip</p> <p>KU73A2. Melakukan Administrasi Surat-Menyurat</p> <p>KU73B3. Melakukan Verifikasi Administrasi Keuangan</p> <p>KU73C4. Menyusun Laporan</p>	<p><b>Kegiatan Operasional Lainnya</b> KS83A3. Melakukan Pendataan</p>
	<p><b>Administrasi Keuangan</b> SD63C1. Mengurus Administrasi Keuangan</p> <p>SD63C2. Mengurus Administrasi Sumber APBD</p> <p>SD63C4. Memeriksa Administrasi Penghasilan Perangkat Desa</p> <p>SD63D1. Menyusun Rencana APBD</p>	<p><b>Administrasi Keuangan</b> KU73B1. Mengurus Administrasi Keuangan</p> <p>KU73B2. Mengurus Administrasi Sumber APBD</p> <p>KU73B4. Melakukan Administrasi Penghasilan Perangkat Desa</p> <p>KU73C1. Menyusun Rencana APBD</p>	
	<p><b>Kegiatan Operasional Lainnya</b> SD63A1. Melakukan Tata Naskah</p> <p>SD63A4. Mengontrol Ekspedisi</p> <p>SD63B1. Melakukan Penataan Administrasi Perangkat Desa</p> <p>SD63B3. Menyiapkan Rapat</p> <p>SD63B4. Melakukan Pengadministrasian Aset</p> <p>SD63B6. Mengurus Perjalanan Dinas</p> <p>SD63D2. Menginventarisir Data Desa dalam rangka Pembangunan</p> <p>SD63D3. Melakukan Monitoring dan Evaluasi Proker</p> <p>SD63B5. Melakukan Inventarisasi</p>	<p><b>Kegiatan Operasional Lainnya</b> KU73A1. Melakukan Tata Naskah</p> <p>KU73A4. Mengurus Ekspedisi</p> <p>KU73A5. Melakukan Penataan Administrasi Perangkat Desa</p> <p>KU73A9. Melakukan Inventarisasi</p> <p>KU73A10. Mengurus Perjalanan Dinas</p> <p>KU73A8. Melakukan Pengadministrasian Aset</p> <p>KU73A7. Menyiapkan Rapat</p> <p>KU73C2. Menginventarisir Data Desa dalam rangka Pembangunan</p> <p>KU73C3. Melakukan Monitoring dan Evaluasi Proker</p>	

Figure 2. Focus Group Business Process Diagram

### III. RESULT AND DISCUSSION

According to the method, we can share the result. The master plans will be a presentation on three matrix tables. The first table describes the Information Requirements for the Head of Affairs. Moreover, the second table describes Information Requirements for Section Head Serves. Moreover, the last table describes Information Requirements for Head of Regional, Secretary and Chief of Village.

The number of information systems in the table does not represent the priority number. It is just a sequence number.

Table 1. Head of Affairs Master Plan

No	Information System Requirement	Head of affairs		
		Administration	Finance	Planning
1	Citizen Database	v		
2	Family Card Record	v		
3	Repository	v		
4	Letters Administration	v		
5	Human Resource Management	v		
6	Asset Management	v	v	v
7	APBD Planning		v	v
8	Finance Report		v	
9	Cash Flow		v	
10	Planning Management			v
11	Internal archives			
12	Governance			
13	Social Community Management			
14	Village website	v	v	v
15	Inventory Management	v	v	v

There is three software that the head of affairs has not needed on the first table. There are Internal archives, Governance, and Social Community Management. And then, in the second table, there is seven software needed by the Section head Serves, the Citizen Database, Repository, Asset Management, Internal archives, Governance, Social Community Management and Village Profile website. The entire table needs three tables: Head of Regional, Secretary, and Chief of Village. The Secretary must verify all documents, data, and information before the Chief of Village validation. Likewise, regional heads also require almost all applications.

Table 2. Section head serves master plan.

No	Information System Requirement	Section Head Serves		
		Government	Social	Services
1	Citizen Database	v	v	v
2	Family Card Record	v		
3	Repository	v		
4	Letters Administration	v		
5	Human Resource Management			
6	Asset Management	v	v	
7	APBD Planning			
8	Finance Report			
9	Cash Flow			
10	Planning Management			
11	Internal archives	v		
12	Governance	v		
13	Social Community Management	v	v	v
14	Village website	v		
15	Inventory Management			

Table 2 explain about requirement information system for three Section Head Serves. There are Government Section Head Serves, Social Section Head Serves and Services Section Head Serves. In this table, we can see that Section Head Serves do not require four applications. There are APBD Planning, Finance Report, Cash Flow and Planning Management.

Table 3. Head of regional, secretary and chief of village master plan.

No	Information System Requirement	Head of Regional	Secretary	Chief of Village
1	Citizen Database		v	v
2	Family Card Record	v	v	v
3	Repository		v	v
4	Letters Administration	v	v	v
5	Human Resource Management		v	v
6	Asset Management	v	v	v
7	APBD Planning	v	v	v
8	Finance Report	v	v	v
9	Cash Flow	v	v	v
10	Planning Management		v	v
11	Internal archives		v	v
12	Governance		v	v
13	Social Community Management	v	v	v
14	Village website	v	v	v
15	Inventory Management		v	v

Furthermore, the following table is about requirement information system for Head of Regional, Secretary and Chief of Village. In table 3, we can see the privilege of Chief of Village for all applications. This privilege is to validate access. Moreover, Secretary has the same privilege too. Nevertheless, there is a little different access. The Secretary have verification access for all applications before sending them to the Chief of Village. The last is head of regional like RT, RW and Kepala Dusun. They have the privilege to Family Record, Letters Administration, Asset Management, APBD Planning, Finance Report, Cash Flow, Social Community Management and Village website.

This section knows nine user characteristics needed to operate the information system. So the government should commit to providing informal education in ICT in the state apparatus and society starting now [10]. This action will build digital communities (digital society) throughout the region in Indonesia. A digital society considers developing a better e-government system and impacting economic acceleration. Other than those two things, the most important thing also requires commitment and strong leadership in developing e-government [10]

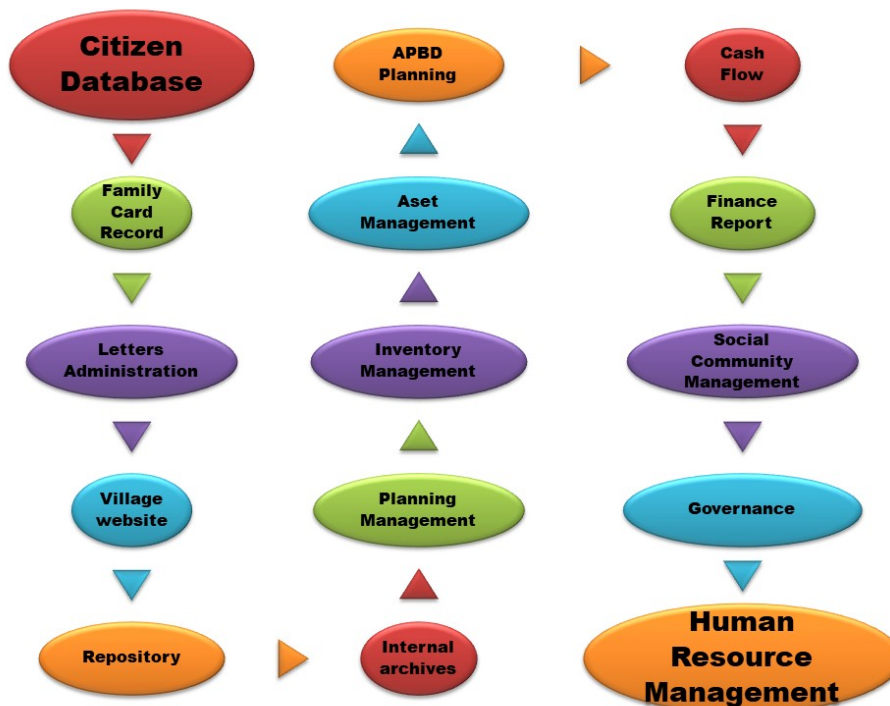


Figure 2. Master plan schedule

The fifteen applications in this master plan can develop as shown in Figure 1. The sequence of this Master Plan is based on the priority of the management information system, which starts from the marketing or services division, manufacturing or services operations, then finance and finally is human resources [11]. The duration or timeline can decide according to the resource that had on the village. One recommendation article about the duration of an e-government master plan implementation found in Sudan. There are twenty-five e-government projects in Sudan to be implemented within five years from 2016 – 2020 [12]. Master Plan Local E-government can succeed if it gets support and collaboration from many related institutions like opinions from Zambia researchers. The researcher said that 56% of the respondents indicated no framework for inter-agency collaboration, while 43% said there was a framework for inter-agency collaboration. In Zambia, several researchers and scholars have reviewed e-government implementation. However, no study has sought to review the role of coordination and inter-agency collaboration in implementing e-Government programmes in Zambia. Their study's results informed policymakers to develop policies, strategies, and legislative interventions to make e-Government coordination and collaboration of government agencies more effective and transparent [13]. Hopeful this result will send the benefit of E-government like to go beyond cost-quality ration if adopted well it can transform the government. Because E-government is a channel through which the ruling class interacts with its citizens (e-Citizens and e-Services), improves public service delivery and processes (e-Administration), and builds external interactions (e-Society) [14]

#### IV. CONCLUSION

After the research, we have three conclusions about the Master Plan of local e-government for the village office information system referring to ministerial regulations on the work procedures process. There are:

- Master Plan need fifteen Information System Requirement
- Master Plan need nine user characteristic to split that privilege on the system
- Master Plan need sequence schedule well. Moreover, the researcher suggests the following sequence of schedules for citizen database, family card record, letters administration, village website, repository, internal archives, planning management, inventory management, asset management, APBD planning, cash flow, finance report, social community management, governance, human resource management.

Hopefully, this research will be helpful and can develop further.

#### REFERENCES

- [1] R. Nallathiga, 2017, *Assesing the Role of Master Plans in City Development: Reform Measures and Approaches* (New Delhi: NAGARLOK), 1-4
- [2] Y. Afrizal, 2018, The Arrangement of the Information Technology and Communications Master Plan using PeGI Model (e-Governance Ranking Indonesia) to Improve District Government Services, IOP Conf. Ser.: Mater Sci. Eng. 407 012141
- [3] M. Kautsar Sophan et al, 2020, Online Survey for supporting and developing IT Master Plan: The case of HVA Teolongredjo Hopsital, J. Phys.: Conf. Ser. 1569 022063
- [4] D. Herdiana et all, 2018, Development of System Continuance Models for Assessing among Local E-Government in Indonesia, Conference Paper researchgate.net/publication/328802870
- [5] S. Lestari et all, 2020, E-Gov Master Plan International Journal of Psychosocial Rhabilitation 24(2) 3180-3185
- [6] Kementrian Dalam Negeri 2015 Peraturan Menteri No. 84 Tahun 2014 tentang Susunan Organisasi dan Tata Kerja Pemerintahan Desa
- [7] I. Gede Juliana Eka Putra et all, 2020, Perencanaan MasterPlan Teknologi Pada Pemerintahan Desa Berbasis E-government, Information System and Emerging Technology Journal (INSERT), 1, (2), 120-129
- [8] M. Fairuzabadi and E. Erizal, 2016, Master Plan E-Government Pemerintah Daerah Kabupaten Klaten, Jurnal Dinamika Informatika, 5 (1)
- [9] H. Sharifi and Behrouz Zarei, 2004, An adaptive approach for implementing e-government in I.R. Iran, Journal of Governmtn Information, 30, (5), 600-619
- [10] M. Huda and N. Setia Yunas, 2016, The Developmentof e-Government System in Indonesia, Jurnal Bira Praja, 8(1) 97-108
- [11] M. Susilowati and A. Anggara Kusuma, 2019, Software Requierement Specification Sistem Informasi Manajemen, SMARTICS, 5, (1), 27-33
- [12] YESE. Admed, 2017, Sudan e-Government Master Plan and Transition to Smart Government 2016-2020 Comparison of Current Approaches, International Journal of Science and Research (IJSR), 6(1), 82-96
- [13] Z. Chilembo and S. Tembo, 2020, Opportunities and Challenges of Coordinating the Implementation of e-Government Programmes in Zambia, International Journal of Information Science, 10(1), 29-43
- [14] N. Nkwe, 2012, E-Government: Challenges and Opportunities in Botswana, International Journal of Humanities and Social Science, 2(17), 39-48

**Meme Susilowati**, Earned a bachelor's degree in computer science (S.Kom) from STMIK PPKIA Pradnya Paramita in 2005. Then earned a Master's degree (M.MSI) from Gunadarma University in 2008. The author is a lecturer in the Information Systems study program at Ma Chung University.

Yudhi Kurniawan, earned a Master's degree (M.M.T.) from the Sepuluh Nopember Institute of Technology in 2011. The author is a lecturer in the Information Systems study program at Gunadarma University.

Weda Adistianaya Dewa, Earned a bachelor's degree in computer science (S.Kom) from STMIK PPKIA Pradnya Paramita in 2009. Then earned a Master's degree (M.MSI) from Gunadarma University in 2012. Currently, the author is a lecturer in the Information Systems study program at STMIK PPKIA Pradnya Paramita.

Moh. Ahsan, Earned a bachelor's degree in computer science (S.Kom) from STMIK PPKIA Pradnya Paramita in 2011. Then earned a Master's degree (M.T) from Brawijaya University in 2015. Currently, the author is a lecturer in the Informatics Engineering study program at the University of PGRI Kanjuruhan Malang.