



DOI: <https://doi.org/10.38035/jlph>  
<https://creativecommons.org/licenses/by/4.0/>

## Effectiveness of Building Information Systems in Building Planning of Security Offices (Study at Padang Tualang Prefecture Office)

Ary Syardand<sup>1</sup>, Februati Trimurni<sup>2</sup>.

<sup>1</sup>Universitas Sumatera Utara, Medan, Indonesia, [syardandarie@gmail.com](mailto:syardandarie@gmail.com).

<sup>2</sup>Universitas Sumatera Utara, Medan, Indonesia, [syardandarie@gmail.com](mailto:syardandarie@gmail.com)

Corresponding Author: [syardandarie@gmail.com](mailto:syardandarie@gmail.com)<sup>1</sup>

**Abstract:** The rapid development of information and communication technology provides opportunities for the government to access, manage and use information quickly and accurately in regional development efforts. Law 32 of 2004 concerning Regional Government underlines the importance of effective resource management. This research highlights the role of the Regional Government Information System (SIPD) in development planning in Padang Tualang District. Based on Permendagri No.70 of 2019, SIPD functions to synchronize development plans with the budget. This study evaluates the effectiveness of SIPD by measuring goal achievement, efficiency, integration, and adaptation. The results show that the implementation of SIPD in Padang Tualang still faces several obstacles, including delays in data input and lack of data integration with district/city governments. However, SIPD also offers several advantages such as more structured data input and easy access by the public. This research provides a descriptive view of the effectiveness of SIPD in regional development planning and suggests improving the quality of human resources and supporting infrastructure to maximize the benefits of SIPD.

**Keyword:** Information Technology, Development Planning, Regional Government, SIPD, Effectiveness, Padang Tualang District.

### INTRODUCTION

The rapid development of information and communication technology (ICT) opens up huge opportunities for governments in accessing, managing, and utilizing information quickly and accurately. This is relevant to the needs of regional development, especially in the context of decentralization regulated by the Act No. 32 of 2004 on Regional Government. With the enactment of the Act, the rights and obligations of local governments in the management of natural and human resources are increasing.

In order to implement these rights and obligations efficiently and effectively, local governments must be able to formulate development planning properly. Regional development planning is further regulated in Act No. 25 of 2004 on the National

Development Planning System which explains that planning is the process of determining appropriate future actions through a sequence of choices taking into account available resources.

The definition of regional development under Government regulation No. 8 of 2008 covers the use of resources to improve the well-being of communities in various aspects, including income, employment opportunities, and the Human Development Index (HDI). (Susiani, 2020: 114). The success of regional development planning is strongly influenced by the effectiveness of the working body and supporting information systems. According to Permendagri No. 70 Year 2019, the Regional Government Information System (SIPD) is a regional development information management platform aimed at synchronizing the development plan with the budget. Implementation of SIPD is expected to improve the efficiency and effectiveness of planning and implementation of regional development. However, the implementation of SIPD in various areas still faces a number of obstacles, as in Padang Tualang district, Langkat district. These include data input delays, planning models that are still top-down, and unoptimal data integration between the district/city level and the central government. The new use of SIPDs requires adaptation, both in technical and human resources terms. (Agnesya Sisilia Mai, 2021; Rosalina Harahap, 2021).

This study aims to evaluate the effectiveness of the implementation of SIPD in Padang Tualang district, in particular in realizing the principles of good governance through e-governance. The evaluation will look at how SIPD is able to harmonize planning and monitoring documents in a transparent, rapid, and integrated manner. The indicators used include goal achievement, efficiency, adaptation, and integration, taken from J.L. Gibson's theory. (2017). Based on these issues, this study will explain to what extent the Padang Tualang government is able to manage SIPD effectively. The view and satisfaction of the public as an object involved in this programme will be an important measure to assess the success of implementation of SIPD. The study is entitled "Effectiveness of Regional Development Information Systems (SIPD) in Development Planning in Padang Tualang District Office".

## **METHOD**

This research uses descriptive methods with a qualitative approach to describe the effectiveness of development planning through Regional Development Information System (SIPD) at Padang Tualang Prefecture Office, Langkat District, North Sumatra Province. The method used in this research is a qualitative method with a type of descriptive research. According to Denzin & Lincoln in Anggito and Setiawan (2018:7) stated that qualitative research is research that uses a natural background with the intention of interpreting phenomena that occur and performed by means involving various existing methods. The location was chosen because since 2018, electronic-based planning hasn't been maximum. The analysis unit is a local government stakeholder, with informants selected purposively by sampling. Data is collected through in-depth interviews and live observations, as well as supported secondary data from documentation. Data analysis follows codification, presentation, and conclusion drawings steps, with the validity of data tested through triangulation of sources and methods. The results of the study are expected to provide an accurate picture of the effectiveness, efficiency, and transparency of the use of SIPD in such cases.

## **RESULTS AND DISCUSSION**

Development is an ongoing effort to create conditions that can provide more legitimate alternatives for every citizen to his most humanistic aspirations. (society welfare).

(Ali: 2017). Therefore, a development must begin with a proper planning so that, with the right planning, it will provide a development output that meets the needs of the community. Planning of regional development through the SIPD information system is a mandate of the provisions of the Legislation formulated in the Law No. 23 Year 2014 on Regional Government in Article 264 which states that the regional development plan is formulated transparently, responsive, efficient, effective, accountable, participatory, measurable, fair and environmentally conscious. As also mentioned in the Permendagri No. 86 Year 2017 on the Plan of Measures, Control and Evaluation of Regional Development, the Plan for the Evaluating of Plans of Regional Regulations on the RPJPD and RPJMD, as well as the Modification of the RKPD. Preparing development planning and following the acceleration of technology by improving the progress of the system then the use of applications for the implementation of musrenbang has been implemented by the entire area of Padang Tualang district of Langkat. Even every regional device organization in Langkat district has been supported in the execution of Musrenbang through this application SIPD. The municipalities and villages that are active in the introduction of proposals for development planning that are conducted over the course of the year at the beginning of March this year consist of three (three) groups of proposal fields, namely the fields of infrastructure, social and cultural and economic.

The implementation of this application is one of the latest breakthroughs to facilitate work as well as the preparation of construction planning can be done in a transparent and timely manner. With the use of SIPD applications for construction planning in the Tualang Padang district, the community also participates actively in feeling the benefits directly and the operators and administrators of the OPD can complete their work on time. Based on the results of the analysis carried out, it was found that the use of SIPD web-based applications to the effectiveness of the regional development process is not in line with the expected targets. This SIPD application is considered to facilitate the day-to-day work of the Civil State Appliance (ASN) in government agencies. However, the stakeholders who have the right and obligation to fill in the data in this application have not fully understood the proper filling of the data.

As has been explained in the theory of existing experts, information systems in an office have many advantages, among them can be judged to facilitate and speed up a job. From that, the government created a web-based application called SIPD to integrate the development planning that each region wants to submit and intends to make the work of every regional government in Indonesia more efficient. However, based on the results of analysis that took place in the field on the basis of the literature referred to in this study (Deseverians & Wulandari, 2020; Ekaputra, 2021; & Ikhsan, 2020), it was found that the application of this SIPD has not been fully effective in each region. It can be seen from the stakeholders in charge of filling in the area planning data that have not done their job properly.

In line with the theory put forward by Duncan (in Deseverians & Wulandari, 2020), it is stated that a system must be accompanied by socialization such as seminars, technical guidance, and other socialization that can improve coordination between government agencies in obtaining the data needed so that the use of this SIPD can run correctly in accordance with the purposes planned initially.

This SIPD was launched to shift the media of the construction planning form into a paperless form so that no accumulation and loss of forms occurs. However, it turns out that this SIPD is more appropriate to be used as the controller of activities and regional development programmes only because of the limited knowledge of the stakeholders. A study conducted by Rochman, Nurhasanah & Mambang (2022) found that the mastery of technology and information of human resources in the scope of poverty is still inadequate.

Furthermore, the building planning applicant often fails to observe the deadlines set. Because if the data input is done beyond the specified time, then the planned submission cannot be processed.

Basically, this SIPD application has been integrated according to the initial purpose of its creation, so it can facilitate the central party in the process of gathering planning and development data from every region in Indonesia. In addition, with the presence of this application SIPD makes the arrangement of activities more systematic because in the process of input the data must be entered starting from the planning stage, so that no activity suddenly appears in the Regional Revenue and Purchasing Budget (APBD) without prior planning. SIPD can be used flexibly anywhere as long as sufficient devices are connected to the Internet.



Efficiency measurements need to be carried out so that the objectives of a website can be evaluated on the basis of the measures that have been set. Setting a measure of effectiveness will make it easier for a website to the desired results. Thus, to know the effectiveness of information systems planning development through SIPD in this research using the measurement theory developed by Setiawan, (Manoe, Koten, & Rozady, 2023), that is, among others will be described as follows:

**Relevant**

Relevance is the most important component because it is a factor that can determine the existence of a program in question. A particular application of the SIPD is said to be relevant if the whole or the majority of its functions can the objectives of development planning. (Ruhana,2017). Muhson, dkk., also said that the relevance of a government program contains elements: objectives, inputs, processes, outputs/results and impacts (out come). Besides, he also mentions that the relevance of an application can be attributed to its only objective orientation of its application in running a development planning program. (Karundeng, Kaawoan, & Pangemanan, 2021). A government application said to be effective must be able to realize the achievement of the objectives of the program itself, it becomes a valid measure in measuring the effectiveness of a government agency or agency, other assumptions must also be taken into account. First, the organization must have a final goal. Second, the goals must be identified and well defined so that they can be understood. Third, the objectives must

be small enough to be easily managed. Fourthly, there must be a consensus or general agreement on the goals.

The relevance of the SIPD application here is understood as an instrument that helps to run emergency governance programmes in an integrated or unified manner, or in other words to the extent to which a target can be set by an organization can be realized well. It can be seen from the extent to which the implementation of the organization's objectives in achieving targets corresponds to the objectives that have been set. As a well-being connotated in the service of the community (public service). The quality targets of development planning, government disruption and public service are increasing from year to year, according to increased support for the procurement of services quickly, accurately, and correctly. Therefore, for the society that does not know the technology of the staff of the Coral Coral Shell is ready to help in the SIPD program, for it must be improved further service to the community must be continuously done.

Based on the results of an interview with Camat Padang Tualang Muhamad Izwanda, SE regarding the relevance of SIPD with aims in regional development planning, explains that "SIPD Applications or Information Systems of Regional Development Planning, intentionally used so that the development planning can run effectively, efficiently and integrated, So with the presence of tools to help, can maximize the system and the system is also able to present highly informative analysis for stakeholders. Regional Development Planning Information System (SIPD) is a tool that can also compile RKPD, KUA PPAS, KUa/PPAS Change, RKDP Changes district/province level, so that can be solved easily, quickly, accurately and in accordance with the instructions contained in Permendagri No. 54 Year 2017". Based on the description of interviews related to the relevance of SIPD application with the purpose of planning development in Padang Tualang district, it can be formulated that the objectives of making SIPD Information System are: (1). Helping stakeholders in compiling the report on the implementation of project results starting from the village/city to the district level; (2) Helping the stakeholder in analyzing and formulating the policy of planning the development of the area based on priorities of the community; (3). Helped stakeholders inining the consistency of planning.

### **Time Saving**

Effectiveness can be measured from some of the things that Makmur (2015) put forward, namely the accuracy of time determination. The process of building is a very long process. So from that, in a construction to obtain a maximum outcome should be preceded by a planning. It relates to early prevention efforts on the problems that will be faced at the next stage. The efficiency of implementing the SIPD application in the development planning process of the local government provides facilities in its implementation, such as the use of time that can be saved in the planning of the development of an area. This web-based application can be used to support documentation, administration, and processing of quality and innovative data development of the region so that the output of information will be shown to the public until then used as consideration material in decision-making for planning, implementation, and evaluation of the performance of the ASN within the regional government agencies. Based on the results of interviews with staff users of the application related to the use of time management of the SIPD application at Padang Tualang Customs Office, explains that: "By the point of view of time, the process of inputs of data planning and calculation is quite efficient and very time-saving, because at SIPD for calculation of expenditure details all the components of the spending have been inserted by the Budget Team into the application, so that several of the same accounts already have price units, nor common cost units so that the user remains choosing the unit of the price without typing it manually". Referring to the above description, it is known that the efficiency resulting from

the presence of SIPD is a saving of time and cost reduction known that there is no need for the mobility of OPD staff in delivering hardcopy documents to Bappeda because it is only necessary to input from each Device to the Village.

### **Accuracy**

In an information age as fast as it is today, the need for accurate information is becoming increasingly important. Accurate information is vital in all aspects of life, in education, business, and everyday life. In the study, will be discussed in depth about the accuracy of the application of SIPD in the process of implementation of development planning as well as the importance of accurate information in the context of transparency of information of local government policy. Accuracy is the success of delivering accurate information to the target, without error or distortion. Accurate information is information that can be trusted to be true, based on valid and verifiable facts. In this context, accuracy can be seen as the desired quality in delivering information, so that such information can be reliable and used with confidence. In implementing the effectiveness of SIPD in synchronizing work plan documents and budget execution documents through the activities of Musrembang in Padang Tualang District, the author uses 2 (two) indicators 1) accuracy of cost calculation. Cost calculation is carried out with the aim of ensuring that in running a program there is no deficit in terms of funds or breaches until the program is completed. Based on the explanation above, from the results of an interview with Father Muhamad Izwanda, SE selaku Camat Padang Tualang explained that: " At the beginning of the use of SIPD in the Tualanga district, socialization was carried out to the entire district unit, especially to the Kasubbag Planning and operators in each district Unit starting from the District unit, department unit, village unit, and community. If there were changes or updates in the form of the addition of features to the Sipd, Bappeda again socialized the entire regional unit. The socialization efforts are aimed at increasing the understanding of the government officials who have a duty in carrying out the development planning in each region, so that in its implementation do not fail, so it can be implemented to the maximum." While the efforts of the community is aimed to explain that the public can see the regional planning on the application SIPD, and also able to provide input or comments related to the planning of the development of the region that we have entered in the SIP D website." Based on the results of the interviews that have been shown above it can be concluded that Padang Tualang department always holds socialization related to the presence of system updates or feature updates. BAPPEDA also undertook socialization with the aim of providing information and teaching new SIPD operators from other regions. Socialization is done with the usual face-to-face. This is done so that the developments that are being carried out are well communicated to all the Regional Affairs and stakeholders.

### **Inhibiting Factors of Development Planning through SIPD at Padang Tualang Prefecture Office.**

Any activity or policy implemented by either the central government or the region must have drivers and inhibitors. However, the inhibitor does not become a matter but a challenge so it will be more enthusiastic to face the various challenges or obstacles that exist. Some of the obstacles or challenges that exist in the implementation of the SIPD system throughout the Padang Tualang government are as follows:

#### **1. Weak Understanding and Ability of Human Resources**

Human resources are one of the important elements in the planning process of the development of the region. Less or minimal understanding of human resources to electronics has become a challenge or impediment in the implementation of SIPD in the government of Padang Tualang, as presented by Mr. H.Ramlan Efendy, SE selaku Camat PadangTualang:

that some SDMs are a bit late to learn it, and of course it is also becoming an impediment. Besides, Mr. Secretary Camat, who explains that: "which inhibits itself is understanding, so here is still sometimes of the scpd both at the level of gravity " and village level is still lacking in its understanding, therefore sometimes we still need meetings, bimtek Sometimes there are people who don't realize that because the programming of these activities is already in place, they still like to create their own programs like that." This can impede the efficiency and effectiveness of the SIPD's own work which should be faster and easier. The weak understanding and capability of SIPD operators can hinder the effectiveness of Sipd in synchronizing workplan documents and budget execution documents. The problems that arise can be errors in entering the activity proposal data into SIPd, not understanding the new operator against the application of SIBD so that the Government of Padang Tualang with BAPPEDA district has to undertake further construction against new operator who holds the management of SIPD.

### **Internet Access in Padang Tualang District Government**

There are also other obstacles to the effectiveness of the SIPD which are facilities such as Internet access in the area of Padang Tualang that are not good or slow. On the dimensions of adaptation and indicators of means and facilities previously has been shown that the section of Padang Tualang is near. Based on the results of the author's interview with the government of Padang Tualang district, Secretary Camat Muhamad Izwanda, SE, who explained that; can be taken the conclusion that indeed the condition of laptop and computer is good but the network is still not stable and there have been incidents where failure to upload files and the process of verification of results of flight errors due to network corruption and missing. This condition makes the work delayed and has to add a few more days to complete the work, the weakness of the unstable network system also becomes an obstacle for the village apparatus to enter proposals for programmes and activities, because with only one week all skpd are required to enter all the suggestions of their activities and program of work, while automatically when an application is used by many people does not close the possibility that the application running will fail, and it requires more rigour so that no errors occur because the proposal already put cannot be changed or fixed again.

### **SIPD is not Integrated with e-budgetting**

The government of Padang Tualang district focuses only on SIPD because e- planning and e-budgeting are not well integrated, there is a need for the commitment of the leadership of the government and budget allocation to build a more reliable system in creating Good Governance. That in its implementation so that SIPD can be integrated with other systems such as e-Budgeting. The expertise is needed so that local governments can operate and manage the system independently and. To create a single system of SIPD and e-budgeting, not only human resources are needed, but also the processes of the system itself and the technologies associated with the infrastructure. Success in implementing these SIPDs and e-budgeting not only requires resources, but is also related to the rules or regulations governing this. Local governments themselves are also in the process of preparing local regulations.

### **CONCLUSION**

This study discusses the effectiveness of the Regional Development Information System (SIPD) in planning the construction of the Padang Tualang Prefecture Office in Indonesia. It emphasizes the importance of development planning in meeting basic needs, improving living standards, and improving the well-being of local communities. The research uses

descriptive methods with qualitative analysis, data collection through field research, observations, and in-depth interviews. The results of the research show that the SIPD system at Padang Tualang Prefecture Office is quite effective in planning the development of the region. But challenges such as poor understanding of human resources, limited network access, and lack of integration with e-budgeting still hinder implementation. The study also discussed the importance of the implementation of SIPD in Musrenbang, a forum for planning and monitoring at the emergency level, and highlighted the need for effective system utilization and adaptation. This research digs into the theoretical concepts of effectiveness, outlining the various factors that influence it, such as goal achievement, efficiency, integration, and adaptation. The indicators used to measure the effectiveness of the implementation of SIPD, including relevance, time savings, and accuracy of cost calculations, were discussed. Furthermore, this explanation explains the importance of planning in development, emphasizing how planning directs limited resources to achieving social and economic improvement effectively and efficiently.

## REFERENCE

- Adisasmita, Raharjo. (2011). *Pengelolaan Pendapatan dan Anggaran Daerah*. Yogyakarta: Graha Ilmu.
- Anggito, A., & Setiawan, J. (2018). *Metodologi penelitian kualitatif*. Jakarta: CV Jejak,(Jejak Publisher).
- Deseverians, R., & Wulandari, S. (2020). Efektivitas Sistem Informasi Pembangunan Daerah (SIPD) Dalam Perencanaan Pembangunan Tahunan Daerah Di Kota Pontianak Provinsi Kalimantan Barat. *Jurnal Ilmiah Administrasi Pemerintahan Daerah*, 12(1),13-30.
- Fauzi, A. A., Kom, S., Kom, M., Budi Harto, S. E., Mm, P. I. A., Mulyanto, M. E., ... & Rindi Wulandari, S. (2023). *Pemanfaatan Teknologi Informasi di Berbagai Sektor Pada Masa Society 5.0*. Jakarta: PT. Sonpedia Publishing Indonesia.
- Hadiutomo, K. (2021). *Perencanaan pembangunan terintegrasi dan terdesentralisasi: perspektif reposisi perencanaan pembangunan pertanian*. Bandung: Deepublish.
- Hanafi, Mamduh. (2004). "Manajemen Keuangan", BPFE, Yogyakarta.
- Harbani Pasolong, M., 2017. *Teori Administrasi Publik*.Bandung: Alfabeta.
- Hidayat, W. (2021). *Metode Kuantitatif Mengukur Kepuasan Pengguna Web Kampus*. Jakarta: Penerbit Lakeisha.
- Husaini, Usman. 2010. *Manajemen Teori, Praktik, dan Riset Pendidikan*. Edisi 3. Jakarta: PT Bumi Aksara.
- Karundeng, A. B., Kaawoan, J. E., & Pangemanan, S. E. (2021). Implementasi Kebijakan Sistem Informasi Pemerintahan Daerah (Sipd) Di Badan Perencanaan Pembangunan Penelitian Dan Pengembangan Daerah Kabupaten Kepulauan Siau Tagulandang Biaro. *GOVERNANCE*, 1(2).
- Mahi, I. A. dan K., Trigunarro, S. I., (2017). *Perencanaan Pembangunan Daerah Teori dan Aplikasi*. Jakarta: Kencana.
- Mahi, I. A. dan K., Trigunarro, S. I., (2017). *Perencanaan Pembangunan Daerah Teori dan Aplikasi*. Jakarta: Kencana.
- Manoe, D. S., Koten, Y. P., & Rozady, M. P. (2023). Analisis Efektivitas Penerapan Aplikasi Sistem Informasi Pemerintah Daerah (Sipd) Bidang Anggaran Pada Badan Pengelolaan Keuangan Dan Aset Daerah Kab. Sikka. *Increate-Inovasi dan Kreasi dalam Teknologi Informasi*, 9(1).
- Manullang, (2004), *dasar-dasar Manajemen* Yogyakarta: Gadjah Mada University Press.78
- Patarai, D. M. I. (2016). *Perencanaan Pembangunan Daerah:(Sebuah*



- Pengantar*), Jakarta Kencana
- Ruhana, F. (2017). Pemanfaatan Sistem Informasi Pembangunan Daerah dalam mendukung Perencanaan Pembangunan Daerah di Indonesia. *Jurnal Manajemen Pembangunan*, 4(2).
- Rochman, W. N., Nurhasanah, N., & Mambang, M. (2022). Analisis Kualitas Sumber Daya Aparatur Pada Kantor Kelurahan Bereng Kecamatan Kahayan Hilir Kabupaten Pulang Pisau: Analysis Of The Quality Of Apparatus Resources At The Office of Kelurahan Bereng Kecamatan Kahayan Hilir Kabupaten Pulang Pisau. *Pencerah Publik*, 9(2), 27-39.
- Setiawan, D., Madhakomala, R., & Cahyana, U. (2022). *Determinan Efektivitas Kemampuan Militer*. Yogyakarta: Penerbit Adab Siahaan, A. Y., & Pardede, P. D. K. (2022). *Transformasi Pembangunan Melalui Pelayanan Publik*. Yogyakarta: CV Pena Persada.
- Sondang, P. Siagian. 2016. Manajemen Sumber Daya Manusia. Jakarta : PT. Bumi Aksara.
- Sopanah, A., dkk. (2021). *Bunga Rampai Ekonomi dan Bisnis: Isu Kontemporer Ekonomi dan Bisnis*. Jakarta: Scopindo Media Pustaka.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif Kualitatif dan R&B*. Bandung: Alfabeta.
- Suharsaputra, Uhar. (2014). *Metode Penelitian Pendekatan Kuantitatif, Kualitatif dan Tindakan*. Bandung: Refika Aditama.
- Suni, B., Fahriansah, O., IP, S., & Sihalo, N. T. P. (2023). *Politik Lokal Dalam Kinerja Organisasi Terhadap Efektivitas Pembangunan Partisipatif Pemerintah Daerah Pada Musrenbang*. Jakarta: Scopindo Media Pustaka.
- Susiani, D. (2020). *Hukum Tata Ruang*. :Bandung: Pustaka Abadi. Sutrisno, H. E. (2019). *Budaya organisasi*. Jakarta: Prenada Media. Tarigan,Robinson.(2006). *Perencanaan Pembangunan Wilayah*. Jakarta:Bumi Aksara.