



BUM Desa Development Model Through SICATU Application at BUM Desa Catu Kwero Sedana in Pecatu Village of South Kuta

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Abstract. The establishment of Village-Owned Enterprises (BUM Desa) is mandated by articles 87 to 90 of Law No. 6 of 2014 concerning Villages. The mandate is elaborated in Government Regulation No. 43 of 2014, as well as Regulation of the Minister of Village, Development of Disadvantage Regions, and Transmigration No. 4 of 2015 concerning the Establishment, Management and Governance, and Dissolution of Village-Owned Enterprises. BUM Desa was formed by the Village Government to utilize all economic potentials, economic institutions, as well as the potential of natural resources and human resources whose ultimate goal is to improve the welfare of the Village community. As a social institution, BUM Desa is referred to as an institution that favors the interests of the community as its contribution in the provision of social services. While as a commercial institution aims to seek profit through the offering of local market resources. BUM Desa Catu Kwero Sedana located in Pecatu Village of South Kuta, Badung, Bali is engaged in various business fields, one of which is waste service and management. Currently, the BUM Desa is in dire need of an information system that makes the operational process, from planning to accountability, is much easier to perform. Therefore, analysis of general control or business models and application control is needed to make the design of information system easier and more applicable. For this reason, an information system was developed called SICATU (Business Transparency Accountability Record Information System) for BUM Desa Catu Kwero Sedana in Pecatu Village.

Keywords: BUM Desa, Development Model, Information System, Accountability, SICATU.

1. Introduction

One of the current government's missions is to develop rural areas that can be achieved through community empowerment with the aim of increasing the productivity and diversity of existing businesses, fulfilling facilities to support village economic improvement, building and strengthening institutions that support production and marketing chain, as well as optimizing human resources as the basis

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of village economic growth (Adawiyah, 2018). BUM Desa as a legal entity, formed based on applicable laws and regulations, and in accordance with the rules in force in the village. Law Number 32 of 2004 concerning Regional Government in Article 213 paragraphs 1-3 stated that villages can establish Village-Owned Enterprises (BUM Desa) in accordance with the needs and potential of the village. In accordance with the regulation, the establishment of BUM Desa is based on the needs and potentials of the village, with the aim of improving community welfare. In the case of planning and formation, BUM Desa is built on the initiation of the village community, and is based on the principles of cooperative, participatory, and emancipatory principles. The most important thing is that the management of BUM Desa must be carried out professionally, cooperatively, and independently. Thus, the development of BUM Desa can vary in every village in Indonesia. In connection with that, accurate and precise information about local characteristics including socio-cultural characteristics of the community is needed to develop BUM Desa.

BUM Desa as a village-owned enterprise has great potential to further advance the economy of residents in order to create more independent village. The establishment and management of BUM Desa is basically an effort to build a tradition of economic democracy in the village to improve the economic status of the village community. Its establishment is a strategy to optimize village asset management. An independent and prosperous village can be achieved if the village is able to drive a village-based local economy through BUM Desa. However, the importance of BUM Desa's role in the regions has not been followed by swift handling by BUM Desa's own management and local governments. Some of the problems identified are product management, capital, unskilled human resources, marketing, fulfillment of health standards and halal products, accounting and taxation, and investment. BUM Desa needs to develop competitiveness in order to realize a prosperous and independent village community (Arman, et al 2018).

The Village-Owned Enterprises as one of the government's program, is expected to help the poor in terms of providing capital through credit loans with affordable interest for poor farmers, which eventually will be able to stimulate and move the wheels of the economy. The agricultural block system is very helpful for farmers in overcoming the fixed costs per unit constraints in the production process and can manage finances collectively (Mushi, 2015). The purpose of this study is to make a priority scale in its completion, facilitating the needs of business actors in the village related to science that will be used in developing village potential.

2. Literature Review

2.1. Human Resources Capacity and System Development

Capacity is the ability, skills, understanding, attitudes, values, relationships, behaviors, motivations, resources, and conditions that enable each individual, organization, network/sector, and broader system to carry out their functions and achieve development goals that have been set over time (Milen, 2017). Human

resources are people who are ready, willing and able to contribute the efforts to achieve organizational goals. Human resources cover three aspects, namely education, experience and training. Every organization needs to have qualified human resources since it will show the capacity of organization' resource. Humans are responsible for managing organizations, therefore human resources are an important element and always present in organizations (Hullah, et al. 2012).

Milen (2017) also provides an understanding of capacity building as a process by which individuals, groups, organizations, institutions, and communities improve their ability to: (a) produce performance in the implementation of core functions, solve problems, formulate and realize the achievement of predetermined goals, and (b) understand and meet development needs in a broader context in a sustainable way. This is in line with the concept of capacity development according to Grindle (1997) which states that capacity development as the ability to perform appropriate task effectively, efficiently and sustainably.

According to Grindle (1997), capacity development has dimensions, focus and types of activities. These dimensions are; 1) the dimension of HR development, focusing on professional personnel and technical capabilities as well as types of activities such as training, direct practice, working climate conditions, and recruitment; 2) dimensions of organizational strengthening, focusing on governance to improve the success of roles and functions, as well as types of activities such as incentive systems, personnel equipment, leadership, organizational culture, communication, managerial structures; 3) institutional reform, focusing on institutions and systems of public sector organizations (increasing the capacity of public sector organizations) and macrostructure, with types of activities such as political and economic rules, changes in policies and regulations, and constitutional reform.

Activities in human resource development are procurement or provision of professional personnel and technical capabilities. Its activities are in the form of an appropriate recruitment system, education and training, provision of salaries/wages, and regulation of working conditions and environment. Organizational strengthening focuses on management systems, improving the performance of existing tasks and functions and microstructure arrangements. Activities that must be carried out are organizing incentive systems, optimization of existing personnel, leadership, communication and managerial structures. While institutional reform, it is necessary to emphasize changes in existing systems and institutions, as well as the influence of macrostructures. With the rapid development of BUM Desa, an application system is needed in realizing good corporate governance. The system consists of several business processes; Master Data Management, User Management, Planning Management, Administration Management, Operations Management and Accountability.

2.2. Village-Owned Enterprises (BUM Desa)

Village-Owned Enterprises, hereinafter referred to as BUM Desa, are business entities whose entire or most capital is owned by the Village through direct participation derived from separated Village wealth to manage assets, services, and

other businesses for the maximum welfare of the Village community. BUM Desa was established under the mandate of Law No. 6 of 2014 concerning Villages, particularly articles 87 to 90. Article 87 of the Village Law states that villages can establish Village-Owned Enterprises (BUM Desa) managed with the spirit of kinship and cooperation. BUM Desa can run businesses in the economic and/or public services in accordance with the provisions of laws and regulations.

The establishment of BUM Desa is agreed through Village Deliberation which is further stipulated by Village Regulations. The objectives of establishing BUM Desa are: (a) improving the village economy; (b) optimize village assets to be useful for village welfare; (c) increase community efforts in managing the economic potential of the village; (d) develop business cooperation plans between villages and/or with third parties; (e) create market opportunities and networks that support the general service needs of citizens; (f) create employment; (g) improving community welfare through improvement of public services, growth and equitable distribution of village economy; and (h) increase the income of the village community and the original income of the village.

BUM Desa can consist of business units that are legal entities in the form of business institutions whose shared-ownership comes from BUM Desa and the community. In the event that BUM Desa does not have legal entity business units, the organizational form of BUM Desa is based on the Village Regulation on the Establishment of BUM Desa. The origin of initial capital of BUM Desa is coming from the Regional Budget which consists of village capital participation and village community capital participation. If BUM Desa is in the form of a Limited Liability Company (PT, corporates) as a capital partnership, formed based on an agreement, and conducts business activities with capital mostly owned by BUM Desa, in accordance with the laws and regulations on Limited Liability Companies; and if BUM Desa forming a Microfinance Institution, the share of BUM Desa is at least 60 (sixty) percent, in accordance with the laws and regulations on microfinance institutions.

In implementing business activities, BUM Desa reports accountability to advisors who are ex-officio held by the village head. This is intended so that all BUM Desa activities are monitored by the village. Supervision of BUM Desa operational activities is also carried out by supervisors. The Village Government is responsible for the task of fostering BUM Desa; to be submitted to the Village Consultative Body (BPD) and the community through Village Musyawarah (Musdes). The accountability argument through Village Deliberation is because the initial capital of BUM Desa comes from the Village Revenue Budget (APBDes). The Government, Provincial Regional Government, Regency / City Regional Government are obliged to carry out guidance and supervision of BUM Desa. These tasks are among others carried out through facilitation of the development of BUM Desa, including: (a) providing grants and/or access to capital; (b) provide technical assistance and access to markets; and (c) prioritize BUM Desa in natural resource management of the village.

3. Research Methods

The approach used in this study is a combination of qualitative and quantitative approach. The qualitative approach is a case study by paying attention to the depth aspect to obtain more complete data in the form of written, oral, actions, symbols, physical objects or visual images, numbers and not only converted into numbers but non-standard shapes, sizes, and forms. The quantitative approach is descriptive by displaying descriptive statistical data. This study is a case study, namely developing an information system in BUM Desa Catu Kwero Sedana Pecatu with stage 1 system development (system development) and the 2nd year of system application (system application).

Qualitative approaches generally rely on data collection through interviews, observation, documentation and group discussions. This technique is relevant to use because a phenomenon will be understood its meaning well, if researchers interact with research subjects where the phenomenon takes place. Compiled data consists of secondary data types obtained from various sources. Primary data as primary data are obtained through observation, interviews and/or in-depth interviews with key informants. Then there will be further analysis, namely descriptive analysis by sorting data so that it becomes information, for example trends and data patterns. This research was conducted in 2021. Research site at BUM Desa Catu Kwero Sedana, Pecatu-South Kuta Village.

4. Research Results

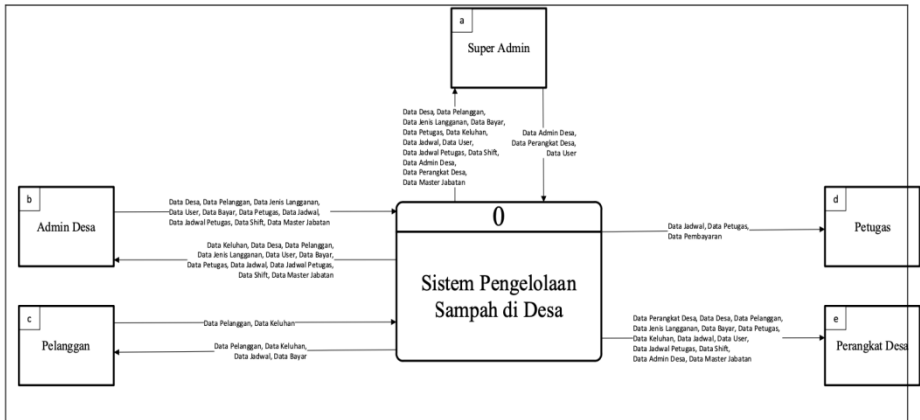
4.1. BUM Desa Development Model in Bali

During the research period, data collection has been carried out through interviews, observations, and focus group discussions (FGDs). Subsequently, the data and business processes obtained were analyzed to develop application called SICATU (Business Transparency Accountability Record Information System) Catu Kwero Sedana Pecatu-Kuta Selatan Village. Thus, it is expected that BUM Desa will be able to fulfill its function as a pillar of village economic activities, both as a social and commercial institution. Finally, the profits generated by BUM Desa will be able to become income for PADes or village original income which is then distributed to villagers in various development programs to encourage the welfare of villagers.

4.2. Development of SICATU (Business Transparency Accountability Record Information System)

One of the BUM Desa in Bali is BUM Desa Catu Kwero Sedana located in Pecatu Village, South Kuta, Badung, Bali. BUM Desa is engaged in various business fields, one of which is waste service and management. Currently, BUM Desa is in dire need of an information system that makes it easier to carry out its operations from planning to accountability. For this reason, analysis of general control or business models and application control is needed so that information system design becomes easier and more applicable. For this reason, an information system was developed called SICATU (Business Transparency Accountability Record Information System) BUM Desa Catu Kwero Sedana Pecatu. Researchers have developed an information system in BUM Desa Catu Kwero Sedana Pecatu which is carrying out the first stage, namely system development (system development) with the following details:

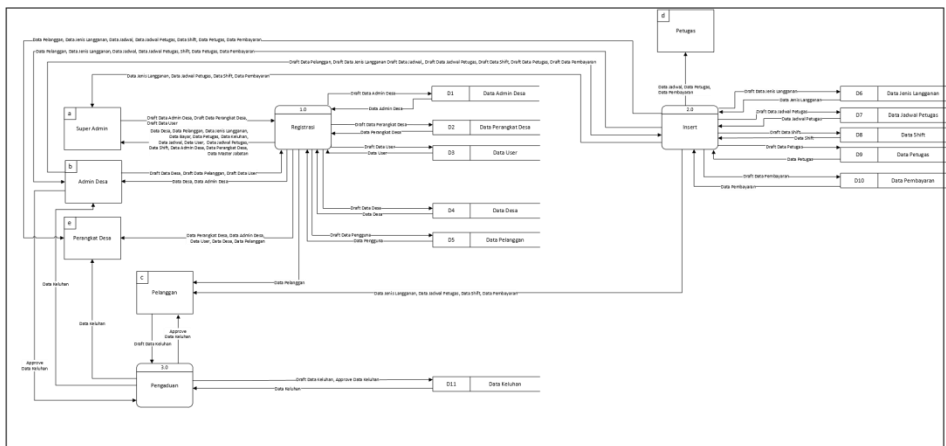
Fig 1. Context diagram of waste management system in village



Note: Figure 1 taken from SICATU application. Own work.

The picture depicted in Figure 1 is a context diagram of the waste management system in the village, where the system has as many as five entities/roles that can access the system. Each data entered into the system by the entity is a draft inputted by each, while the data that is re-received by each entity is draft data that has previously been processed and becomes information for the entities.

Fig 2. DFD Level 0 Waste Treatment System in Villages



Note: Figure 2 taken from SICATU application. Own work.

The picture depicted in Figure 2 is DFD level 0 of the waste treatment system in the village which is an extension of the previous context diagram. It can be seen that there are three processes that occur in the system, namely 1). Registration, 2). Insert, and 3). Complaint. The registration process is the initial process where the super admin registers the initial data needed by the system such as village data,

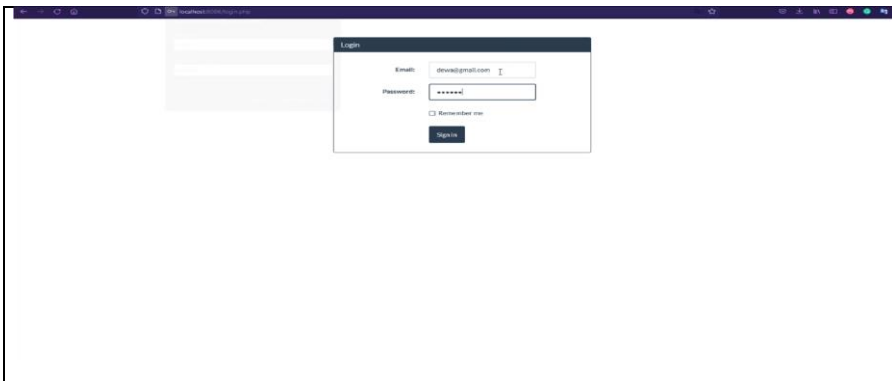
village admin data, village device data (admin view) and user data. Super admins have access to all data because they are the highest admins with access authority. The same is done by the village admin entity as a system administrator in the relevant village, which is authorized to register customers and their users and edit their own village data. The insert process is a process where data is entered that is needed in the process of using the system by the village admin, such as subscription type data, officer schedule data, shift data, officer data, and payment data. The data that has been entered and processed can then be viewed by other authorized entities. The complaint process is a process where residents as customers / users can file complaints about problems during the waste processing process to be heard and corrected by the village government. Complaints are received by the village admin to be forwarded to the village government, if the problem has been resolved then the village admin will change the status of the complaint to be handled.

4.3 Usage Guide

4.3.1 Village Admin

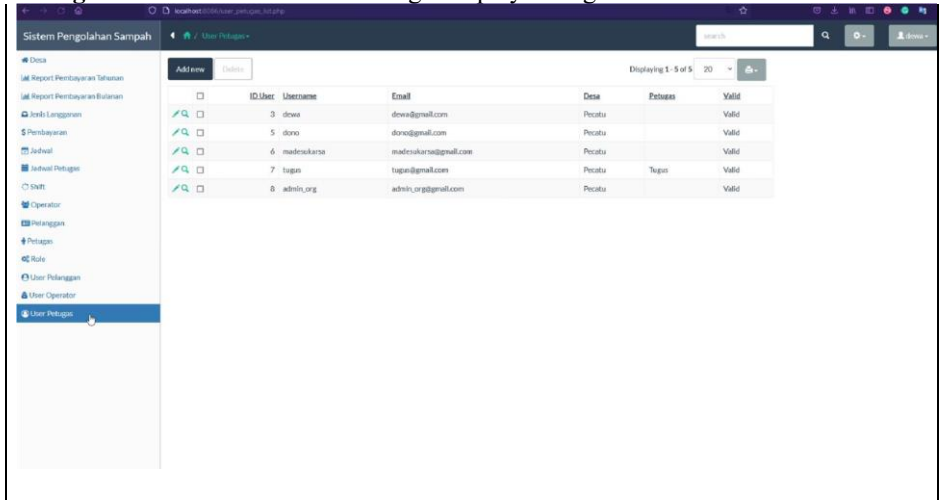
The next role is the village admin who will carry out application management at the village level. Village admins have the authority to manipulate data that is only related to their village, so that data belonging to other villages will not appear on the display or transaction process concerned. The first thing a user must do first is log in as a village admin on the village admin page.

Fig 3. Village Admin Role Login Page Display



Note: Figure 3 taken from SICATU application. Own work.

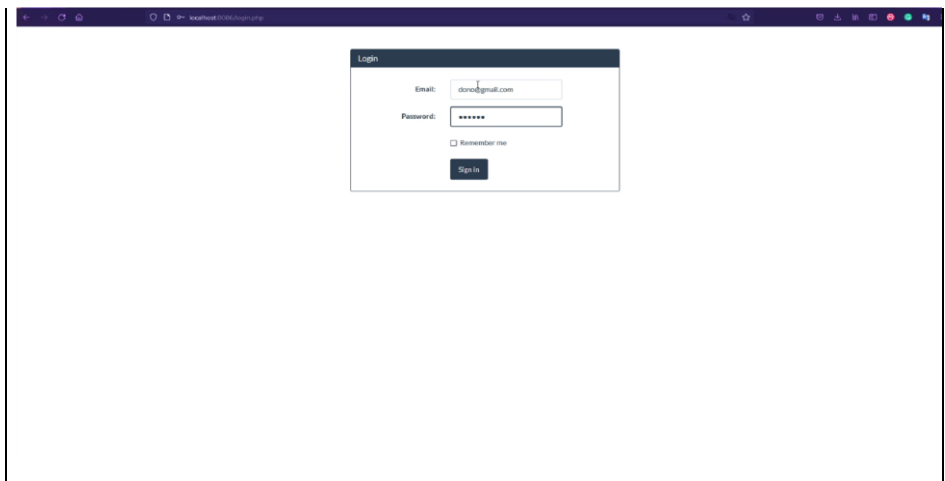
Figure 3 depicted the display of the login page used by users to log in as village admins. After the login process is successful, it will immediately display the main menu page as can be seen in Figure 4. The main menu page is a display of the officer user menu which is used to add customer data to SICATU (Accountability Record Information System) users.

Fig 4. Customer Officer Menu Page Display Village Admin Role

Note: Figure 4 taken from SICATU application. Own work.

4.3.2. Customers

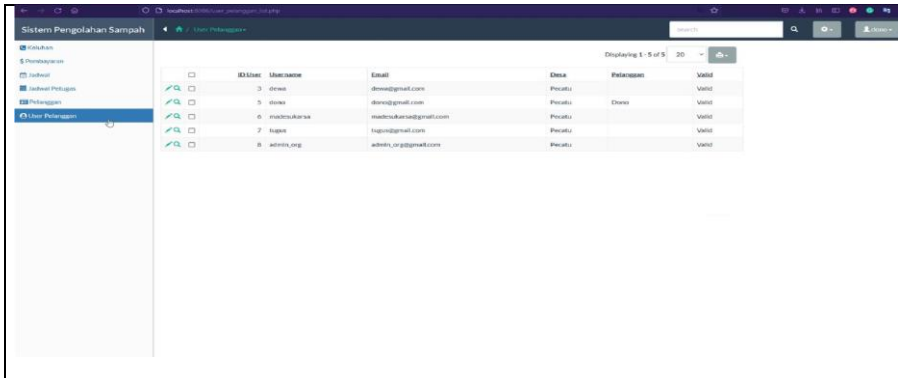
In the customer role is different from the previous role, this role focuses on reporting complaints, besides that the customer role only has access to see not to edit on certain menus such as payments, schedules, schedule officers, customers and customer users. On the role payment menu, customers can only see the usage that this account has made and not other me. The first thing a user must do first is log in as a user on the user page.

Fig 5. Customer Role Login Page Display

Note: Figure 5 taken from SICATU application. Own work.

Figure 5 displays the login page for users to log in as customers. After the login process is successful, it will immediately display the main menu page as shown by Figure 6. It is the display of the customer user menu on SICATU (Accountability Record Information System). This menu contains username, email and password data that users can changes as needed.

Fig 6. Customer User Menu Page Display Customer Role

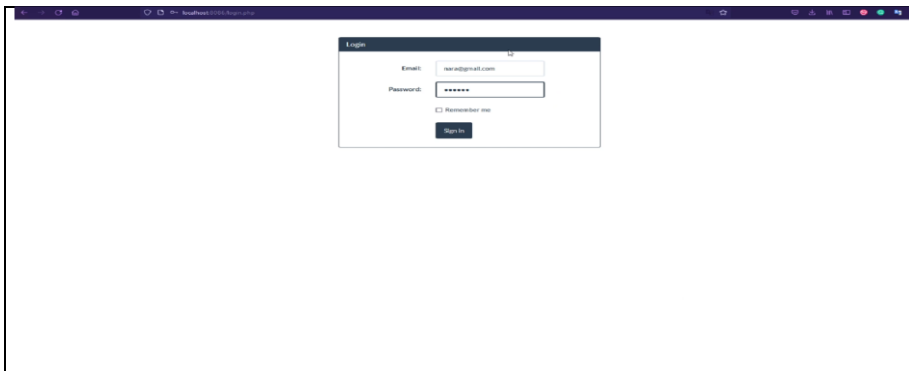


Note: Figure 6 taken from SICATU application. Own work.

4.3.3 Village Apparatus

The next role is the village apparatus which will be one of the users of SICATU (Accountability Record Information System). This role only has access to view data according to the village. In addition to user operator menus such as village menus, complaints and so on, village device roles only have access to view data. The role of the village device can only do account management such as changing email, username or password only. The first thing the user must do first is log in as a village device on the village device page.

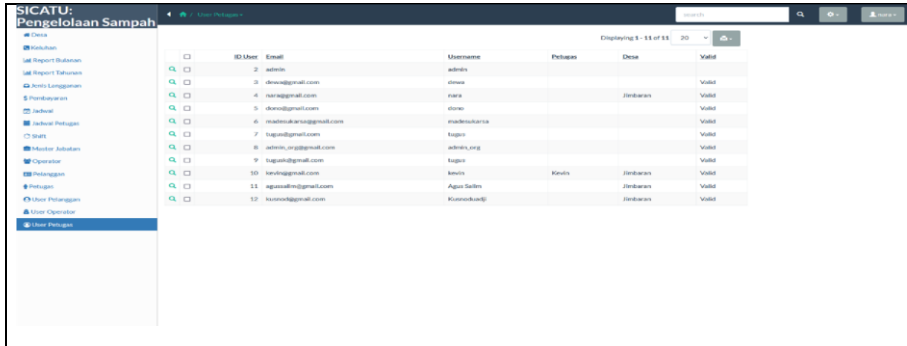
Fig 7. Village Device Role Login Page Display



Note: Figure 7 taken from SICATU application. Own work.

Figure 7 shows the display of the login page for users to login as a village device. After the login process is successful, it will immediately display the main menu page.

Fig 8. Page Display User Menu Officer Role Village Device



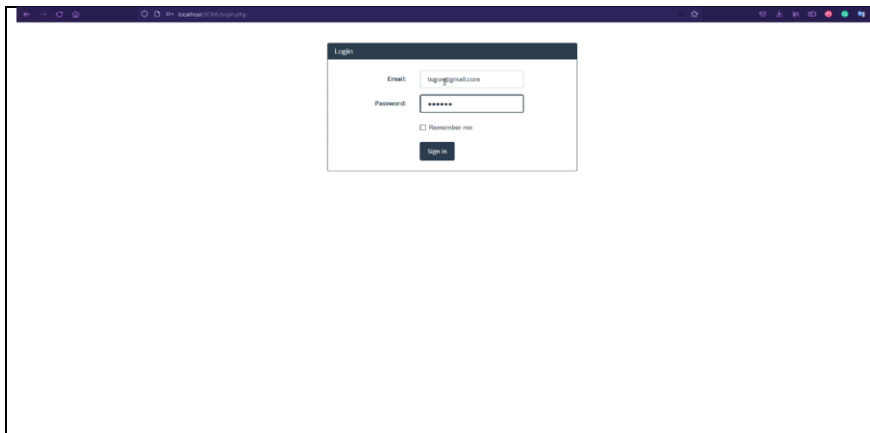
Note: Figure 8 taken from SICATU application. Own work.

Figure 8 shows the display of the officer user menu at SICATU (Accountability Record Information System) with the role of village equipment. On this menu, the village device can only see the list of existing officer user data.

4.3.4 Officers

Officer role only has access to see the payment menu, schedule, officer schedule, officer and officer user. This role does not have access to the data input process and can only view data on certain menus. The first thing the user must do first is log in as an officer on the officer page.

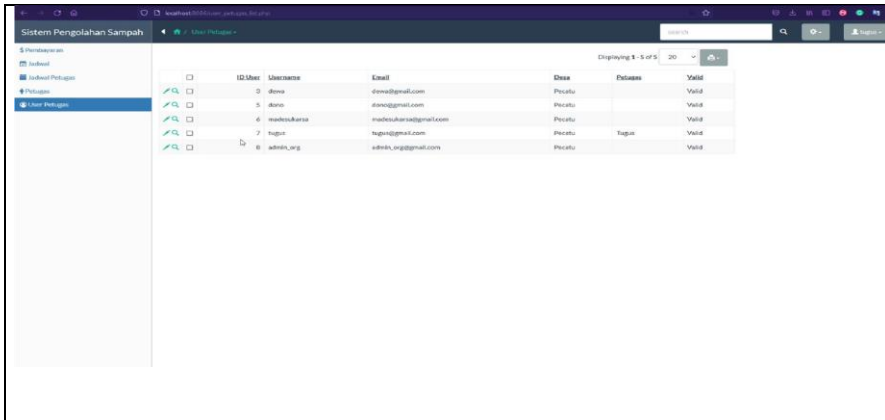
Fig 9. Officer Role Login Page Display



Note: Figure 9 taken from SICATU application. Own work.

Figure 9 shows a display of the login page for users to login as an officer. After the login process is successful, it will immediately display the main menu page as depicted in the Figure 10.

Fig 10. User Menu Page Display Officer Role Officer



ID User	Username	Email	Desa	Password	Valid
2	dewa	dewa@gmail.com	Pecatu		Valid
5	abno	abno@gmail.com	Pecatu		Valid
4	madusukerda	madusukerda@gmail.com	Pecatu		Valid
7	regan	regan@gmail.com	Pecatu	Tugan	Valid
6	aditih.org	aditih.org@gmail.com	Pecatu		Valid

Note: Figure 10 taken from SICATU application. Own work.

Officers can view lists of officer data corresponding to their villages and edit their own user data.

5. Conclusions and Suggestions

BUM Desa Catu Kwero Sedana, located in Pecatu Village, South Kuta, Badung, Bali, is engaged in various business fields, one of which is waste service and management. Currently, BUM Desa is in dire need of an information system that makes it easier to carry out its operations from planning to accountability. For this reason, analysis of general control or business models and application control is needed so that information system design becomes easier and more applicable. For this reason, an information system was developed called SICATU (Business Transparency Accountability Record Information System) BUM Desa Catu Kwero Sedana Pecatu. Other BUM Desa can also develop information systems by analyzing and designing applications needed in order to improve performance and transparency of performance.

References

1. Arman Agus. Marsuki, Sulkipli. 2018. BUM Desa Development Model through Higher Education and Banking Partnerships. *Proceedings of Community Development*. Volume 2. pp. 520-526.
2. Adawiyah, Robiatul. 2018. Development Strategy of Village-Owned Enterprises (BUM Desa) Based on Social Capital Aspects. *Journal of Public Policy and Management*. Volume 6 No (3). Pages 1- 15.

3. Grindle, M. S. (1997). *Getting Good Government : Capacity Building in The Public Sectors of Developing Countries*. Cambridge: Harvard University Press.
4. Hullah, A.R., Pengemanan S., Tangkuma, S & Budiarmo, N. 2012. The Effect of Human Resources and the Use of Information Technology on the Reliability of Financial Reporting in the Government of North Sulawesi. *Journal of Accounting Research*, Vol3 No 2: pp. 921
5. Milen, A. 2017. *What do We Know About Capacity Building? An Overview of Existing Knowledge and Good Practice*. Taken return from http://www.unescobkk.org/fileadmin/user_upload/aims/capacity_building.pdf
6. Mushi, Ally S, Deus D. Ngaruko, 2015. Determinats of fiancial Substainability of Smal Holder Sugarcane Farming Systems in Tanzania. *African Journal of Economic Review* III (2). pp: 57-73.

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Appendix 1.

Proof of the copyright of SICATU Application.

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Dalam rangka perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

Nomor dan tanggal permohonan : EC00202151081, 29 September 2021

Pencipta
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Alamat : Universitas Udayana, Denpasar, BALI, 80361
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Jenis Ciptaan : Program Komputer
Judul Ciptaan : Aplikasi SICATU (Sistem Informasi Catatan Akuntabilitas Transparansi Usaha) Untuk Pengelolaan Sampah

Tanggal dan tempat diumumkan untuk pertama kali di wilayah Indonesia atau di luar wilayah Indonesia : 24 September 2021, di Denpasar

Jangka waktu perlindungan : Berlaku selama 50 (lima puluh) tahun sejak Ciptaan tersebut pertama kali dilakukan Pengumuman.

Nomor pencatatan : 000279715

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.
Surat Pencatatan Hak Cipta atau produk Hak terkait ini sesuai dengan Pasal 72 Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.

a.n. MENTERI HUKUM DAN HAK ASASI MANUSIA
DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL

[Signature]
Dr. Freddy Harris, S.H., LL.M., ACCS.
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