p-ISSN: 2252-3006
e-ISSN: 2685-2411

# Digitalization of Web-Based Notary and PPAT Office Service Management

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***Abstrak***

*Notaris dan Pejabat Pembuat Akta Tanah (PPAT) merupakan sebuah lembaga yang disebutkan dalam Kitab Undang-Undang Hukum Perdata memiliki kewenangan berkaitan dengan pembuatan akta autentik. Seperti halnya dengan lembaga lain, Notaris dan PPAT membutuhkan sistem informasi untuk membantu meningkatkan efektivitas dan efisiensi pelayanan jasa lembaga tersebut. Oleh karena itu, penelitian ini dibuat dengan tujuan menghasilkan sistem informasi yang dapat membantu proses manajemen, melakukan pemantauan, dan pelaporan terhadap pelayanan jasa yang dilakukan oleh Notaris dan PPAT. Penelitian ini dilakukan dengan memanfaatkan metode Waterfall sebagai metode pengembangan yang menghasilkan 5 modul diantaranya Modul Manajemen Data Pegawai, Modul Manajemen Data Client, Modul Manajemen Autentikasi, Modul Manajemen Pelayanan Notaris dan PPAT, dan Modul Pelaporan serta telah diuji dengan menggunakan Metode Pengujian Blackbox dan Post-Study System Usability Questionnaire (PSSUQ) yang menunjukan bahwa sistem ini dapat berjalan baik dan tepat guna dengan skor keseluruhan (Overall) pengujian 1.27.*

***Kata kunci:*** *Notaris, PPAT, Sistem Informasi, Manajemen Pelayanan, Web*

***Abstract***

*A notary and Land Deed Making Officer (PPAT) is an institution mentioned in the Civil Code with the authority to make authentic deeds. As with other institutions, Notaries and PPATs need an information system to help improve the effectiveness and efficiency of the agency's services. Therefore, this research was conducted to produce an information system that can assist in the management process, monitoring, and reporting on services performed by Notaries and PPATs. This research was conducted by utilizing the Waterfall method as a development method which produced 5 modules, including the Employee Data Management Module, Client Data Management Module, Authentication Management Module, PPAT and Notarial Services Module, and Reporting Module, and has been tested using the Blackbox Testing Method. and the Post-Study System Usability Questionnaire (PSSUQ) which shows that this system can work well and is effective with an overall test score of 1.27.*

***Keywords:*** *Notary, PPAT, Information System, Service Management, Web*

## 1. Introduction

Technological developments that are competitively increased require users always to follow the flow of digitalization to facilitate needs in various fields that are increasingly complex. As a supporting factor, information technology is expected to enable users in multiple areas, especially data management activities [1]. One form of clear evidence of the significant influence of technology is the existence of a web-based information system capable of processing and presenting data effectively, quickly, and accurately.

An information system is an interconnected component to collect, store, and distribute information to support an organization's decision-making [2]. Information systems in business processes are one of the factors that facilitate the improvement of the quality of information, so it is the primary function area in managing business administration [3].

The Notarial Office (NO) and Land Deed Making Officer (PPAT) in Indonesia is an institution mentioned in the Civil Code with authority for authentic deeds. In carrying out their duties and administrations, Notaries and PPAT officials need data management that is managed and monitored correctly. Doing an original act that needs to go through a series of complicated processes and requirements that sometimes requires a unique mechanism to monitor the alignment of the process with established procedures [4].

However, until now, it is not uncommon to find Notarial offices and PPATs still using manual recording and reporting. That things trigger various obstacles in the Notarial and PPAT service process, such as the slow service process due to the lack of employee performance monitoring facilities, and the files collected are prone to damage. In addition, creating the files required as a condition for doing an authentic deed is also often still done manually by typing the necessary information from the file one by one, significantly slowing down the process because the required files are not small.

These management constraints require an information system solution that can help data management from the Notarial Office and PPAT so that their services can run more effectively and efficiently. That kind of management problem is the background for this research, so it can help with data management and reporting constraints for the Notarial Office and PPAT by utilizing a website-based information system.

Website-Based Service Management and Reporting Information System at the Notarial Office and PPAT is expected to be a solution because it has several features, such as a service process monitoring feature to help overcome delays in the service process. This feature will make it easier for Notarial and PPAT officials to determine the best solution for a service problem immediately. In addition, this system also has reporting features in the form of dashboards and automatic report printing that can be used to monitor Notarial and PPAT office service statistics and to help provide periodic reports quickly and efficiently. Finally, this system also has an automatic service file printing feature, making it easier for staff to prepare service files.

## 2. Research Method / Proposed Method

Several supporting hardware and software are used to support the implementation and testing in this study. The hardware used is ASUS TUF Gaming FX505GE with Intel Coffee Lake Core i7-8750H CPU with a processing speed of around 2.20 GHz accompanied by support for GPU Nvidia Geforce GTX 1050 4 GB, RAM 88192 MB, SSD of 128 GB, HDD 1 TB, 64-bit Operating System Windows 11, x64-based processor. As well as Windows 11 Home operating system software, Visual Studio Code, XAMPP Control Panel, SQLyog Ultimate – MySQL GUI v13.1.1 (64-bit).

The research method applied in this study is the development of the waterfall method. The waterfall method is a systematic and sequential information system development model [5]. The result of this system using the Waterfall model is made by following a series of processes.

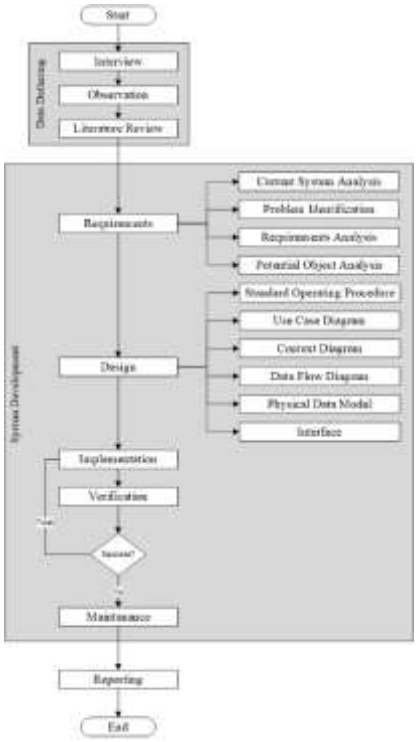


Figure 1 Research Method with Waterfall Development Scheme

Figure 1 is a research method that implements the Waterfall development scheme. System design and development begins with the process of collecting data in the form of interviews, observations, and literature [6]. Next, the system development process is carried out using the Waterfall development method, namely through four stages of development. After the development stage has been carried out well, the research will end with making a report.

The general description of the system to be designed is helpful as a reference for modeling the system as a whole to make it easier to provide information on how the system will be formed. The general description of the Service Management Information System and Website-Based Reporting at the Notarial Office and PPAT is as follows.

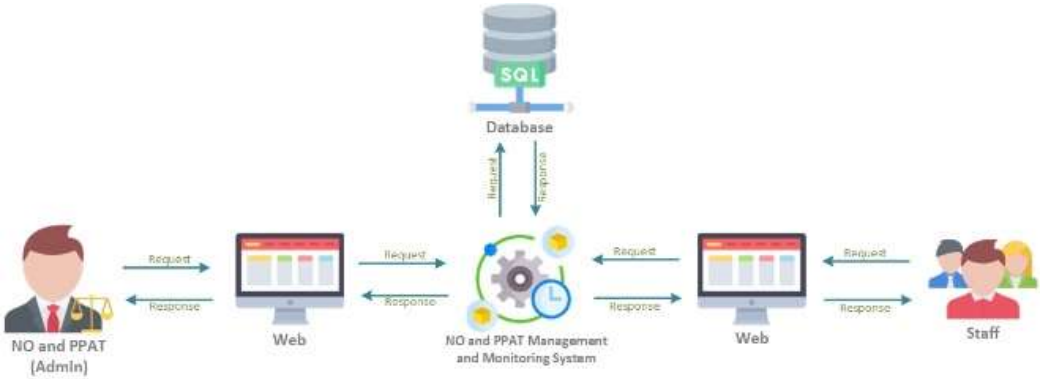


Figure 2. System General Overview

Figure 2 overviews the Service Management Information System and Website-Based Reporting at the Notarial Office and PPAT. This general description shows that this system will later be accessed through the website by two entities, namely staff and Notarial and PPAT officials, where all system data is stored in the database. Notarial and PPAT officials can use the system to monitor the service process carried out by staff.

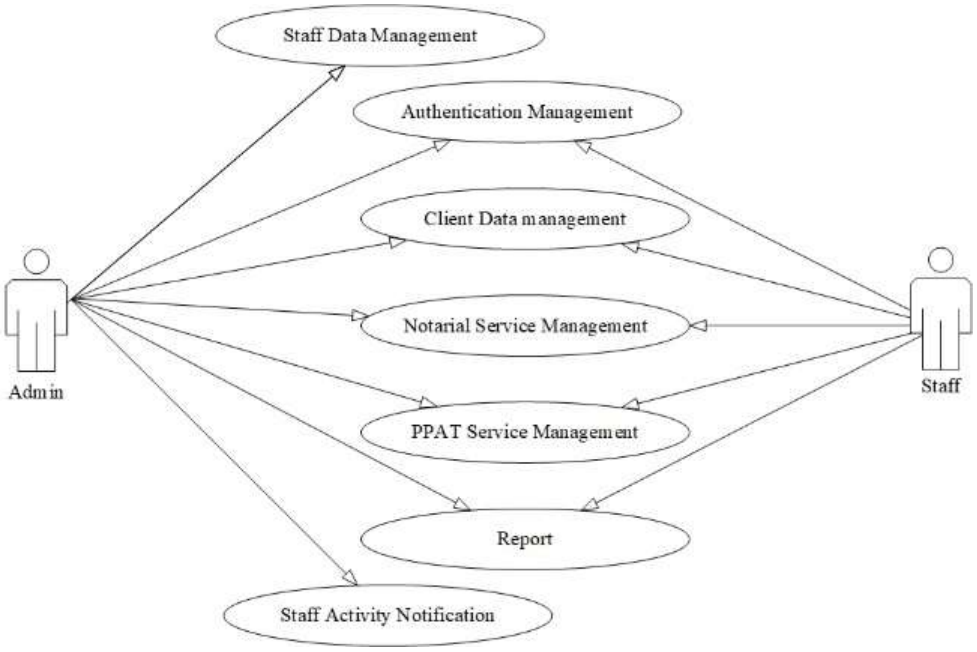


Figure 3 Use Case Diagram

Figure 3 is a Use Case Diagram of a Website-Based Service Management and Reporting Information System at a Notarial Office and PPAT. Use Case Diagram can be defined as a system modeling which describes the list of functions and ownership rights of existing functions [7]. Two actors can access or become targets for system users, namely staff and Notarial and PPAT officials. Generally, the two actors can access several system models, including Authentication Management, Customer Data Management, Notarial Service Data Management, PPAT Service Data Management, and Reporting. Meanwhile, Staff Data Management and Staff Service Notifications can only be accessed by Notarial and PPAT officials as the system admin.

After the system has been successfully developed, all features or menus will be tested to detect errors or deficiencies using the Blackbox and Post-Study System Usability Questionnaire (PSSUQ) methods.

Black Box testing is a software quality test that focuses on software functionality. Black Box testing aims to find incorrect functions, interface, data structure, performance, initialization, and termination errors [8].

The Post-Study System Usability Questionnaire (PSSUQ) is designed to assess and evaluate user satisfaction with a computer system or application. The PSSUQ question items yield four scores, one overall and three subscales. These values include System Quality (SysQual) which is a subscale that evaluates system quality, Information Quality (InfoQual) subscale that is used to assess information quality, Interface Quality (IntQual) subscale that is used to evaluate interface quality, and overall, which is a value the average of the entire subscale [9]. PSSUQ Version 3 consists of 16 questions with seven options (+ NA option). The question below shows a PSSUQ questionnaire to measure the usability of a website.

Table 1 PSSUQ Questionnaire

| No | Questions |
|---|---|
| 1 | Overall, I am satisfied with how easy it is to use this system. |
| 2 | It was simple to use this system. |
| 3 | I was able to complete the tasks and scenarios quickly using this system. |
| 4 | I felt comfortable using this system. |
| 5 | It was easy to learn to use this system. |
| 6 | I could become productive quickly using this system. |
| 7 | The system gave error messages that told me how to fix problems. |
| 8 | Whenever I made a mistake using the system, I could quickly recover. |
| 9 | The information (such as online help, on-screen messages, and other documentation) |

| No | Questions |
|---|---|
| | provided with this system was evident. |
| 10 | It was easy to find the information I needed |
| 11 | The information was effective in helping me complete the tasks and scenarios. |
| 12 | The organization of information on the system screens was clear. |
| 13 | The interface of this system was pleasant. |
| 14 | I liked using the interface of this system. |
| 15 | This system has all the functions and capabilities I expect it to have |
| 16 | Overall, I am satisfied with this system. |

PSSUQ has an assessment standard used as a reference to compare the results obtained for calculating the questionnaire results. The norms of the PSSUQ used for assessment standards can be seen as follows.

Table 2 PSSUQ Norms Version 3

| Sub-Scale | Lower Limit | *Mean* | Upper Limit |
|---|---|---|---|
| **SysUse** Questions 1-6 | 2,79 | 3,02 | 3,24 |
| **InfoQual** Questions 7-12 | 2,28 | 2,49 | 2,71 |
| **InterQual** Questions 13-15 | 2,62 | 2,82 | 3,02 |
| **Overall** Questions 1-16 | 2,57 | 2,80 | 3,02 |

Table 2 is the scale value that is determined as a reference for determining the system's feasibility, which consists of Low, Mean, and Medium. The lower the value obtained, the better the quality of the system being developed [10].

**3. Literature Study**

Literature Review or related research functions for analysis enriches research discussion and distinguishes it from current research. As a reference for comparison, this research uses several research references that are relevant to this research.

The first study discusses the design and development of information systems at Notary and PPAT offices to make it easier for clients to monitor the process of making deeds from estimated costs, to process notifications [11]. This research is a reference in the mechanism of service process modeling at Notary offices and PPAT.

The second study discussed creating a registration information system and monitoring Notary and PPAT services using the methods of observation, interviews, literature study, analysis, design, and testing [12]. This research references the service process modeling mechanism at Notary offices and PPAT.

The third study discusses the development of executive dashboards that can be used by branch heads to monitor micro KUR customer data graphs [13]. This research is a reference in using the Waterfall method for developing information systems.

The fourth research discusses the development of an administrative system that can support activities at the notary's office, especially in data searches and monthly reports [14]. This research references the service process modeling mechanism at Notary offices and PPAT.

The research discusses the design and development of information systems that can help procure Notary office reports such as applicant list reports and filing process flats [15]. This research obtained references regarding the mechanism of service process modeling at Notary offices and PPAT.

**4. Result and Discussion**

The Website-Based Service Management and Reporting Information System at the Notarial Office and PPAT has seven features that have been successfully developed, including the following.

### 4.1. Authentication Management

Authentication Management Module is a system whose job is to manage access rights before using the system. The interface description of the Authentication Management Module is as follows.

Figure 4 Authentication Interface

Figure 4 is an interface when the user has not logged in to the system. The user will be asked to enter an email input and a password which will later be adjusted to the data recorded in the database. If the data entered matches the data stored in the database, the user can enter the system according to the account role.

### 4.2. Staff Data Management

Staff Data Management Module is a system that can only be accessed by the admin to manage staff data. This system can view, modify, and delete stored staff data. The interface description of the Staff Data Management Module is as follows.

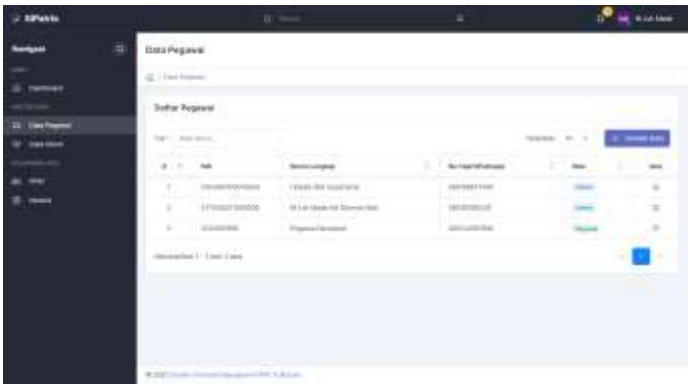

Figure 5 Staff Data Management Interface

Figure 5 is the main page of the staff data management module. This page displays a complete list of staff recorded in the database with processing buttons such as data details, change data, reset the password, and delete on each row and the add button to add data.

### 4.3. Client Data Management

Client Data Management Module is a system all users can access to manage client data. This system can view, modify, and delete client data stored in the system. The interface description of the Client Data Management Module is as follows.

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e-ISSN: 2685-2411

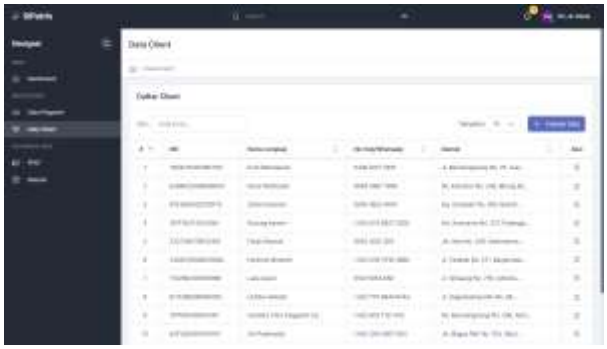

Figure 6 Client Data Management Interface

Figure 6 is the main page of the client data management module. This page displays a complete list of clients recorded in the database with processing buttons such as data details, change data and delete on each row, and the add button to add data.

**4.4. Management of PPAT and Notarial Services**

PPAT and Notarial Service Management Module is a system all users can access to manage and monitor PPAT and Notarial service data. This system can view, add service data, and change process status. The interface description of the PPAT and Notarial Services Management Module is as follows.

Figure 7 PPAT and Notarial Service Management Detail Page

Figure 7 displays the added data page on PPAT and Notarial service management. This page asks users to complete the information needed to create service data, such as the parties involved and land data.

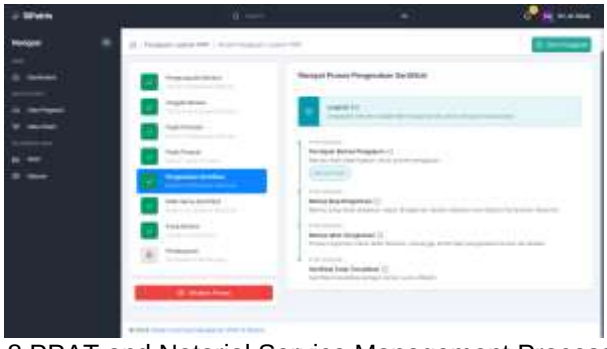

Figure 8 PPAT and Notarial Service Management Process Page

Figure 8 is a display of the PPAT and Notarial service process page. This page displays a step-by-step process for performing PPAT and Notarial services. Each method requires the user to complete data for service requirements.

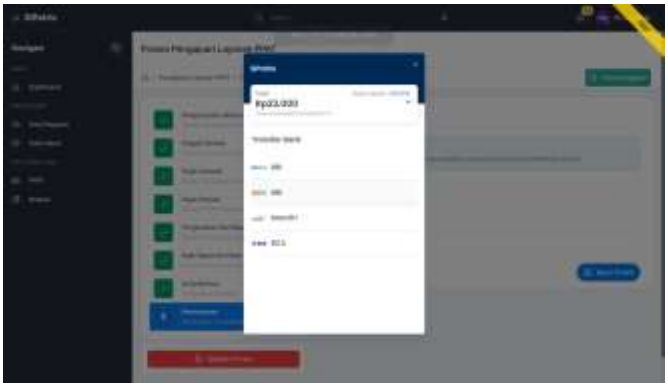

Figure 9 PPAT Service Management Payment Page

Figure 9 displays the payment process for services that utilize the Midtrans API. The payment process is the last step of the service process, which requires the user to enter the payment nominal and payment method, which the client can later use to make payments through partners.

**SURAT KUASA**

Yang bertanda tangan dibawah ini :
1 Nama : Calista Astuti
Umur : 24 Tahun
Pekerjaan : Wakil Presiden
Alamat : Kpg. Fajar No. 205, Tidore Kepulauan 51199, Banten, Kebonjati, Tomohon, Sibolga, Bali

- Selanjutnya disebut **PEMBERI KUASA**:

Dengan ini memeberikan kuasa kepada:
Nama : Ni Luh Made Adi Dharma Wati
Nama : 21 Tahun
Pekerjaan : Pegawai Notaris/PPAT I WAYAN RUSMAWAN,SH.,M.Kn
Alamat : Jln. Raya Semat, Gg. Jalak 17 B No. 4

- Selanjutnya disebut **PENERIMA KUASA**:

----------KHUSUS----------
Untuk dan atas nama pemberi kuasa mengurus pendaftaran Validasi BPHTB pada Badan Pendapatan Daerah Kabupaten Badung atas obyek tanah:

- Sertipikat Hak Milik nomor 4323453253535, luas 425245 M2, dalam Surat Ukur tanggal 2023-06-16, nomor 001/Denpasar/2000, terletak di Bali, Denpasar, Denpasar Utara, Peguyangan, tertulis atas nama Eva Gunawati.

Untuk itu yang diberi kuasa berhak untuk menghadap kepada petugas/pejabat yang berwajib di Badan Pendapatan Daerah Kabupaten Badung, menandatangani surat pendaftaran, membayar biayanya, memberikan keterangan/penjelasan yang dianggap perlu, selanjutnya mengambil dan menerima hasil Validasi BPHTB tersebut diatas setelah terbit atas nama pemberi kuasa.

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Badung, 02 Juni 2023

PENERIMA KUASA PEMBERI KUASA

(Ni Luh Made Adi Dharma Wati) (Calista Astuti)

Figure 10 Print File Output

Figure 10 is an example display of files the system can print automatically to support the service process. All information in the file is automatically generated based on service information data stored in the database.

**4.5. Reporting Management**

Reporting Management is a system that automatically generates monthly service reports and monitors the rate of Notarial and PPAT services. The following is a reporting system interface to the Service Management Information System and Notarial and PPAT Reporting.

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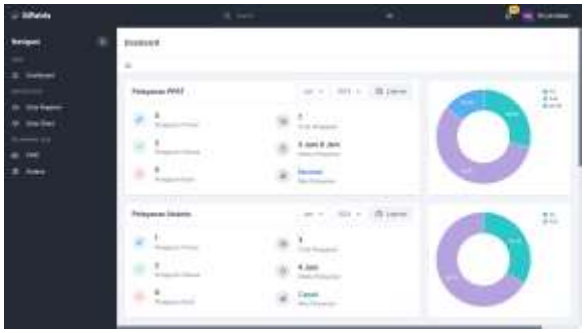

Figure 11 Service Effectiveness Reporting Interface

Figure 11 displays service effectiveness reporting that can be used by all users to monitor the effectiveness of services that have been running. Through this report, the user can find out the speed of service.

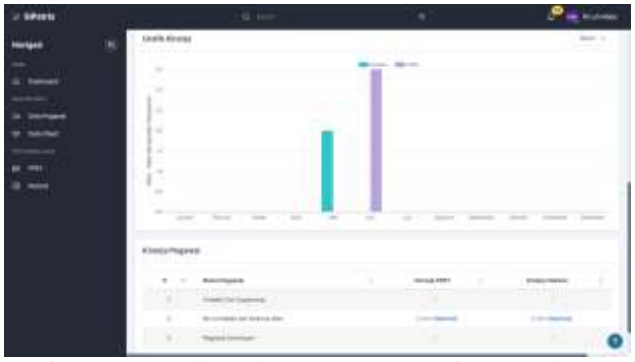

Figure 12 Staff Performance Reporting Interface

Figure 12 is a display of staff performance reporting that the admin can use to monitor staff performance in carrying out ongoing services.

All system modules have been successfully built and tested for readiness to run as a system as it should. Testing was carried out using the Blackbox testing and PSSUQ methods.

Black box testing is carried out by testing four modules built with 29 system scenarios. Testing is carried out by tracing the system functionality one by one according to the initial scenario that was planned in the system development. The results of this test show that all features in the system have succeeded in running well according to the expectations of the expected scenario without any system function errors.

Meanwhile, the PSSUQ test has been carried out by distributing questionnaires to related users, such as Notarial and PPAT office staff, I Wayan Rusmawan, SH., M.Kn, with the following test results.

Table 3 PSSUQ Test Results

| Sub-Scale | Lower Limit | *Mean* | Upper Limit | Result |
|---|---|---|---|---|
| **SysUse** Questions 1-6 | 2,79 | 3,02 | 3,24 | 1,36 |
| **InfoQual** Questions 7-12 | 2,28 | 2,49 | 2,71 | 1,26 |
| **InterQual** Questions 13-15 | 2,62 | 2,82 | 3,02 | 1,17 |
| **Overall** Questions 1-16 | 2,57 | 2,80 | 3,02 | 1,27 |

Table 3 is a table of the comparison of PSSUQ version 3 norms with the calculation results from the respondents' answers. Based on the results of tests conducted using Google Forms, the results obtained from all scales are below the lower limit of the standard norm. These results indicate that the overall test has been running very well.

## 5. Conclusion

Website-Based Service Management and Reporting Information Systems at Notarial and PPAT offices have modules that can help manage Notarial and PPAT service management and simplify the reporting process.

The Black Box and PSSUQ methods used in testing the Website-Based Service Management and Reporting Information System at Notary and PPAT offices gave an excellent results, as proven by the Black Box scenario with 29 test scenarios from 5 modules that have been implemented which show that the system runs well and with testing PSSUQ was declared to have passed the lower limit of the standard PSSUQ version 3. A questionnaire using The PSSUQ method for 22 respondents showed that Overall they got a score of 1.27 which is lower than the lower limit value of the PSSUQ standard norm version 3, so it is considered very good and acceptable to users.

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