Implementation of a Smart City-based Building Asset Inventory Internal Control System at the East Java Public Works and Water Resources Department

1st Fasihul Lisan[1], 2nd Sofie Yunida Putri[2] *

Faculty of Economics and Business, UPN Veteran East Java, Indonesia

20013010040@student.upnjatim.ac.id; sofie.yunida.ak@upnjatim.ac.id

Abstract. The era of technological development during industry 4.0 encouraged a sustainability monitoring system that involved digital transformation. Government agencies as public service organizations are required to use the principles of transparency, credibility and accountability both from serving the public and managing internally. This research was carried out as a requirement for a web-based asset management application system, namely proposing an approach to systematic and sequential software development and system progress in all analysis, design, code, testing and maintenance. This convenience can be a solution in accelerating the existing asset inventory system. so that it is easily accessible at any time. In addition, there is also a process of collecting data on incoming goods, condition of goods, measuring data on goods, location of goods so as to be able to provide data collection in the form of reports that can be used by leaders. This study uses an iteration method which uses the system development stage to create a reliable system. The stages created are expected to be able to provide clarity to users as system users in the future so that better development can be carried out. This article contains information on the use of a Smart City-based internal control system in an inventory of building assets that can provide significant benefits. By integrating information and communication technology, it helps improve the efficiency, transparency and accuracy of building asset management. In addition, this system also facilitates the maintenance and monitoring of asset conditions

Keywords: Digital Transformation, Asset Inventory, Smart City.

I.   Introduction

The era of technological development during industry 4.0 encourages the existence of a sustainability monitoring system that involves digital transformation. Government agencies as public service organizations are required to be able to provide transparency, credibility and accountability in both services to the public and internal management. Recording asset inventory data for an agency can be assisted by a computerized system that is able to play an important role in real time. Computerized systems are able to contribute to fast and accurate data processing on both small and large scales (Ashari, 2018).

Asset inventory is the process of collecting, recording and maintaining complete and detailed information regarding all assets owned by an organization. Assets in this context include various types, such as equipment, property, inventory of goods, vehicles, software, etc. The recording process is used to provide data convenience and labeling. Automated inventory, or asset inventory automation, is an approach that uses technology and automated tools to collect, manage and update asset inventory automatically. Inventory also has the benefit of reducing stock emptiness due to delays in recording so that it is missed from being replenished with similar assets (Susandi, 2018). The main goal of inventory automation is to reduce manual work, increase data accuracy, and speed up the inventory process. However, it is important to remember that inventory automation is not a process completely devoid of human intervention. Human supervision is still required to ensure data accuracy, address complex situations, and conduct regular reviews of the automated systems in use. Currently, the recording system is implemented manually and conventionally, so there is a need for an integrated system update. An online form system that is connected to each other is able to modernize recording (Fachry & Elizabeth, 2019).

The East Java Province Public Works and Water Resources Service is one of the government agencies that requires a structured automation system that can be used and monitored in terms of recording the assets in the buildings they own by the management and procurement department. Asset recording can provide an internal measurable performance assessment and the principle of accountability. This recording must be made for informative purposes and to physically and financially control the assets. The asset management and procurement sector is expected to be able to implement effective information management so that information is available at any time and according to the condition of the assets. The decision to create information records can help with several strategic decisions (information on asset characteristics), tactical decisions (more detailed information), as well as operational decisions (information for day to day use for all employees) (SE, M. Ec. DRKSE, M. Ec. Dev., M. (Cert.) Sri Wahyuni, 2020)

This concept is also in line with the Smart City launch, through the use of information and communication technology (ICT) to integrate infrastructure, public services and information in cities which can improve the goals of internally accountable asset management and increase the speed of information received by the public externally. As part of a smart city, ICT technology is used to speed up and simplify access to information and decision making. In developing a smart city, many factors must be considered, such as public policy, IT infrastructure, resource management, and community participation. Therefore, it is important to plan carefully and establish good relations between government, industry and society to

understand the smart city concept. Apart from that, one of the most important aspects in smart city development is data. Proper data collection and analysis can help in making good decisions and developing smart cities. Therefore, smart city development must be supported by an information system that can collect, manage and analyze data effectively (Sri Khaerawati Nur, 2020).

This research was carried out with reference to a web base by (Safitri & Nirmala, 2019) namely the need for a web-based asset management application system with a method that is used effectively using the waterfall method, namely proposing an approach to systematic and sequential software development that starts at the level and progress of the system throughout analysis, design, code, testing and maintenance. This application can be a solution in speeding up the existing asset inventory system. so it's easy to access at any time. Apart from that, there is also a process for collecting data on incoming goods, condition of goods, measurable data collection on goods, location of goods so that they can provide data collection which can be translated into reports that can be used by management.

II. Literature Review

The internal control system is a series of systems consisting of various components that are designed to be used by management in an effort to implement the policies and standard operating procedures that have been established.(Afryanto, M., 2020). Also with the existence of an asset inventory system which is a series of activities aimed at providing data on all assets owned by an organization related to purchases, grants or gift giving which contains information regarding the type and use according to asset specifications. It is also related to the source of procurement, quantity, price, time of procurement of assets and real location of assets. These things support the logistics control and supervision process effectively and efficiently (Pasaribu, 2021). This is also related to information systems which are the process of combining technology with the preparation of procedures for use, information, and the people involved with the system to achieve goals in an organization.(Oktaviani & Made Widiarta, 2019). With the meaning of information, it is a series of data that contains the results of processing general information to produce specific information that helps users in making decisions.(Oktaviani & Made Widiarta, 2019). The relationship between Smart City as a concept of increasingly smart technological development is to create a smart concept that is not only applied to various devices, but also to various asset inventory management processes. The concept, also known as a smart city, is a concept that provides an understanding of a smart city structure that can play a role in making it easier for people to get information quickly and accurately. The smart city concept is presented as an answer to efficient resource management. The smart city concept can be said to be the direct integration of information with urban society.(Hasibuan & Krianto Sulaiman, 2019). The influence of developments over time certainly also helps upgrade oneself, including employees in government agencies. Government agencies as public servants are required to adapt to digital transformation which also affects the use of asset management systems in offices. The relationship between the competency of asset management human resources can be done by upgrading their own quality to create strong internal control and have credibility in controlling internal risks.(Ayu Farhana, 2020).

Technology and communication systems basedwebis a series of systems that support interaction between users with displays designed according to user needs. Web displays help users find answers to their problems by accommodating the information they are looking for, then processing it and providing answers to the information processing. (Pasaribu, 2021). Relating to existencePHPwhich is a server-side type programming language designed in detail for developing web-based applications. PHP also contains aspects of performance, scalability, portability and is open source so it is integrated with database processing (Pasaribu, 2021). UtilizationMySQLwhich is a data storage device that is used in creating dynamic web-based applications. MySQL allows to create stored procedures and functions, which are blocks of reusable code that can be executed in a database. The working system of My SQL provides a way to perform complex operations and calculations directly in the database.(Fachry & Elizabeth, 2019).

III. Research Method

This research uses an iterative method which uses system development stages to create a reliable system. It is hoped that the stages created will be able to provide clarity to users as system users in the future so that better development can be carried out over time(Fachry & Elizabeth, 2019). The stages that appear in the shrimp paste methodology are as follows:
1. **Planning Stage**..The initial stage used is to find a problem definition in order to determine the scope of the system that will be designed to be created. This stage focuses on gathering general information to formulate the best solution and also creating a schedule for the future process.
2. **Design Thinking Analysis Stage.** This stage develops the information obtained with various ideas and positions ourselves as users. Offer ideas for solutions but also look at the priority of several plans in ideation, which ones are most important to address first.
3. **Design Stage.** This stage groups the ideas that will emerge into solutions. At this stage there are various challenges that also require innovation in how a solution does not cause new problems both

in terms of initial design and use.

4. **Implementation and Development Stage.** This stage is a continuation of the design by carrying out web-based simulations. This stage also carries out UI/UX development on how to display it well but also prioritize the efficiency and effectiveness of using each feature.

IV. Results and Discussion

The implementation of the research stages is based as a form of implementing the internal control system for building asset inventory on the Smart Citu concept from the East Java Public Works and Water Resources Service. The research stages gave rise to the following research results.

1. Planning Stage

This planning stage is carried out by conducting survey sessions with employees at the department regarding problems that arise regarding asset inventory. There are several important steps in managing and tracking assets that can be linked to a web platform. The following are the steps taken:

    1) Identify assets.

The identification step for all assets involves web database recording. Web-based recording must also be adjusted to the server owned by the service, available hardware, software, domain, SSL certificate, license, and the content regarding the data used in operating the web-based recording.

    2) Asset grouping

The process of grouping assets is carried out according to the relevant asset categories after identifying all assets in the service. Grouping is carried out to provide a priority scale according to the needs of the department and the capabilities of the web base recording developer. Grouping can be done according to the priority scale for developing web base recording, as follows:

Source: Researcher
Figure 1 Data Collection (Priority 1)

Priority scale 1 reveals that the East Java Provincial Public Works and Water Resources Service feels that it is necessary to record basic assets to ensure the real quantity of goods along with where the goods come from, the supplier of the goods, separation between incoming and outgoing goods, and grouping according to type of goods.
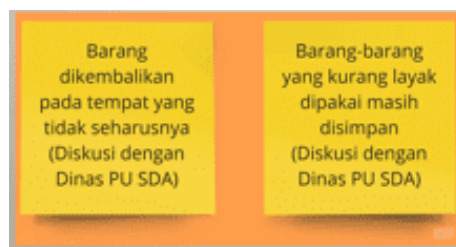
Source: Researcher
Figure 2 Operational (Priority 2)

Priority scale 2 problems with field operational conditions, namely the placement of goods that are not appropriate to the place where the goods originally came from and the placement of goods that are no longer suitable for use in the asset warehouse.

    3) Determination of asset ownership

Determining ownership and responsibility for each asset, starting from who is responsible for the server, domain, or relating to the placement of goods and several other things. This determination can

encourage a more structured responsibility policy for assets.

    4)   Detailed documentation of assets

Creation of a detailed list for each asset regarding serial number, item specifications, date of purchase, license contact, as well as the presence of other relevant information on the item. This is also related to updates on changes to service assets.

    5)   Update and maintenance tracking

Establish renewal and maintenance schedules for each asset to ensure monitoring and reminder schedules so that assets remain in good condition. This process can utilize the developed asset recording web.

    6)   Asset security planning

Carry out security measures on servers and software with firewalls, data encryption and asset safeguard policies by providing limited access to anyone who can take goods from the asset warehouse.

    7)   There is backup and recovery of assets

Back up regularly and keep backup copies on the software and of course on the recovery server in case of data loss or system failure.

    8)   Audit and monitoring

Routine audits to update accurate data and identify changes or problems that may arise in assets recorded on the web.

  2.   Design Thinking Analysis Stage

    1)   Empathy

Needs and challenges for web use by stakeholders. Conducting interviews with employees related to the building asset inventory of the East Java Public Works and Water Resources Service is aimed at gaining insight into perspectives on asset management.

    2)   Ideation

This brainstorming session produced ideas regarding improvements and improvements in the quality of recording of asset inventory management in areas involving the web. In discussions as a researcher involving stakeholders to generate ideas for the problems experienced.

    3)   Prototype

Taking the best ideas into the web asset inventory solution prototype development process. This time the prototype used is a simple sketch that represents the concept of the solution being offered
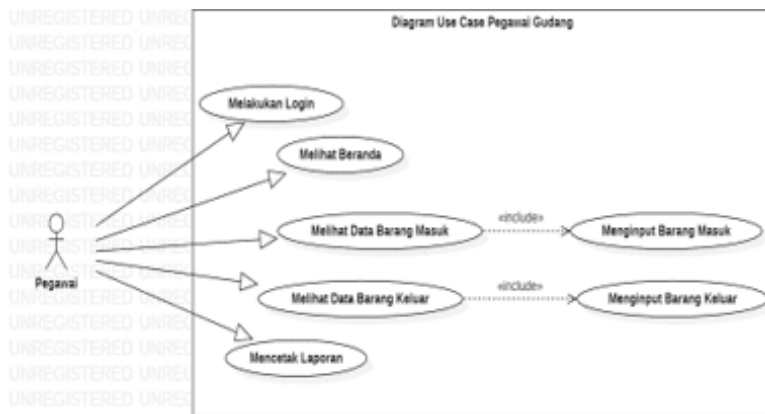
Source: Researcher

Figure 3 Warehouse Employee Use Case Diagram

This simple sketch was created to identify the initial needs of warehouse employees regarding web-based asset inventory. It tends to be simple by separating incoming and outgoing goods by inputting asset records.
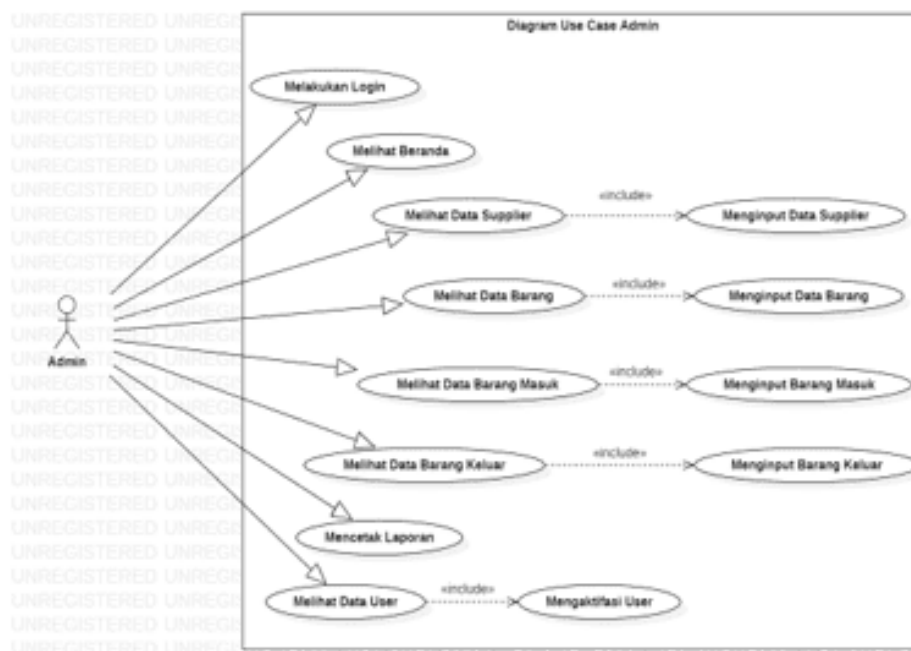
Source: Researcher
Figure 4 Admin Use Case Diagram

This simple sketch has differences in the warehouse employee use case diagram, where the admin is given the authority to carry out the input stages of incoming and outgoing goods on supplier data and there is user activation authorization for anyone who can edit and access web-based inventory.
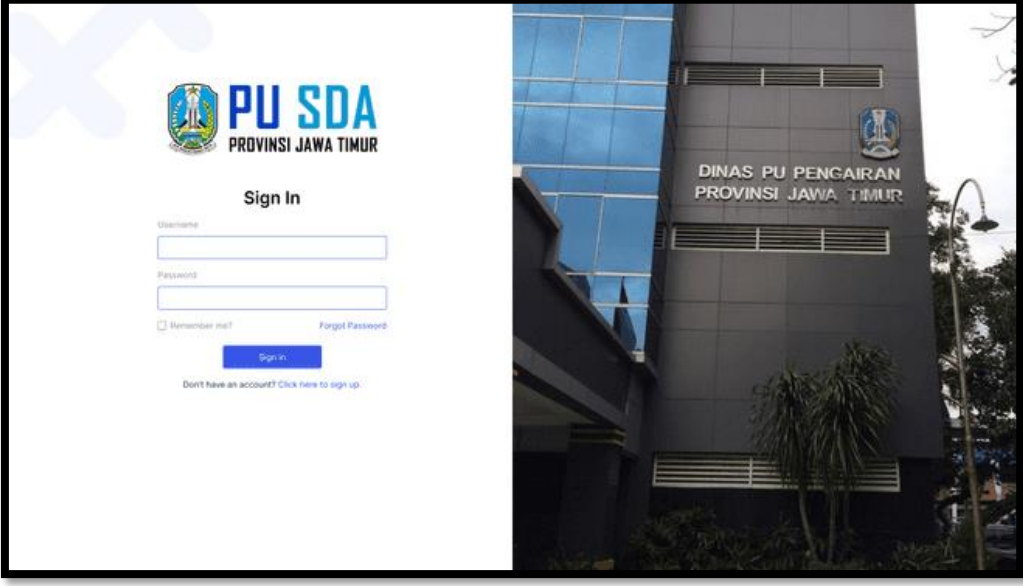
    4)   Test

Testing at this stage is aimed at obtaining feedback responses from stakeholders regarding use cases for effectiveness, usability and suitability of solutions for service needs. Apart from that, it also includes identification of weaknesses or problems that have the potential to arise to be corrected with further developments in the design.
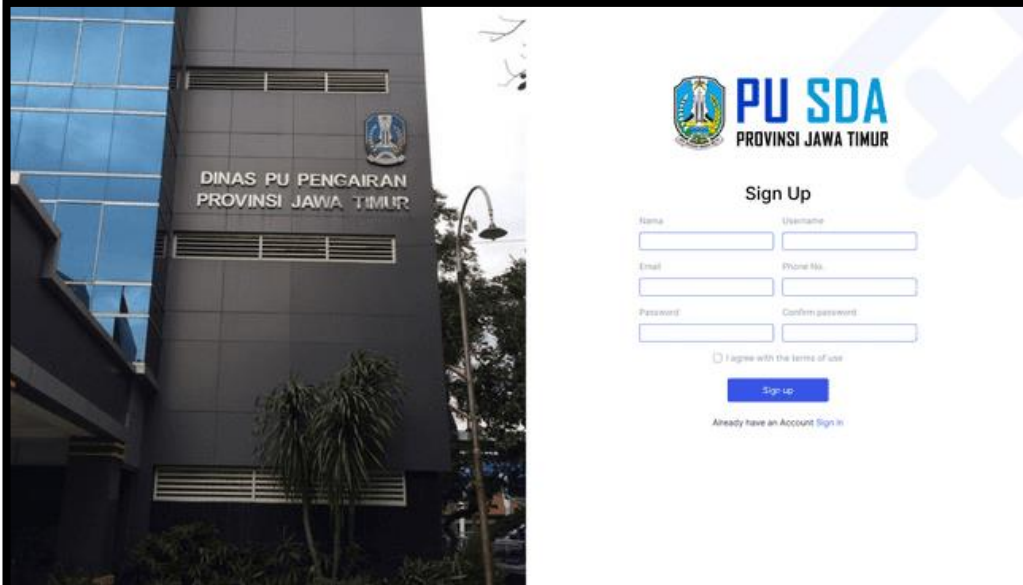
    5)   Iteration
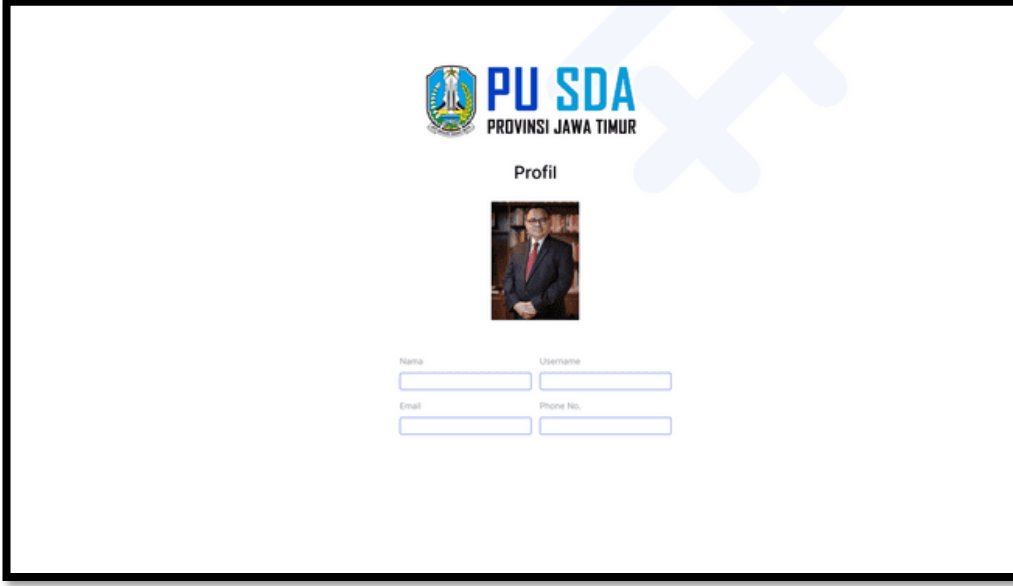
Iteration is carried out on simple sketches at the prototype stage by providing solution suggestions based on a web base inventory that has received feedback looking at possible updates that can be made to the prototype.
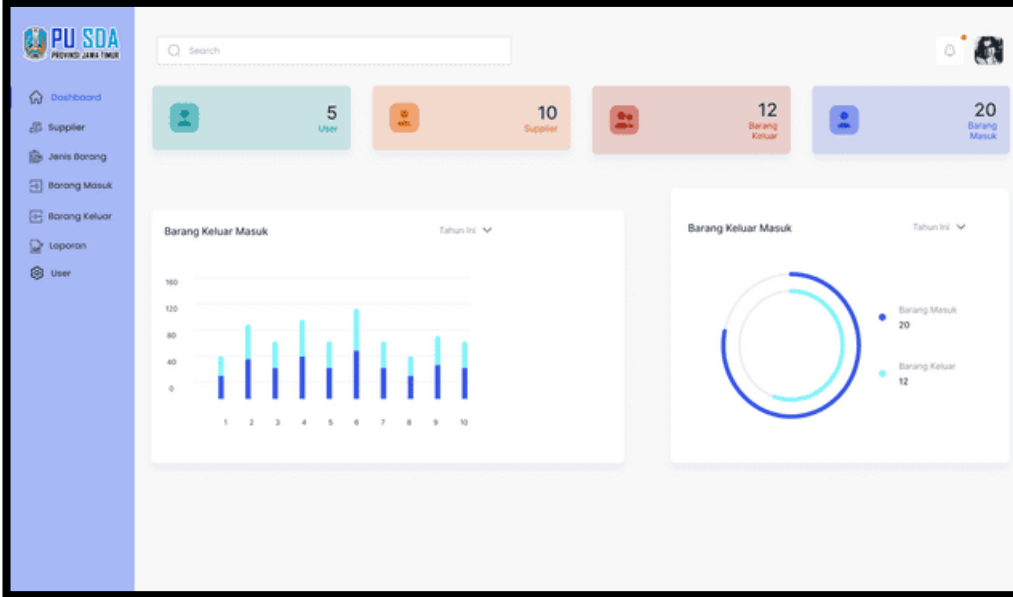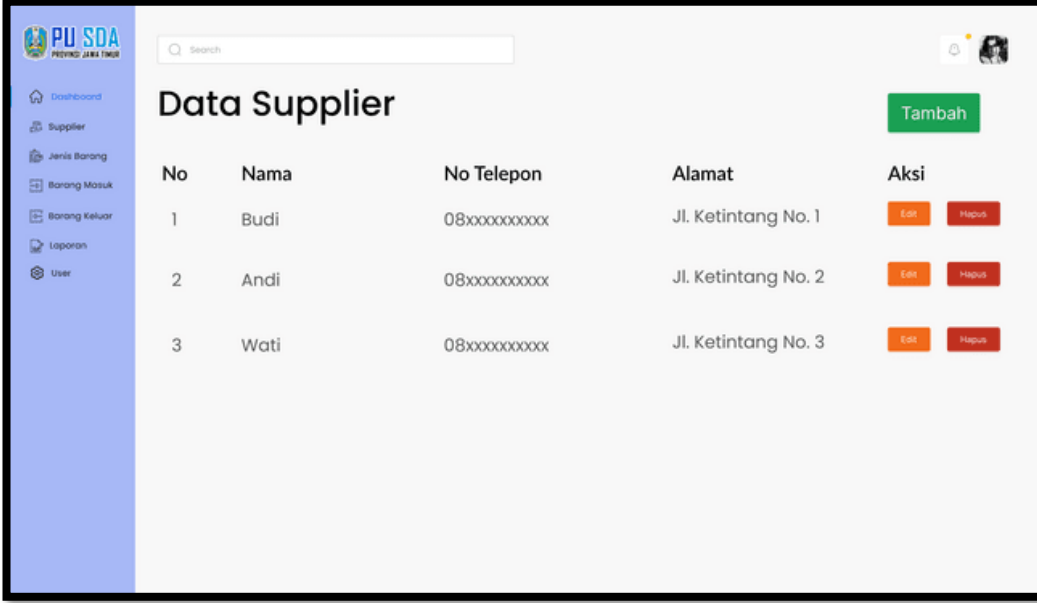

  3.   Design Stage

This stage carries out an initial analysis by looking at any problems in the admin uses case diagram and employee use case diagram for the inventory system at the East Java Province Public Works and Water Resources Service. The simple flow of the inventory system resulting from the analysis becomes a guide in the design which is explained in more detail, namely that in general the appearance for admin and employees is similar, only there are differences in the side bars and menus that can be accessed. Admins have access rights to all displays and menus and no longer need to register. Meanwhile, employees can register first and wait for confirmation from the admin. Employees only have access rights to the menu of incoming goods, outgoing goods and reports.

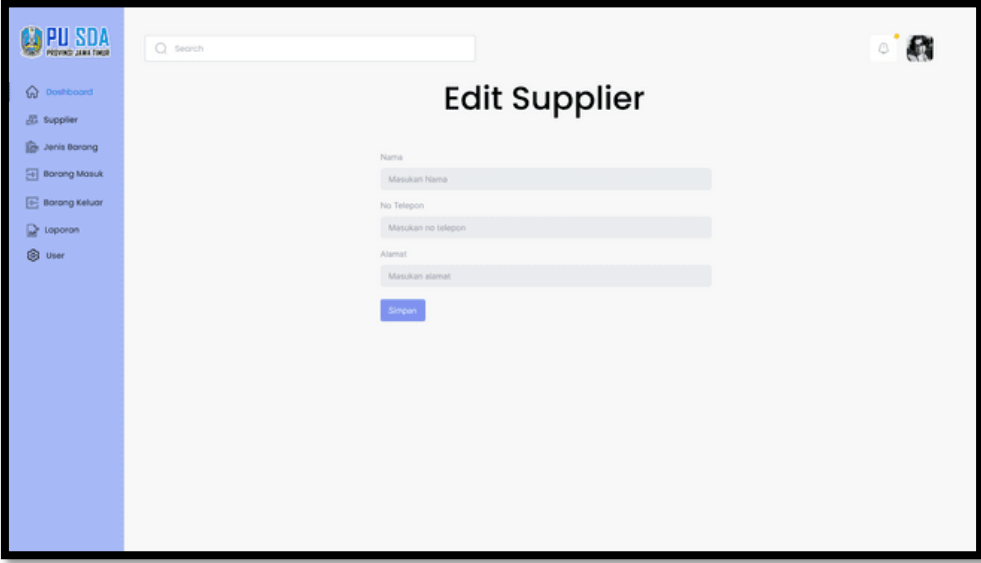| Name	Login Page
Description	The login page is the first page that can be accessed when you first enter the application. In order to enter the application, users are expected to fill in their username and password first. This page can be accessed by admins and employees.

Name	Registration Page
Description	The registration page is a page that provides a user registration form. Please fill in the registration form by completing your name, username, email, telephone number, password and password confirmation. If you have registered, please wait for confirmation. This page can be accessed by employees.
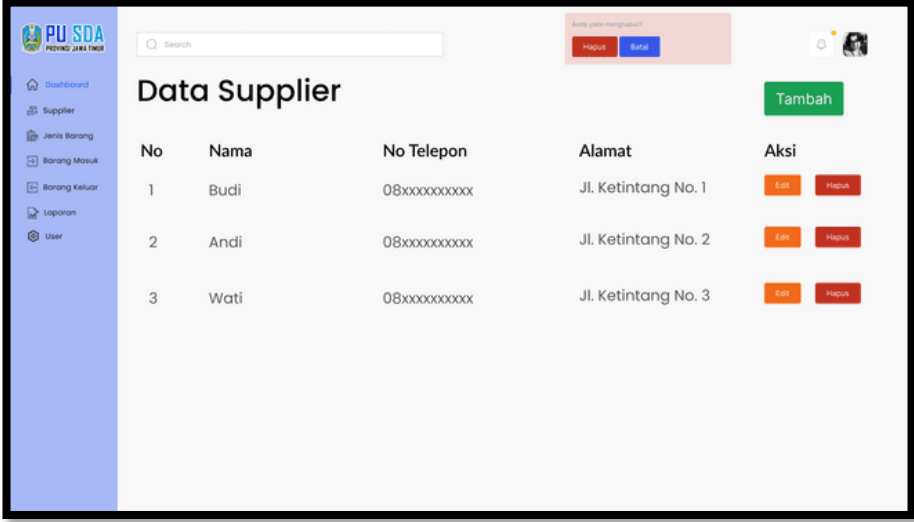
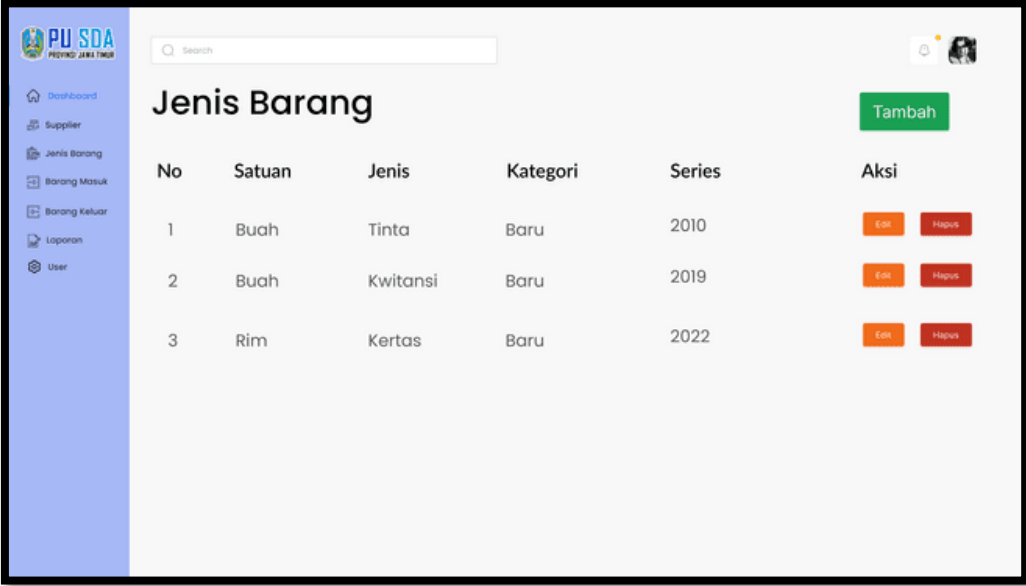| Name	Profile Page
Description	The profile page is a page that displays an explanation of the name, username, email and telephone number. This profile page can be accessed by selecting the profile icon in the top right corner of the dashboard. This page can be accessed by admins and employees.

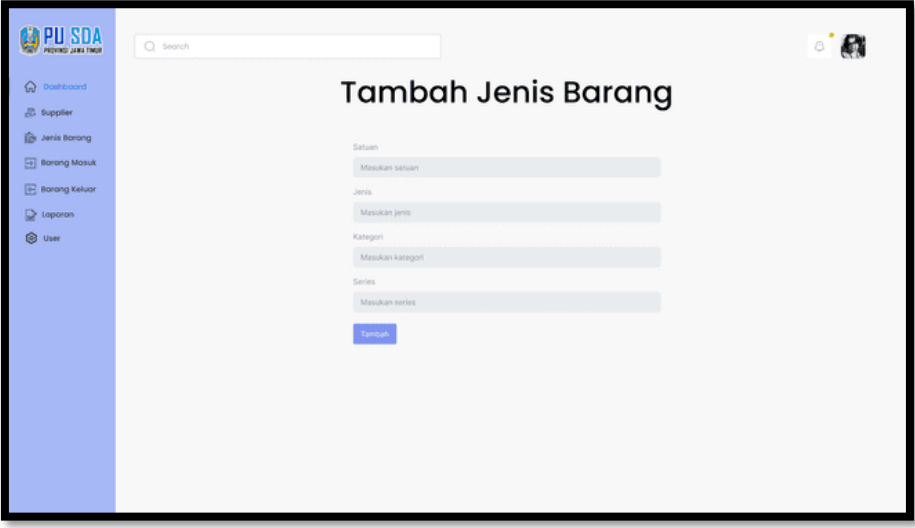| Name	Dashboard Page
Description	The dashboard page is a page that provides general and brief information about all the data in the application. In the image above, a graph of the entry and exit of goods and brief information about the number of users, suppliers, incoming goods and outgoing goods is presented. This page can be accessed by admins and employees.

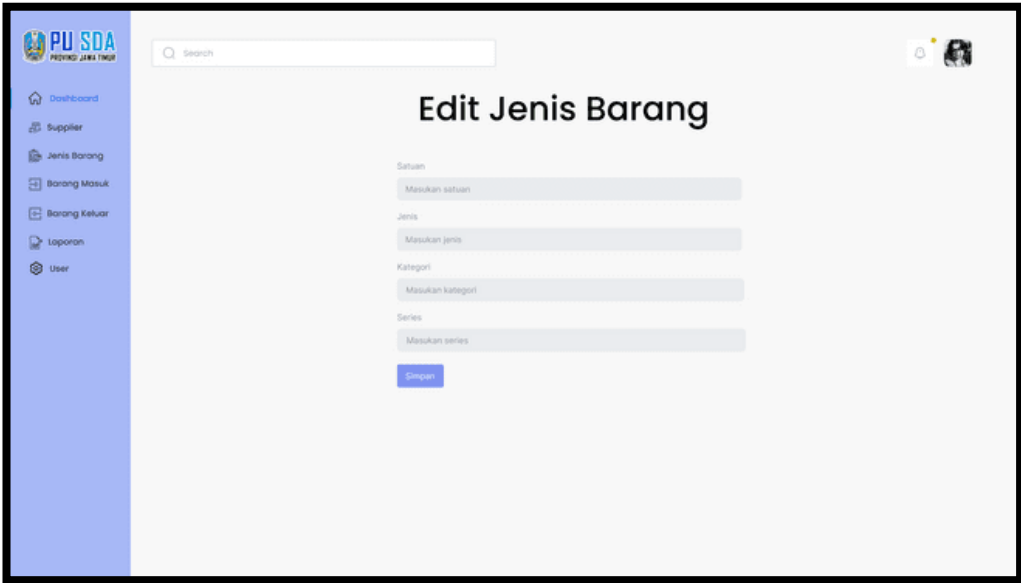| Name	Supplier Data Page
Description	When we select the supplier menu, the system will display supplier data. This data is presented in the form of a table with columns number, name, telephone number, address, and action (edit and delete buttons). If we want to add supplier data, we can select the "add" button in the top right corner. Then, if you want to edit or delete, please click one of the "edit" buttons to edit and "delete" to delete in the action column. Can be accessed by admin.

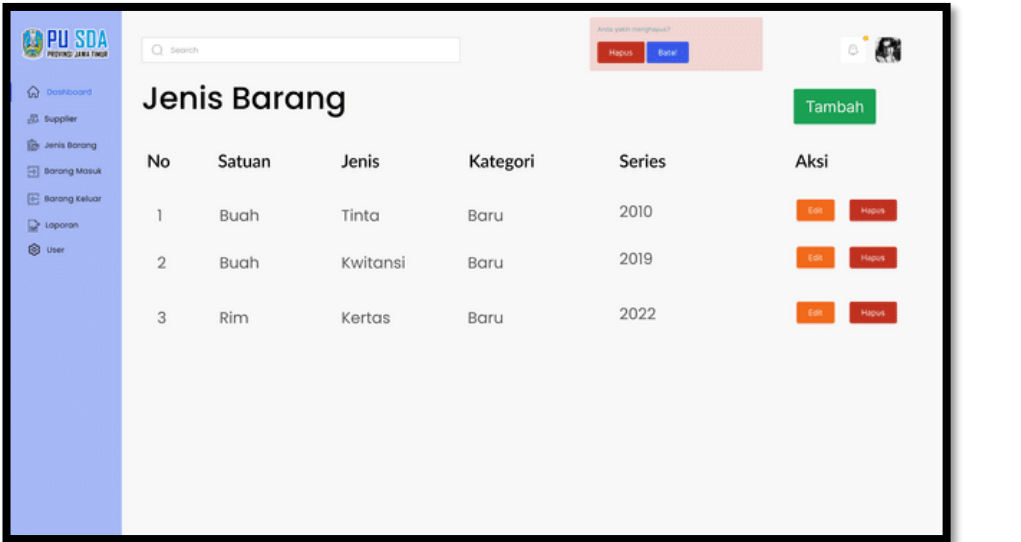| Name	Add Supplier Page
Description	If we select the "add" button on the supplier data, the system will display the add supplier form. Please fill in the name, telephone number and address of the supplier you want to add. Then, if you are sure and complete, please click "add". Can be accessed by admin.

Name	Edit Supplier Page
Description	If we select the "edit" button in the action column, the system will display a supplier edit form. Please fill in the name, telephone number and address of the supplier you want to edit. If you are sure, you can click "save". Can be accessed by admin.

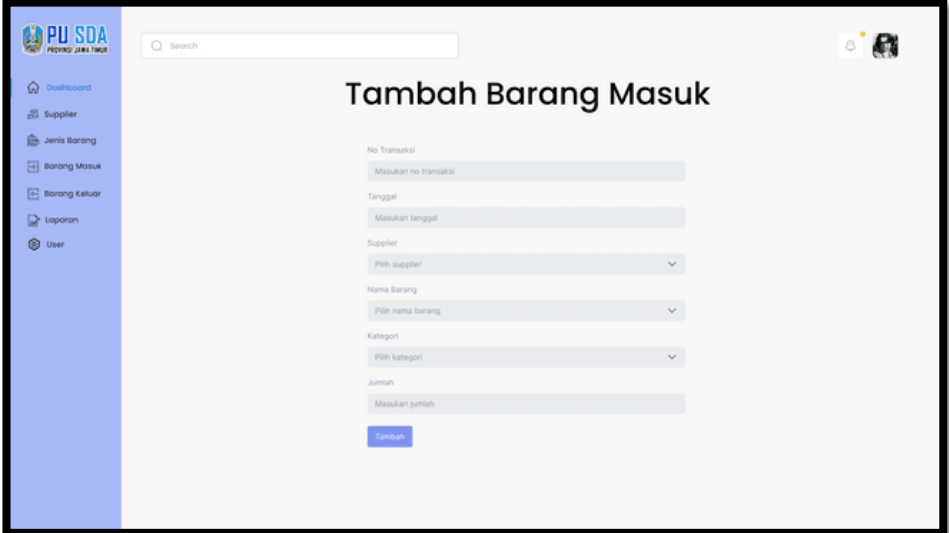| Name	Delete Supplier Page
Description	If we select the "delete" button in the action column, the system will display a pop up alert. The goal is to confirm whether we are sure we want to delete the data or not. If you are sure, select "delete". Otherwise, please select "cancel". Can be accessed by admin.

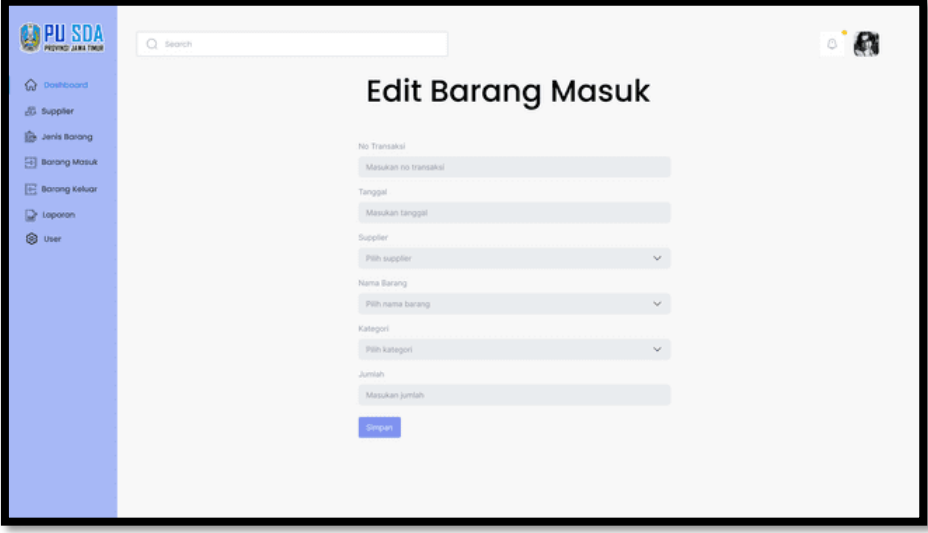| Name	Item Type Data Page
Description	When we select the item type menu, the system will display item type data. This data is presented in the form of a table with columns number, unit, type, category, series and action (edit and delete buttons). If we want to add item type data, we can select the "add" button in the top right corner. Then, if you want to edit or delete, please click one of the "edit" buttons to edit and "delete" to delete in the action column. Can be accessed by admin.

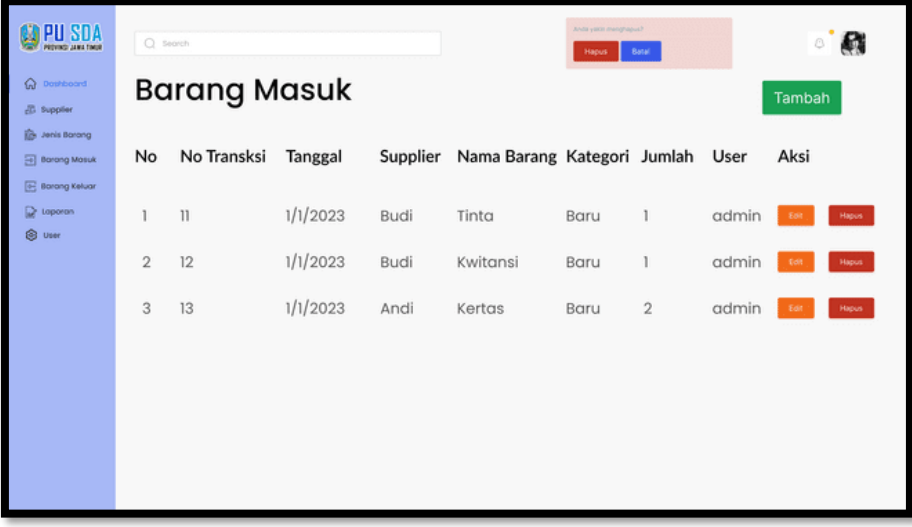| Name	Add Item Type page
Description	If we select the "add" button on the item type data, the system will display the add item type form. Please fill in the unit, type, category and series of the type of item you want to add. Then, if you are sure and complete, please click "add". Can be accessed by admin.

Name	Item Type Edit Page
Description	If we select the "edit" button in the action column, the system will display an item type edit form. Please fill in the unit, type, category and series of the type of item you want to edit. If you are sure, you can click "save". Can be accessed by admin.

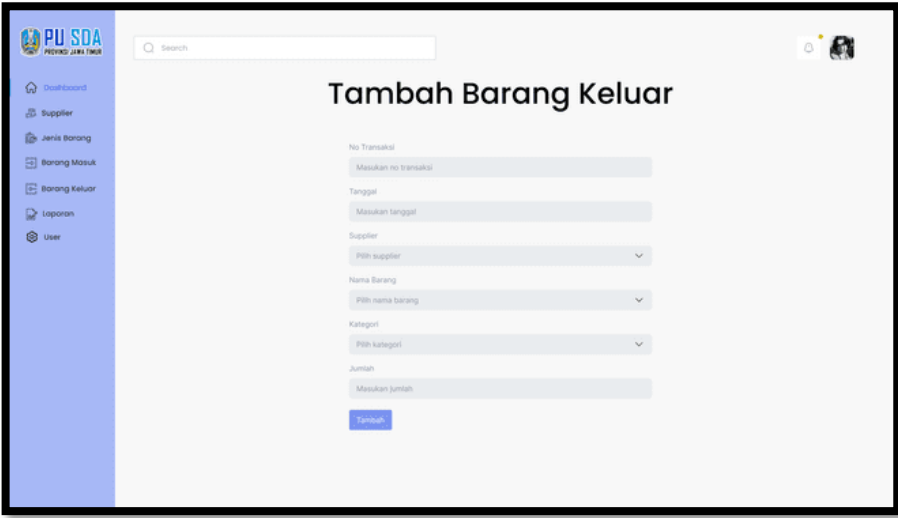| Name	Delete Item Type page
Description	If we select the "delete" button in the action column, the system will display a pop up alert. The goal is to confirm whether we are sure we want to delete the data or not. If you are sure, select "delete". Otherwise, please select "cancel". Can be accessed by admin.

Name	Incoming Goods Data Page
Description	When we select the incoming goods menu, the system will display the incoming goods data. This data is presented in the form of a table with columns no, transaction no, date, supplier, item name, category, quantity, user, and action (edit and delete buttons). If we want to add data on incoming goods, we can select the "add" button in the top right corner. Then, if you want to edit or delete, please click one of the "edit" buttons to edit and "delete" to delete in the action column. This page can be accessed by admins and employees.

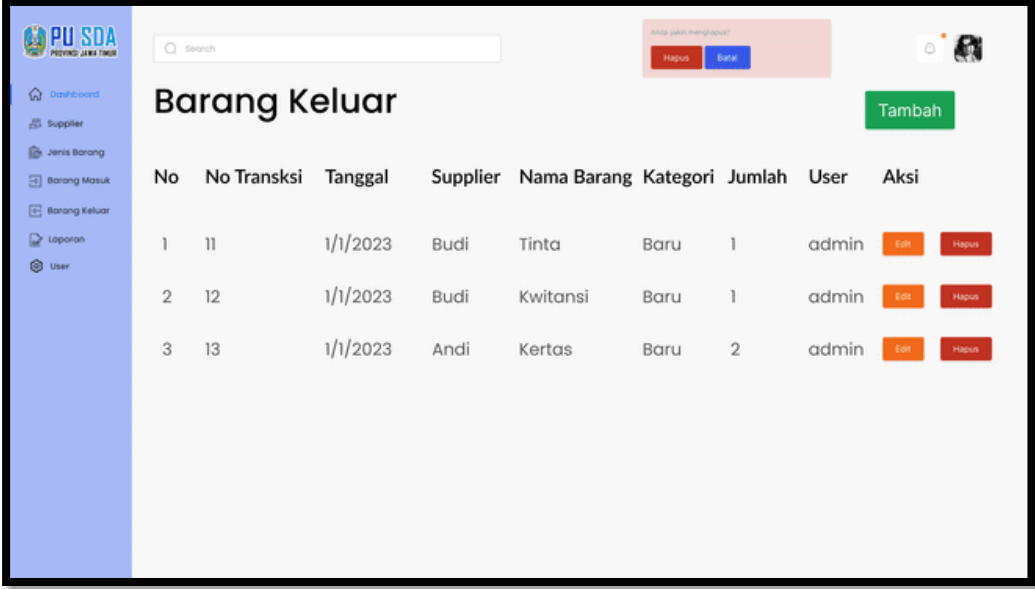| Name	Add Incoming Items page
Description	If we select the "add" button on the incoming goods data, the system will display the add incoming goods form. Please fill in the transaction number, date, supplier, item name, category, quantity and user of the incoming item you want to add. Then, if you are sure and complete, please click "add". This page can be accessed by admins and employees.

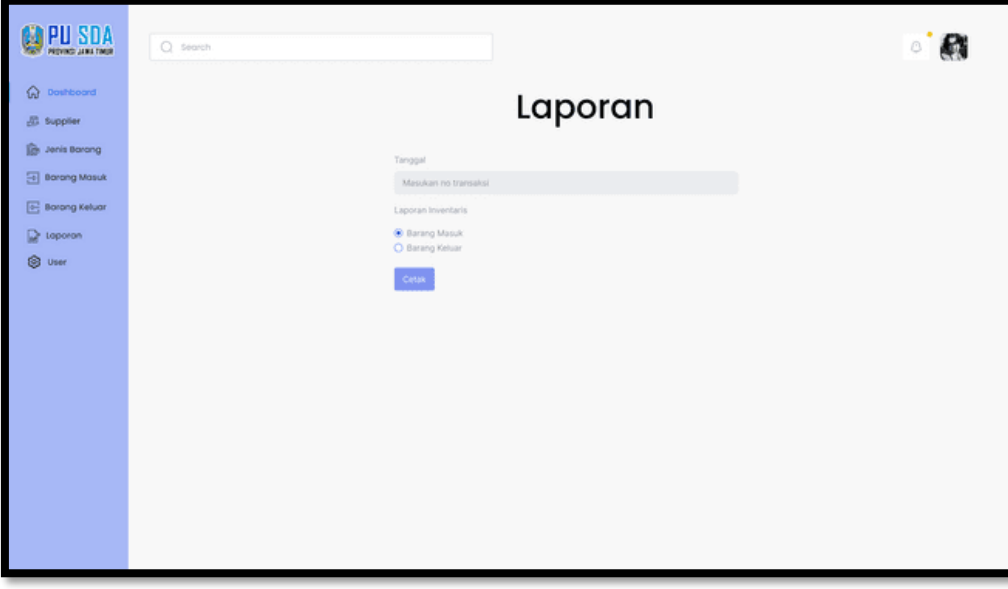| Name	Edit Incoming Items page
Description	If we select the "edit" button in the action column, the system will display an edit form for incoming goods. Please fill in the transaction number, date, supplier, item name, category, quantity, and user of the incoming item you want to edit. If you are sure, you can click "save". This page can be accessed by admins and employees.

Name	Delete Incoming Items page
Description	If we select the "delete" button in the action column, the system will display a pop up alert. The goal is to confirm whether we are sure we want to delete the data or not. If you are sure, select "delete". Otherwise, please select "cancel". This page can be accessed by admins and employees.

Name	Outgoing Goods Data Page
Description	When we select the outgoing goods menu, the system will display outgoing goods data. This data is presented in the form of a table with columns no, transaction no, date, supplier, item name, category, quantity, user, and action (edit and delete buttons). If we want to add outgoing goods data, we can select the "add" button in the top right corner. Then, if you want to edit or delete, please click one of the "edit" buttons to edit and "delete" to delete in the action column. This page can be accessed by admins and employees.

Name	Add Out Items page
Description	If we select the "add" button on the outgoing goods data, the system will display the add outgoing goods form. Please fill in the transaction number, date, supplier, item name, category, quantity and user of the outgoing item you wish to add. Then, if you are sure and complete, please click "add". This page can be accessed by admins and employees.

Name	Outgoing Item Edit Page
Description	If we select the "edit" button in the action column, the system will display an edit form for outgoing goods. Please fill in the transaction number, date, supplier, item name, category, quantity, and user of the outgoing item you want to edit. If you are sure, you can click "save". This page can be accessed by admins and employees.

Name	Delete Items Out page
Description	If we select the "delete" button in the action column, the system will display a pop up alert. The goal is to confirm whether we are sure we want to delete the data or not. If you are sure, select "delete". Otherwise, please select "cancel". This page can be accessed by admins and employees.

Name	Reports Page
Description	When we select the report menu, the system will display report options based on date and report type (incoming goods report or outgoing goods report). If you want to print, please select "print". This page can be accessed by admins and employees.

Name	User Data Page
Description	When we select the user menu, the system will display user data. This data is presented in the form of a table with columns number, name, username, email, telephone number, user, and action (edit and delete buttons). If we want to add user data, we can select the "add" button in the top right corner. Then, if you want to edit or delete, please click one of the "edit" buttons to edit and "delete" to delete in the action column. This page can be accessed by admin.

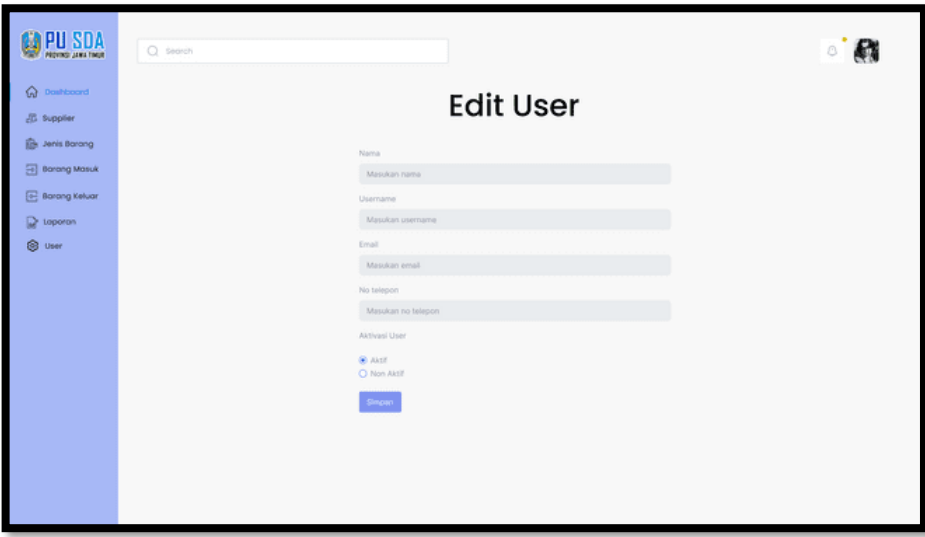| Name	Add User Page
Description	If we select the "add" button on user data, the system will display the add user form. Please fill in your name, username, email, telephone number, user, and activation of the user you want to add. Then, if you are sure and complete, please click "add". This page can be accessed by admin.

Name	Edit User Page
Description	If we select the "edit" button in the action column, the system will display a user edit form. Please fill in your name, username, email, telephone number, user, and user activation that you want to edit. If you are sure, you can click "save". This page can be accessed by admin.

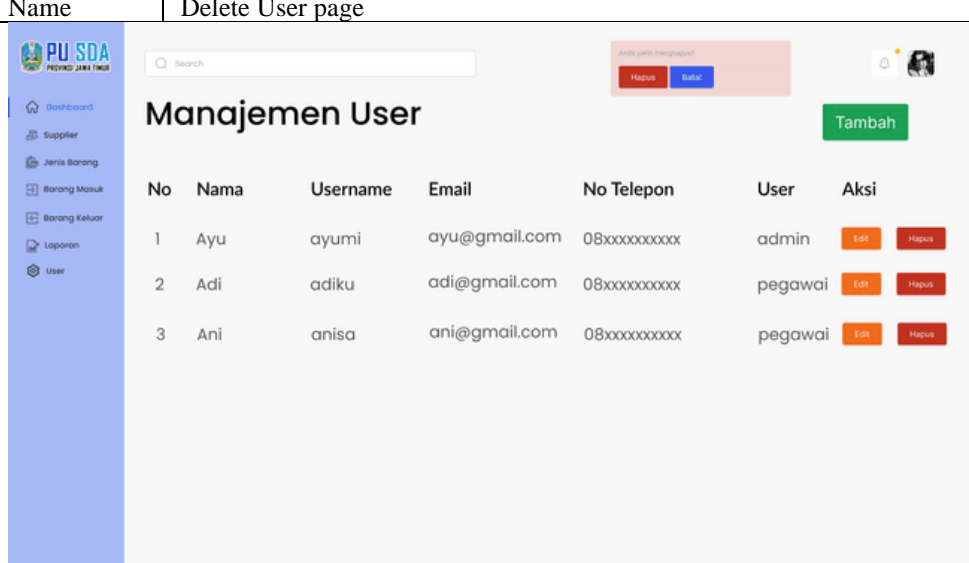| Name	Delete User page
Description	If we select the "delete" button in the action column, the system will display a pop up alert. The goal is to confirm whether we are sure we want to delete the data or not. If you are sure, select "delete". Otherwise, please select "cancel". This page can be accessed by admin.

Non-Functional Requirements

Table1Description of Non-Functional Requirements

SKPL-Id	Parameter	Need
SKPL-NF01	*Availability*	Inventory can be opened 24 hours a day, there is no time limit. Users can still input item data at any time.
SKPL-NF02	*Reliability*	Inventory depends on the internet network.
SKPL-NF03	*Ergonomics*	Inventory is made as user friendly and simple as possible so that users can use it more easily.
SKPL-NF04	*Portability*	Inventory is a web-based system, so it can be accessed using anything.
	Memory	Requires memory that is large enough to accommodate a large database of items.
SKPL-NF05	*Response Time*	*Response Time*maximum 10 seconds
	Safety	Safe, because it does not use things that cause any loss or danger of fraud.
SKPL-NF06	*Security*	Using login authentication on the Inventory administrator system
SKPL-NF07	Communication Language	Use Indonesian because the User is an Indonesian citizen.
SKPL-NF08	*Safety*	User Management can only be accessed by admins. This is important because the admin needs to select who can enter the system.
SKPL-NF09	*Safety*	The supplier master data menu can only be accessed by the admin.
SKPL-NF10	*Safety*	The item master data menu can only be accessed by admins.
SKPL-NF11	*Realibility*	*E-mail*cannot be the same between users. When entering this email, you must use a unique email or an email that has never been used before by other users. So if a new user wants to enter the system, of course they must have their own email first.

Design Constraints
- Can only be accessed using the internet network
- In this system, users other than the admin must ask the admin for permission to enter the system. Contacting the admin is done outside the system.

Summary of Needs
Summary of Functional Requirements
Table2Summary of Functional Requirements

SKPL-Id	Information
SKPL-F01	Register
SKPL-F02	Activate the user
SKPL-F03	Log in
SKPL-F04	Viewing the homepage
SKPL-F05	View supplier master data
SKPL-F06	Adding suppliers
SKPL-F07	View item master data
SKPL-F08	Add item data
SKPL-F09	View the incoming items menu
SKPL-F10	Add incoming items
SKPL-F11	View the item menu out
SKPL-F12	Adding items out
SKPL-F13	Updating item data
SKPL-F14	Print report

Summary of Non-Functional Requirements
Table3Summary of Non-Functional Requirements

SKPL-Id	Information
SKPL-NF01	The system is open 24 hours
SKPL-NF02	The system depends on the internet network
SKPL-NF03	The system is made user friendly
SKPL-NF04	The system is made web-based
SKPL-NF05	*Response Time*system takes a maximum of 10 seconds
SKPL-NF06	The system administrator uses login authentication
SKPL-NF07	The system is created using Indonesian
SKPL-NF08	User management can only be accessed by admins
SKPL-NF09	The supplier master data menu can only be accessed by the admin
SKPL-NF10	The item master data menu can only be accessed by admins
SKPL-NF11	*E-mail*cannot be the same between users

4. Implementation and Development Stage
   1)Implementation
   After continuous iteration and interaction to discuss solutions from stakeholder feedback, planning will be carried out to implement an effective web-based asset inventory. However, there will continue to be developments in this web process.
   2)Evaluation
   Measuring the level of success and positive impact of the solution whether it meets existing goals and needs in accordance with the department.

DISCUSSION
   The results of the implementation of a smart city-based building asset inventory internal control system at the East Java Province Public Works and Water Resources Service are expected

to provide a significant, effective and accountable impact. Prior to this research, the records themselves were not neatly structured and could be accessed in real time. On(East Java Governor Regulation Number 49 of 2018 concerning Nomenclature, Organizational Structure, Description of Duties and Functions and Work Procedures of the Technical Implementation Unit of the East Java Province Water Resources Public Works Service, 2018)which is guided by article 4 paragraph (1) regarding the task of administering equipment, office equipment and assets as well as providing technical considerations for asset utilization. Based on the points in this regulation, the responsibility of the Administrative Subdivision in managing access can involve technology to maximize structured asset management. The assets owned have an impact on budget planning for maintenance, asset replacement or calculating operational costs related to assets. Apart from that, it also provides access to leaders, public auditor stakeholders and especially the wider community to ensure efficient and targeted use of public assets. Apart from that, there is also digital transformation with a smart city concept that is in accordance with(Regulation of the President of the Republic of Indonesia Number 95 of 2018 concerning Electronic-Based Government Systems, 2018)Regarding the Implementation of an Electronic-Based Government System: This Presidential Decree provides general direction and policy for the government in implementing an electronic-based government system, including Smart City, as an effort to increase efficiency, transparency and better public services.

The smart city program is also becoming (National Medium Term Development Plan (RPJMN) 2020-2024: RPJMN, 2020)providing strategic direction for national development in the medium term, and also includes efforts to develop Smart Cities as one of the focuses in improving the quality of life of the community and regional competitiveness. Therefore, it is necessary to transform the asset recording system owned by the East Java Provincial PU & SDA Department. The system developed utilizes the web because the system has qualities that can be developed. A web base also has several advantages which include the accessibility and flexibility of an asset management recording system with a web base that can be accessed from anywhere as long as it is connected to the internet. This allows users to access and manage asset information flexibly, both in the office and remotely. This high accessibility makes collaboration between teams easier, especially if the teams work from different locations, especially the work area of the East Java Province PU & SDA Service which is divided into several sub-regions. Apart from that, updates and maintenance are easy using a web-based system, system updates and maintenance can be done centrally via the server. Users do not need to install special software on each user's computer. This reduces administrative complexity and ensures that users are always using the latest version of the system.

There is increased data security: Web-based asset management recording systems are generally equipped with strong security features. Asset data is stored securely on servers, and access to the system can be controlled and regulated based on user roles and responsibilities. Users can also use double authentication or encryption to increase data security. Efforts to account for and transparency in centralized asset management. By using a web base system, asset data is stored centrally in one location. This makes overall asset management easier, including asset grouping, condition monitoring, maintenance planning, and lifetime monitoring. Centralized asset information also makes reporting and data analysis easier. The advantage of a web base also allows integration with other systems. Web-based asset management recording systems can be easily integrated with other systems used in an organization, such as financial systems or security management systems. This integration enables smoother data exchange between these systems, minimizing data duplication and increasing operational efficiency.

Better analysis and reporting processes can encourage faster and more effective decision making. Web base systems are generally equipped with sophisticated analysis and reporting features. Users can generate complete asset reports, analyze trends, perform maintenance projections, and identify areas for improvement. This helps in better decision making and more effective planning related to asset management.

V. Conclusion

Era The development of Industry 4.0 encourages the role of digital technology in asset management for government agencies. Good asset management in the public sector shows efforts to increase credibility within government agencies. Sustainable public services and a good level of responsiveness to public

complaints.The recording process is used to provide data convenience and labeling. Automated inventory, or asset inventory automation, is an approach that uses technology and automated tools to collect, manage and update asset inventory automatically. Inventory also has the benefit of reducing stock emptiness due to delays in recording so that it is missed from being replenished with similar assets.

The use of a Smart City-based internal control system in building asset inventory can provide various significant benefits. By integrating information and communication technology, this system helps increase efficiency, transparency and accuracy in building asset management. Apart from that, this system also enables more precise decision making based on real-time data, and makes it easier to maintain and monitor asset conditions.

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