

## MONITORING APPLICATION SYSTEM DEVELOPMENT AND EVALUATION OF “PUPR” DEPARTMENT OF GENDER LEADING ACTIVITIES IMPLEMENTATION

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### ABSTRACT

Monitoring and evaluation are the jobs that are often done by the Payakumbuh Public Works Department to maximize work in the field. The Payakumbuh Public Works and Public Housing (PUPR) Office itself is experiencing difficulties in monitoring and evaluating work in the field that is currently underway and the activities carried out have been realized. So far, office work has been monitored manually one by one because the Payakumbuh (PUPR) does not have an information system that can monitor and evaluate all work simultaneously and provide an overall target picture yet. In activities, especially work at the Payakumbuh PUPR Service, it applies the application of gender mainstreaming (“PUG”). The Ministry of Public Works of the Republic of Indonesia as the target for PUG implementation is the integration of a gender perspective into the internal culture of the Ministry of Public Works (at the central and regional levels) to produce an institutional culture that is sensitive to gender issues. To monitor this, applications are developed using the Agile Development software system development methodology. Researchers designed this website application to overcome this problem. The system was built using the PHP programming language with the Laravel Framework. The results showed that the application of reports on the implementation of gender mainstreaming activities with the Laravel Framework helped website developer performance to be more effective and efficient than using the static PHP programming language. The Laravel framework supports is object oriented and supports all databases. The Uniform Resource Locators (URL) structure used in Laravel is much more flexible and much easier to change in routing.

Keywords: Laravel Framework, Monitoring, Evaluation, Angle Development

### 1. INTRODUCTION

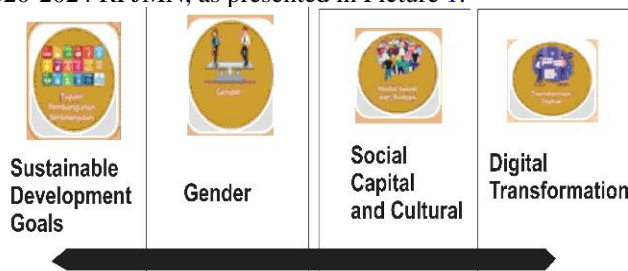
In 1988-2001, the Payakumbuh Public Works Office was a branch of the West Sumatra public works office. During the reign of the 4th President of the Republic of Indonesia Abdul Rahman Wahid the nomenclature of the Public Works Service was changed to the Regional Infrastructure Settlement Service until the end of 2001. However, even this nomenclature ended since the enactment of Law No. 32 of 2000 on Regional Autonomy and in 2004 returned with the name of the nomenclature public works dinar. Based on Regional Regulation No. 17 of 2016, it was changed to the public works and spatial planning department.

The main tasks and functions of the Public Works and Housing Agency are also to monitor, evaluate and report on the implementation of government activity programs in the fields of public works, spatial planning and land affairs. The implementation of PUG in PUPR as the target for PUG implementation is the integration of a gender perspective into the internal culture of the Ministry of Public Works at the Central and Regional levels. This aims to produce a gender-sensitive institutional culture, including Commitment of PUPR leaders and staff to implement Gender Mainstreaming in their field of work, implement gender-responsive human resource development, and provide gender-responsive PUPR office building facilities and infrastructure. In addition, integration with a gender perspective in the entire PUPR implementation process and settlement infrastructure development aims to produce gender responsive PUPR in carrying out its duties and functions as monitoring and evaluation of the planning and programming stages, implementation stages, monitoring and evaluation [1]. To ensure that PUG in every activity at PUPR is carried out, the researchers designed a website-based monitoring and evaluation report design system, because through the internet (website) the system can be used and accessed more easily by superiors to monitor every activity with a gender perspective. PUG must also be implemented in the Payakumbuh PUPR service. However, a web-based system is not yet available, so the design of a system for implementing gender mainstreaming activities (PUG) for the Office of Public Works and Spatial Planning needs to be developed.

In compiling the monitoring and evaluation application program for the implementation of the PUPR leading Activities "Department of PUPR" use the Laravel framework because it has provided various libraries to execute programs. As in the use of object relation mapping (ORM) to execute program code to manage databases so that the user's time to create programs is reduced and easy to maintain. Laravel is much bigger and bigger, the URL structure used in Laravel is much more flexible and easier to change on routing. The architecture used by Laravel is clear and directed, this is because Laravel has provided documentation on its official website. Research with the development of the monitoring and evaluation report (MONEV) application has been carried out by several researchers. The research entitled "Scrum Implementation in Project Management Development Monitoring and Evaluation System Application Development (SMEP)". In developing this application using agile methods in agile implementation is to meet client needs by creating valuable applications quickly and regularly. To support this, one of the principles of agile is the process of presenting results that is carried out within a period of two to four weeks, with preference on a faster time scale [2].

Several related studies have been carried out by researchers including research entitled "Use of the Prototype Method in the Development of Monitoring and Evaluation Applications for SKPD Renja, Central Lombok Regency." The system design/development method used is the prototyping method. The results of usability testing are in the form of a questionnaire. The test consists of 3 assessments namely system quality, information quality and service quality. to get feedback information from users, with this application BAPEDA can monitor the Work Plan of each SKPD and can provide an assessment of the realization of DPASKPD quickly, precisely and efficiently [3]. Furthermore, research conducted by Fauzia et al. regarding the Monitoring and Evaluation Report Information System (MONEV) at the Regional Secretariat of Central Bangka Regency are as follows: a. With the Information System for monitoring and evaluation reports (MONEV) at the Regional Secretariat of Central Bangka Regency it is very helpful in carrying out MONEV data reporting services for each section in the Central Bangka Regional Secretary, b. By presenting various forms of reports according to your needs, you will get the information needed by the leadership, c. Preparation and presentation of reports can be done more quickly, precisely and accurately, d. Storage of documents that take up a lot of space on a running system has been reduced by the existence of a computerized information system. In terms of process speed, process accuracy, control, archiving and in terms of saving time and effort in a computerized system it is far superior to an ongoing system [4].

Research on the Monitoring and Evaluation System for Family Hope Program (PKH) Recipients for Web-Based Beneficiary Families in Nagari Koto Tinggi, Enam Lingkung District" development of a PKH monitoring & evaluation information system for Beneficiary Families built on a website using a framework Laravel and MySQL DBMS, the Laravel system is built on the concept of MVC (Model, View, Controller) [5]. The research entitled "Development of Information System Applications to Assist Stock Control and Improve Service to Customers" applications made, provide various notifications and reports that can help control stock and improve customer service. Notifications are a signal for owners to immediately add stock, anticipate materials that will expire, and complete customer orders. Existing reports can be used to estimate the number of purchases to suppliers so that customer orders can be fulfilled quickly and control stock to avoid possible stock outs. The trial results show that the application developed is useful for controlling existing stock thereby reducing the risk of loss and improving customer service by reducing service time and order fulfillment, reducing the amount of wasted stock due to expiration, estimating the number of purchases, avoiding customer queues, helping customers in determine the product purchased and get information about new products [6]. In order to achieve comprehensive and sustainable gender equality in the national development process, the Government of Indonesia has integrated gender equality into every stage of the RPJMN, starting from RPJMN I (2005-2009) to RPJMN IV (2020-2024). Presidential Regulation Number 18 of 2020 concerning the 2020-2024 National Medium-Term Development Plan also stipulates that Gender Mainstreaming (PUG) is one of the 4 (four) development mainstreaming in the 2020-2024 RPJMN, as presented in Picture 1.



Picture 1. Four Mainstreaming in RPJMN 2020-2024

Gender Mainstreaming in the 2020-2024 in RPJMN Strategies for integrating a gender perspective into development, starting from policy formulation, planning, budgeting, implementation, as well as monitoring and evaluation. Gender Mainstreaming aims to realize gender equality so as to be able to create a more just and equitable development for all Indonesians. Gender equality can be achieved by reducing the gap between men and women in accessing and controlling resources, participating in all development and decision-making processes, and benefiting from development. Source: Appendix 1: Presidential Regulation Number 18 of 2020 Concerning) the 2020-2024 National Medium-Term Development Plan [7]. The development of a monitoring and evaluation system for gender mainstreaming (PUG) activities at PUPR Payakumbuh aims to digitize progress reports related to work that will be monitored by adding an activity program report feature. To find out the progress of PUG implementation, you can see the progress of the work. Progress reports prepared using this website-based system include quarterly progress reports which will be monitored and evaluated. This system was developed so that the process of monitoring the Implementation of Gender Mainstreaming Gender Mainstreaming Activities can be carried out more automatically compared to the previous process.

## 2. RESEARCH METHOD

Agile is a project management method that uses short development cycles, or it can also be called "sprints" to focus on continuous improvement in the development of a product or service. It wasn't until 2001 that the "manifesto for agile software development" and the term agile became synonymous with various forms of existing information systems development methodologies, under the auspices of the agile alliance [8].

Agile is a big umbrella of software development beliefs. It is a conceptual framework for software engineering that starts with the initial planning phase and follows the path to the deployment phase with iterative and incremental interactions throughout the project life cycle. The initial goal of agile methods is to reduce the additional costs in the software development process with the ability to adopt changes without risking the process or without excessive rework [9].

The development of features one by one has been carried out by researchers. this aims to find solutions to the problems studied by designing a system based on the needs of monitoring and evaluation applications for the implementation of PUG activities. The implementation of engineering methods covers all aspects of software production, starting from the following stages:

### Planning

This method follows the plan and follows the developer step by step and if there is a repetition of the process then it repeats from the step according to the plan. The making of application development plans is started by collecting data with users in the form of direct interviews with stakeholders and getting the needs that users want, then the overall design will be carried out using UML tools and user interfaces by application developers [8].

### Analysis

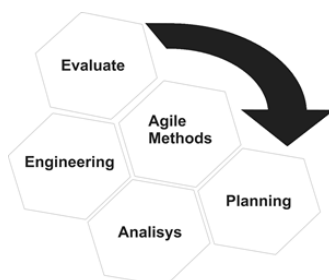
At this stage, an analysis of the business process application system for monitoring and evaluating the implementation of PUG activities for the PUPR service and providing acceptable solutions are carried out.

### Engineering

At this stage, a prototype was developed which covered all the needs of the application system for monitoring and evaluating the implementation of PUG activities for the PUPR service.

### Evaluation

At this stage, assessment and testing are carried out to develop the objectives of the monitoring and evaluation application system for the implementation of PUG activities for the PUPR service for the next iteration process. An overview of Agile's stages is presented in Picture 2.



Picture 2. Agile Stage Flow

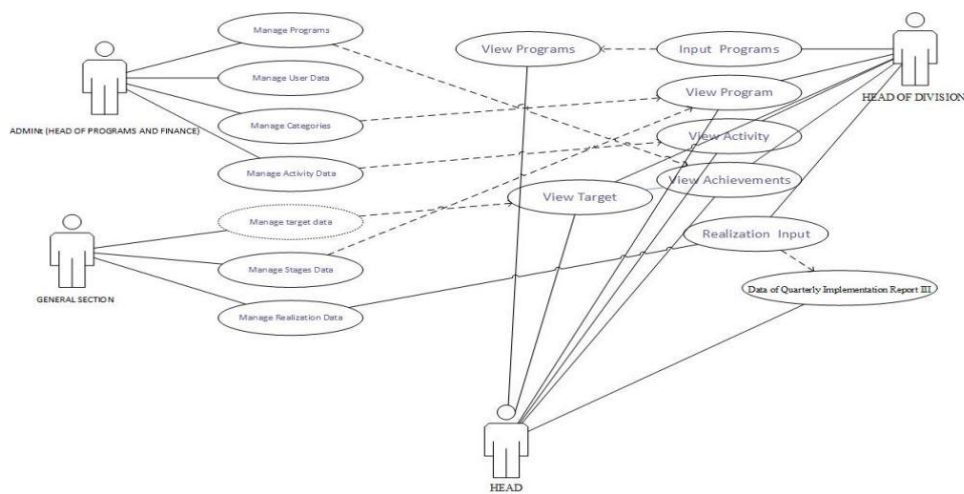
### 3. RESULT AND DISCUSSION

#### Planning System

The purpose of this research is to assist Payakumbuh PUPR in carrying out the process of monitoring and evaluating the implementation of PUG activities for the PUPR agency. The output of this research will provide the complete information about PUG activities to the leadership of PUPR Payakumbuh, so that leaders know which programs have been implemented and which obstacles are experienced in the field of implementing PUG in each of their activities. The following is the formulation of the problem obtained from the interview results:

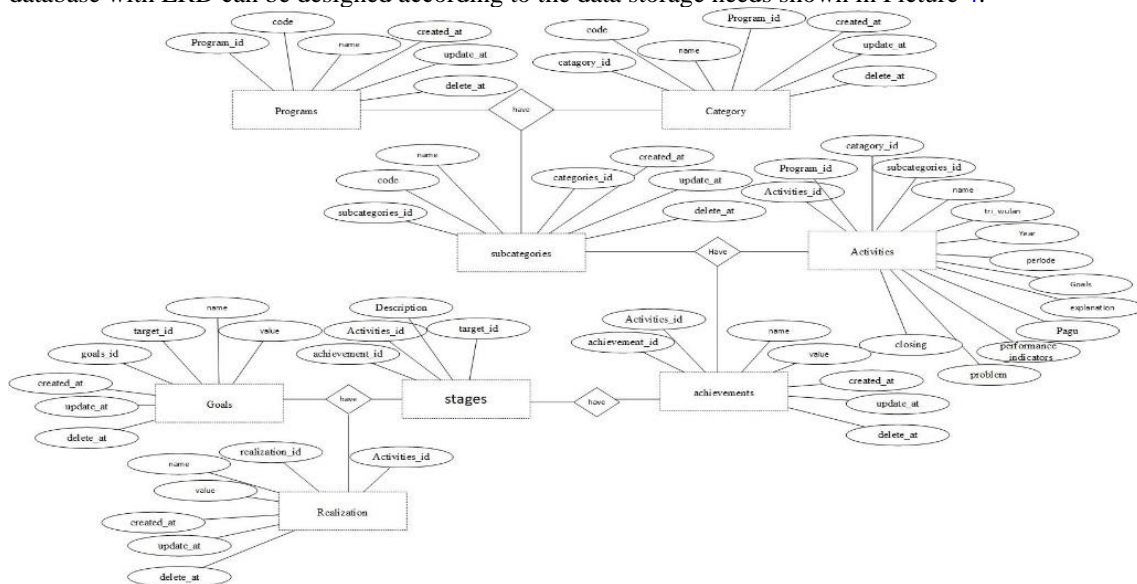
1. Preparation of monitoring and evaluation reports on the implementation of PUG for the PUPR service for a long time.
2. Information on monitoring and evaluation of the implementation of PUG activities at the PUPR service is incomplete.
3. Information on data error constraints in making reports to the Office of Public Works and Spatial Planning is difficult to find out.

The stages of system business process analysis can be seen in Picture 3 regarding use cases.



Picture 3. Business Process Use Cases

The diagram in Picture 3 explains the business process for reporting on the implementation of special allocation funds made in stages from the admin held by the head of program and finance subdivision to the head of the PUPR office. The output of the application is an accountability report for the activity program that is being and/or has been implemented, from the needs outlined in the use case, a database with ERD can be designed according to the data storage needs shown in Picture 4.



Picture 4. Entity Relationship Diagram (ERD)

## Engineering

Creating an architectural design is the first step. This process aims to provide an overview of how the system is built as a single unit of interconnected components. Website is a collection of pages written in HTML format that can be accessed via the World Wide Web (www) on the internet [10]. The design application for monitoring and evaluating the implementation of PUG activities for the PUPR service is as follows:

### 1. Login Page

The login page is the page where the user can enter the application. In this login form the user must enter an email and password in order to use the application. The login page display is shown in Picture 5.

### 2. Home Page

The home menu is an introductory menu about data on gender activity implementation reports for the third quarter at the Payakumbuh City Public Works and Spatial Planning Office. This menu serves to help make it easier for users to view the menus in the application. The menu on this page is shown in Picture 6.

Picture 5. Login Page

Picture 6. Home Page

### 3. List Page

This page is a display of the New Program Data Input form. Users can submit and cancel the filled form as shown in Picture 7.

### 4. Category Page

Picture 8 shows the display of the Category data form. The category data display the input form so that the user can add and edit the Data display menu.

### 5. Sub Category Page

This page is a display of the Sub-Category data form. This sub-categorical data display serves to display all data that has been input by the previous user in the Input form. So that users can view, edit, delete, and print existing data on the Data view menu, presented in Picture 9.

Picture 7. List Page

Picture 8. Category Page

### 6. Activity Page

This page is a display of the Activity data form, as shown in Picture 10. This Activity Data Display serves to display all data that has been input by the previous user in the Input form. So that users can view, edit, delete and print existing data on the Data view menu.



Picture 9. Sub Category Page

Picture 10. Activity Page

#### 7. Achievement Page

This page is the achievement data input form. This achievement form functions to input all data, edit, delete and print existing data. Picture 11 shows the achievement page.

#### 8. Realization Page

This page is a display of the Realization data form. Realization Data Display serves to display all data that has been input by the previous user in the Input form. So that users can view, edit, delete and print existing data on the data view menu presented in Picture 12.

Picture 11. Achievement Page

Picture 12. Realization Page

#### 9. Stages Page

This page is a display of the Stages data form as shown in Picture 13. The Stages Data display serves to display all data that has been input by the previous user in the Input form. So that users can view, edit, delete and print existing data on the Data view menu.



#### 4. CONCLUSION

The Application Report on the Implementation of Gender Mainstreaming Activities can be used to input data, view data, and print data. This application is made to minimize errors and provide data accurately and quickly. The application of Reports on the Implementation of Gender Mainstreaming Activities makes it easier for admins and operators to process data that was previously done manually.

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