Knowledge Management Online Application in PDAM Lampung Province

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ABSTRACT

The development of this technology is very fast, one of the media that utilizes technology such as knowledge management application is media for documentation of knowledge and facilities that can support knowledge sharing culture in PDAM Lampung. The use of interactive online knowledge management can facilitate the company's activities to achieve the project objectives. The utilization of this technology connects computerized technology with the application of appropriate system development methods in order to make the information-sharing relationships of enterprise activities can be stored and well controlled. By applying the first 7 step method described in prototype design the knowledge management application is expected to facilitate the implementation of research and other development support methods such as waterfall method. The use of knowledge stored in the knowledge database, is expected to add new knowledge to users in business processes, the operation of computer applications, monitoring, or how to solve cases encountered in corporate projects

Keyword : Knowledge Management Application, Prototype and Waterfall, PDAM

1. Introduction

The development of technology is moving very quickly, to improve the effectiveness of technology and business. Required implementation and dissemination of knowledge sharing in the utilization of technology today.This is felt to be done in PDAM company is a regional company engaged in the distribution of clean water for the general public.To support the process of performance, there is currently no KM application that can be used as a documentation media user manual, report, or cases that have occurred, so as to support information and knowledge for the company.The use of its specialized technology of knowledge in documentation of inter-system activities that have been done has not been done well, the lack of knowledge of computerized and online-based system users to be able to minimize problems in the project so that happen is often a problem in the future on the company project. This makes it difficult for other users to encounter problems with similar activity cases. An online documentation system is required that

can store data and evaluate activities performed for the future [1], [2].One use of knowledge with this article is made by Gema; Celline Liawan; Gerardus Polla with the title Design Prototype Application Knowledge Management In Division Management Automation Information To Support Oracle Financial In Parents Group in this research knowledge is made by prototype method based on computer network.Another reason for this research is related to the Application Objectives Knowledge Management (KM)that is :

1. Provide a centralized online documentation media centered in computerization and reduce user manual implementation, providing updated information from cases that have occurred to be more structured;
2. Provide helpdesk feature and facilitate monitoring as it can be accessed anywhere online
3. Storing knowledge data and admin experienced in KM application, making it easier in accessing and sharing knowledge widely;
4. apply knowledge sharing in order to share knowledge in the long term
5. Provide solution problems in the project so as to increase knowledge

While the benefits are expected:

1. KM Application Gives experience and knowledge to system users.
2. Accelerate the implementation of activities in solving cases with a solution that has previously been found.
3. The results of this KM application can be used by PDAM as a reference for developing KM system in organization.

The scope of the discussion on subdivision of PDAM. The discussion that will be done is the discussion of concept and basic theory of KM, preparing steps to design prototype KM application and system development with Waterfall method at PDAM Lampung province, making application of KM prototype, designing workflow from KM application usage, evaluation to measure project success this.

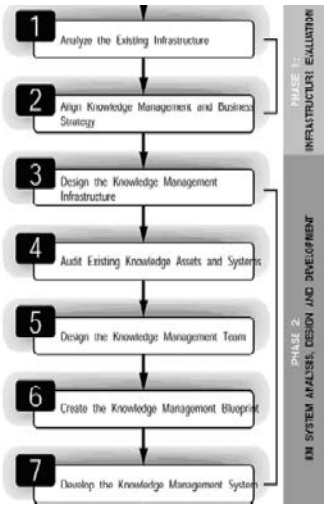
Formulation of the problem

The problems that exist in the company can be formulated as follows:

How to Utilize Knowledge Technologies Aplication for an online PDAM company based on Application Prototype method and system waterfall method in development, so as to improve system quality in PDAM project implementation.

2. Research Methods

For methodology in designing *prototype* aplication *knowledge management* in sub divisions PDAM,researchers use 7 the first steps of from *The 7 Steps Knowledge Management Road Map* described by Tiwana (2002) as in Figure.



Sommerville's Waterfall Model (2007) has several phases as follows:

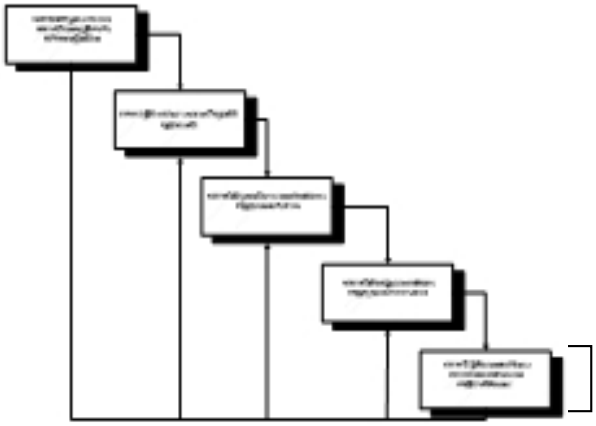


Figure 1.*Waterfall Model*

3. Result And Discussion

First Step: Infrastructure Analysis

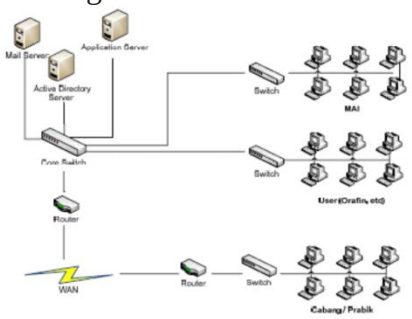
At this stage is done data collection process using stages Observation, Interview, Study Literature

3.1 Analysis of Current Infrastructure Implementation

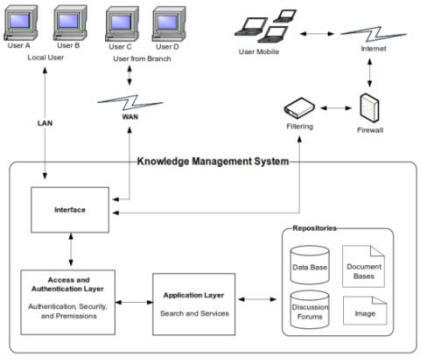
research is divided into two main topics, namely the analysis of the current technology infrastructure and infrastructure analysis of the current knowledge culture.

a. Analysis of Current Technology system

Lampung PDAM is now using computer network technology to connect all computer units, both between divisions and branch offices. All computers that are in the central office are connected directly to the server through *Local Area Network (LAN) by usingswitch*, while for computers that are in a branch or factory connected to the server through*Wide Area Network (WAN)*, by using*router*. All of these computers can directly access the existing applications on the application server. See the following Picture :



Technology already owned by PDAM,



most have been able to support the process of developing prototype application of KM system on PDAM subdivision. The existing computer network allows each user to communicate with each other,Based on the results of infrastructure analyzes

already owned by PDAMs, researchers are trying to define other supporting technologies necessary for system development.

b. **Analysis *Knowledge* is walking**

In subdivision PDAMs generally occur exchange *knowledge*only on the occurrence of problems that (*casebased reasoning*). At the time For solving the case, so far *user*more dependent on previous system users in problem solving within the project so this is an obstacle in system development.Currently there is no means *online*to provide information from *knowledge*which can be used as a reference for solving the case. By design*prototype*aplication*knowledge management*atsubdivision PDAM, is expected to support the sharing process*knowledge*more effectively, where*user*can share knowledge and solve problems quickly with system usage*by online*andcomputerized. *User*can be more independent in solving cases by using information *knowledge*saved*knowledge datebase*consistent by*Standard Operating Procedure* (SOP)of application usage *knowledge management*.

3.2 Stages of research proposal to realize the application*knowledge management*based onlineie making that policy *service request* throughfitur*help desk*, every case that happens should be documented and input into*knowledge database*, andenforce the policy *rewardand punishment touser*for their participation in the development and use of the application*knowledge management*.

The Second Step:

3.3 Connecting Knowledge Management and Organizational Strategy among others:

1. identify the purpose of management division
2. analysis of expansionary knowledge management strategy strategy;
3. strategic knowledge gap analysis
4. analysis of system development with combination of waterfall method

3.4 Analysis, Design, And Development System

Based on the information that has been obtained from the first phase, then on the second phase of this researcher analyzing, designing, and developing a Knowledge Management System by doing the following stages, namely:

1. Designing knowledge management platform;
2. Identify the knowledge on subdivisions of taps;
3. Designing team for km;
4. Create a blueprint of the km system;
5. Develop prototype applications.

The Third Step : Design Knowledge Management

From the result of observation, interview and study literature, then web application is a solution is needed. the application of KM in the subdivision of the PDAM, researchers chose the application Website by

Uses of PHP My Admin. Due to a more flexible and easy to customize to your needs, the features and settings that already exist is more complete and more detailed, and using SQL Server storage capacity.

The Fourth Step : Identify*Knowledge* inSubdivisi PDAM

Identify knowledge to know the needs of the user. At this stage the researcher will discuss: modules on Oracle Financial knowledge and Financial (TAPS). TAPS consists of 5 modules, that is, accounts payables, accounts receivables, general journal, fixed assets, and cash management.

The Fifth Step: Designing Team For*Knowledge Management*

For design teams to project knowledge management is distinguished into two, namely (1) the initial developer team of prototype applications and knowledge management and (2) maintenance team, developers, and users of knowledge management applications.

Database Design

Relational Database Model (RDBM) was often referred to the relational model or relational database. Relationship between 2 files or tables was categorized into 3 types.

1. *One to one Relationship 2 file/ 1-to-1*
2. *One to Many Relationship 2 file/ 1-to-n*
3. *Many to Many Relationship 2 file/ n-to-n*

To completely design the relationship description, there were 3 types of the relationship in one file (Suthanta,2004).

Evaluation Design Of Application *Knowledge Management*

Researcher using an online questionnaire tool that is integrated with a prototype application of questionnaire Respondents km. This is the subdivision of TAPS, the conclusion about the effectiveness of the design of the prototype application knowledge management, what is the purpose and benefits from project design of prototype applications KM achieved. Furthermore the design of application system knowledge is described as follows:

a. Output Design

Figure 1. Home Template

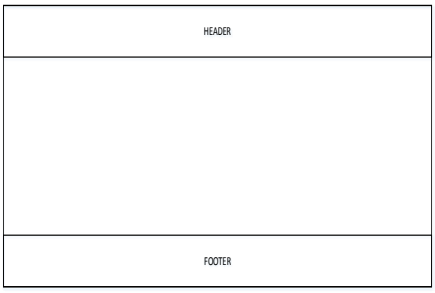


Figure 2 Design of Login for Admin

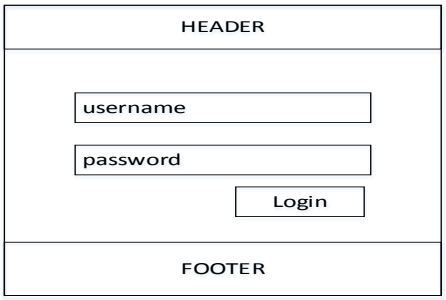


Figure 3. Design of Upload Document

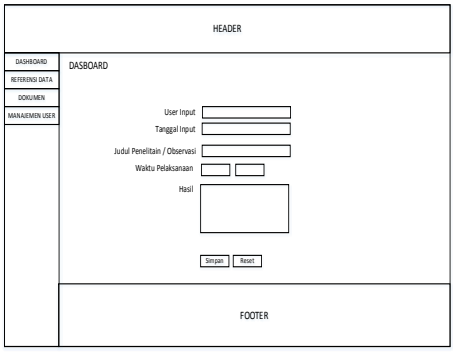


Figure 4. Flowchart of Submenu for Reference Data

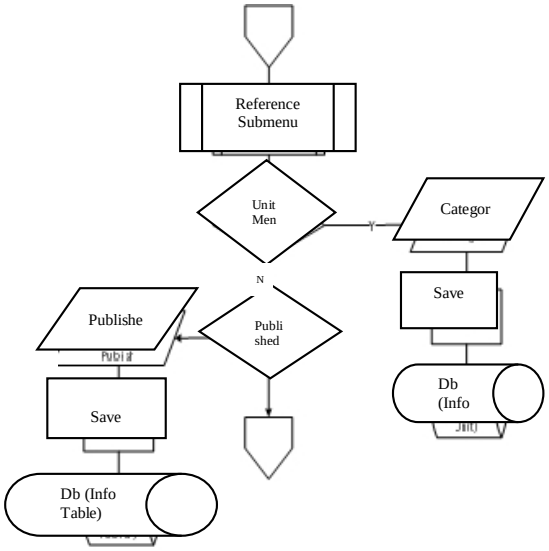


Figure 5. Flowchart of Submenu for Users

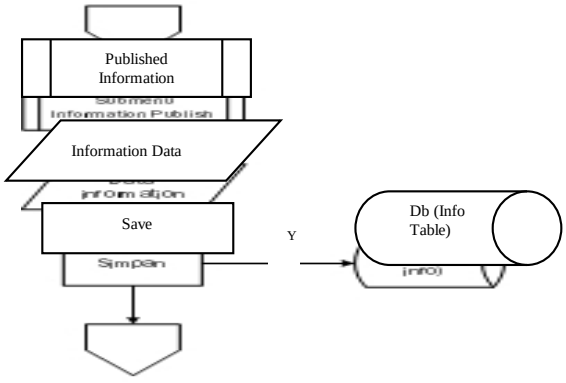
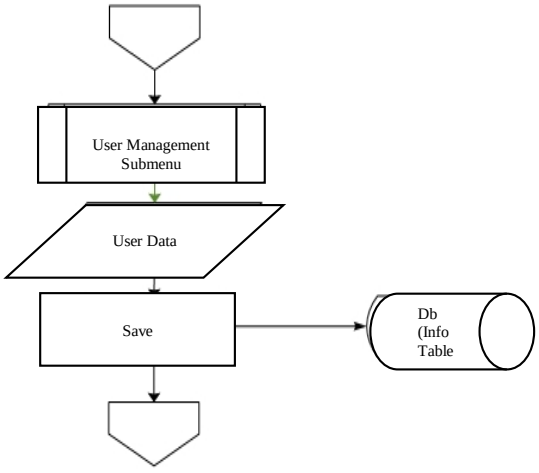


Figure 6. Flowchart of Submenu for Information Publish



4. Conclusion

Summary of the design of the prototype applications of knowledge management in the province of Lampung TAPS subdivision are:

1. Designing a prototype knowledge management developed with the online-based program and focus on the codification strategy to allow storage, delivery, acquisition, and reuse knowledge prototype application knowledge management can facilitate users in sharing knowledge and optimizing its use by providing document management for various purposes.
2. A prototype knowledge management application can store information secaran update.
3. Efficiency of time in solving the cases and provide solutions that are stored in the knowledge database and update information knowledge.
4. The design of a prototype knowledge management that researchers do can already meet the objectives and benefits of the project amounted to 80.05% based on the results of the analysis of the questionnaire that has been done.

therefore required the existence of a policy of the leadership to develop and implement a prototype knowledge management applications that have been created to be used to its full potential. Management must play a role to socialize knowledge and supports the use of a prototype knowledge management applications. Need to do maintainance against applications and

knowledge stored in order to remain up to date and can be used optimally. Add rating to monitor user activity and participation, provide policy management to reward active users.

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