

Development of Quality Management System in the Process Repair Planning Risk-Based in Government Building

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Abstract

Government buildings require repair to extend the life of the building so that services to the community can be indirectly met. The budget is issued annually by the government to maintain the building, but in carrying out repair there is no Quality Management System which is the basis repair of government buildings. This study aims to develop a Quality Management System Risk-Based in the planning process on repair in Government Building. Research method used in this research is Delphi method and respondent survey. The most dominant risk variables selected using questioner and analyzed SPSS. The results of the study is Standard Operation Procedures can improve the quality and performance of building function in the management of repair planning in buildings with renewable methods.

Keywords

Repair, risk management, government building, quality management, standard operation procedures.

1. Introduction

Based on the Regulation of the Minister of Public Works No. 45 of 2007, the building of the state's office shall be the building for the executive office which shall become a state-owned property whose financing shall be derived from the State Budget or its lawful entity. Government buildings require repair to extend the age of the building so that the service to the community is indirectly fulfilled. Based on PERMENPU no 24/2008, the repair of the building is an activity to maintain the reliability of the building and its infrastructure and facilities so that the building is always functional while The repair of the building is the activity of repairing / replacing parts of buildings, components, building materials, and / or the building remains functional. Building repair activities are intended to ensure and maintain the condition of the building, along with the elements, materials and equipment used in the building in order to function as planned and to guard against the damaging effects to reach or exceed the designated age of the plan and to provide more value, building quality as well as security for users (Wimala, Mia 2000).

The significance of the study is that, in many cases, the government that appears to be damaged is not maintained as perfectly as the elevator, the fire, the faded paint, the use of personal stability, and the way it is formed. The phenomenon may affect the performance of the quality of the building as well as the occurrence of its repair and repair procedures. This SOP was developed with risk analysis. According to PMBOK Guide there are two variables in the risk that can be identified and assessed the opportunity of risk and the impact that occurs when the risk occurs. Risk management in QMS can be defined as the manipulation of the production process to achieve the quality objectives by diverting the risk factors with the potential for failure of the quality objectives.

From the background and identification of problems that the author has described before, the purpose of this study are:

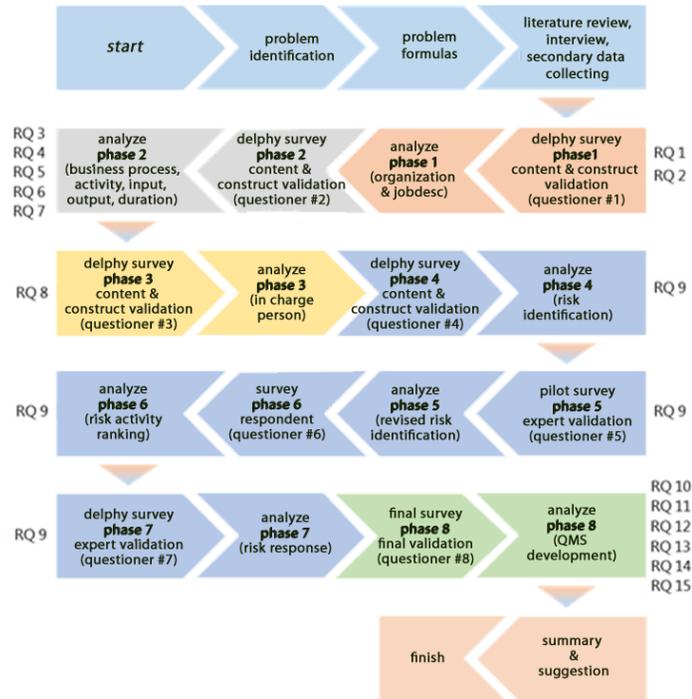
1. Identify the organizational form of repair planning process of government building
2. Identify roles and responsibilities of the organization on repair planning process of government building
3. Identify the business process of repair planning process of government building
4. Determine the activities of repair planning process of government building
5. Determine who is responsible and carry out activities on repair work and planning process of government building repair work
6. Identify the risk of failure to achieve quality in repair planning process of government building
7. Make Standard Operation Procedure and Work Instruction on repair planning process of government building risk based

1. Literature review

The repair of buildings is also greatly influenced by humans or their users. From a journal, 17 common problems faced by operations and repair were caused by a lack of experienced workforce and lack of funding support (Ayman Alsheri, Ibrahim Motawa and Stephen Ogunlana (2015).) Designed an organizational structure for corporate success and a management system capable of overcoming cultural factors that can affect a company so that building an effective organizational management system involves people, systems and business processes (Stephen R. Tiller, DM, PMP, CSEP (2012)).

2. Methodology

To answer the problem formulation then used various research method that is survey and case study. In this study used questionnaires as research instruments distributed to the respondents. Interviews and secondary data collection were also undertaken to deepen the analysis. Data collection conducted by 8 stages. The data collected by Delphi method analysis to get the form of organization, jobdesc, business process, activity, input, output, duration, person in charge, risk identification. Qualitative Risk Analysis is then performed to obtain the highest risk factor. After that, the QMS Development Action Analysis is done by making Work Instruction, Checklist and Quality Record so that QMS development can be done in planning repair and repair of government building building based on risk. This research process using the following stages:



Picture : Phase of research

In this stage of treatment planning is benchmarked against other government agencies such as DKI Government, Public Works, Constitutional Court and Wijaya Karya. From the benchmark results, this study is also a guidance on the Permen PU no 24 in 2008 and obtained the following business process results:

Stage of Repair
A. Planning repair of government building
X1. Budget planning repair of building
X2. Self-managed planning
X3. Selection planning of public tender services
X4. Selection planning of simple selection consultants services
X5. Planning selection of general selection consultants services

Table : Business process

3. Finding result

In the research conducted there are several findings that resulted from the data collection from the expert (expert judgment) and questionnaire.

Phase	Explainit	Results
1	Organization & Job Desk	There are 3 organizational structure changes
2	Business process	5 Business Process approved
3	Activities	46 activities that have been validated to an expert
4	Risk	5 high risk and 1 moderate
5	Respons Risk	<ul style="list-style-type: none"> ➤ 5 high risk with cause, impact, preventive action and Corrective action. ➤ Causal relationships and impacts. ➤ Mapping RBS; <i>Recognition pattern</i> ➤ QMS development measures based on 5 high risk (28 actions)
6	SOP and WI	5 SOP and 95 work instruction
7	Development of QMS	12 QMS Development Action planning of government building repair with 1 addition of SOP and 11 work instructions risk-based

3.1 Organization And Job Desk

Based on the observation during the existing organizational structure there are workloads that are not appropriate, there is 1 unit of work part of the building and installation that has a workload is too heavy, and there is 1 unit part of the House of Representatives management work that the workload is too light. For that purpose, it is desirable to organize the organizational structure in the Bureau of State Property Management.

3.2 Business Processes

Based on the results of data collection and analysis there are 5 (five) business processes that exist in the stage of Building Planning Government Building.

3.3 Activity

From data collection and expert validation, there are several activities that can be combined into one, hence the reduction of the number of activities from 49 to 46

3.4 Risk

Identified 76 risks to existing activities. Among them there are 5 highest risks and 1 moderate risk. The risk is likely to upset the quality objectives to be achieved so that the performance of building repair is diminished.

3.5 Development Quality Management System

Development of Quality Management System is in the form of 5 Standard Operating Procedures and 96 Work Instruction which includes related documents. From the data collection and validation of expert applied to the risk response that will be additional activities and additional work instructions on planning repair of government building of institution X. 1 SOP addition and 11 work instruction risk-based were obtained.

4. Discussion

4.1 Organizational Forms and Job Descriptions

This research has the first and second objective to know the organizational form and job description from the Stage of Planning Repair at Government Institution X. The form of organization and job description from the implementation and supervision of the building of this government building has changed from the form of organization and the role of the existing as set forth in Regulation of the General Secretariat No. 6 of 2015. Where the main responsible person is at the Bureau of State Property Management of the government institution. In this field there is Administration Section which carry out administrative activities related to State Property Management Bureau, Building and Garden Section which carries out the management of building and landscaping, Installation Section carrying out the operation and repair of installation, and Section of homestead and home office which carries out the management of the house and house position. There is also a Building sub-section that manages the building, Garden Subdivision that manages landscaping, Mechanical Subdivision that manages the implementation and repair of mechanical, Electrical Subdivision that manages the implementation and repair of electrical.

4.2 Process Busniss

After knowing the form of organization and jobdesk, the third research objective is to know what business processes are done in the phase of planning repair of government building x. The business process is a key element in ensuring project outcomes in accordance with specified requirements (Zhang, Waszink, & Wijngaard, 2000). Based on the findings, there are 5 (five) business processes in performing repair planning of government buildings. Where business process is a collection of activities that produce useful / valuable output (Michael & Champy, 1993). At the budget planning stage of repair planning, self-managed planning, planning selection of implementing consultant service providers with public auction method for the selection process of contractor executor with auction value above 5 billion rupiah, second business process is implementation selection of implementing consultant service provider with simple auction method for process selection of contractor with auction value of between 200 million and 5 billion rupiah, the third business process is the implementation of selection of implementing consultant services providers by direct selection method for the process of selecting contractor services with a value below 200 million rupiah.

4.3 The purpose of the fourth study is to know what activities are carried out in each business process. Based on the findings, there were 46 (forty six) activities at the Planning stage. In the planning repair of Government Building there are 5 (five) business processes, namely (1) Budget planning with 9 (nine) activities that start from making the work plan to be the ceiling. (2) Self-managed planning with 11 (eleven) activities starting from the task warrant to the inspection of planning results. (3) Selection of Provider of direct procurement consultation services with 5 (five) activities starting from the making of KAK to auctioning of documents to ULP, (4) Implementation of Selection of Providers of simple selection consultation with 9 (nine) activities starting from the making of KAK to the submission of bidding documents. (5) Implementation of Selection of Consulting Services Provider of general selection with 9 (nine) activities starting from making KAK up to giving the document leleang to ULP.

These activities have a series of flowcharts where the sequence of activities can be known. This flowchart also includes information on inputs to start activities, outputs of activities, duration of activities, and personnel in charge of each activity. From this series of business process and activity flowcharts, a Quality Management System document that can be created consisting of SOP, WI, Quality Record List.

4.4 Highest Risk Factors

The purpose of this risk stages research is to know the highest risk factors / events that occur in the Planning Repair Building Government Institution X. Therefore it is necessary to identify the risks of the activities that affect the quality. Of the 46 activities identified 76 possible risk events. Furthermore the risks of identification results are taken to the expert for the Pilot Survey. Then carried out the distribution of questionnaires to respondents to perform the assessment of Frequency and Risk Impact. The result is test analysis with SPSS application, and conducted qualitative risk analysis. Where the value risiko with high risk, moderate risk, and low risk. There were 6 highest risk events consisting of 5 high risk and 1 moderate risk.

4.5 QMS

After the risk analysis of preventive and corrective actions against the 6 highest risks obtained QMS development is the addition of 1 activity and 11 work instructions. So the total of the main data that is there are 47 activities and 106 work instruction risk-based.

5. Conclusion

Results from QMS Development in the Government Building Planning Repair stage are SOP and WI based on risks by identifying the activities necessary to eliminate events and possible impacts

that may derail the performance objectives of the treatment especially for the related function. The activity resulting from the risk response is a risk-prevention measure that could be the basis for developing QMS. From the analysis and final validation of experts there are some changes and additions from the existing data. In the organizational structure there is a change of structure caused by uneven role and responsibility in every function. Then five business processes are drawn up based on laws and benchmarks against other government agencies and details of related activities. In each activity analyzed the possibility of the occurrence of risk or negative impact that can thwart the quality of planning objectives of government building institution X. The results of the analysis in the form of responses obtained from expert judgment and then into additional activities and the addition of work instructions. Thus, the final result is obtained 5 SOP with 47 activities and 106 work instructions risk-based that can be implemented into the planning of the government building institution X.

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Biographies

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