Improvement of Business Processes in Developing Standard Operation Procedures on Government Building Maintenance Work in Indonesia

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Introduction

- Sustainable development has become a central principle in today's modern industry, building maintenance has a vital role in making this happen (Sodangi et al, 2013).
- Protecting buildings at an early stage and maintaining the investment value of the buildings, as well as maintaining the condition of the buildings in order to meet the development objectives is one of the objectives of maintenance (Pukite et al, 2017).
- The building is a physical form of construction work that is united with its place of residence, partly
 or wholly located above and / or in the soil and / or water, which serves as a place for human to
 carry out its activities, whether for shelter or residence, religious activities, business activities ,
 social activities, culture, and special activities (Law RI No. 28, 2002)
- Government buildings require maintenance and maintenance to extend the life of the building so that services to the community can be indirectly met. Maintenance and maintenance of building structures include requirements related to safety, health, comfort, ease of building (Regulation Ministry Public Work 24,2008) Maintenance and renovation of buildings is a term that can not be separated in facility management. Maintenance and renovation have an important role in terms of cost in the life cycle of buildings (Macek & Dobias, 2014).
- According to Pukite et al (2017), building and maintenance management is an effectively organized system consisting of operations, repairs and maintenance to ensure the building is functioning optimally and used for the purpose.

The aim of study

 The purpose of this research is to know the business process in developing the operational standard procedure on the process Maintenance Planning, Implementation, and Supervision Works Building Government Building Works.

Theoritical Study

- Standard Operational Procedures hereinafter abbreviated as SOP is a series of standardized written guidance on the process of organizing the duties of Regional Government (Permendagri, No 52 Year 2011)
- Operational Standard Procedures are guidelines or references for performing job tasks in accordance with the functions and tools of performance assessment of government agencies based on indicators of technical, administrative and procedural indicators in accordance with work procedures, work procedures and work systems in the work unit concerned. (Atmoko Tjipto, 2012)
- Standard Operating Procedures (SOP) is a series of standardized written instruction on various processes of administration of government, how and when to do, where and by whom it is done (Permen Pendayagunaan Aparatur Negara, No 52 Tahun 2011).

Methodology

INPUT

- Regulation of maintenance building
- Previous Study

PROCESS

- Interview
- Literature Study
- SurveyRespondent
- Expert Judgment

OUTPUT

- BusinessProcess
- Developing Standard Operational Procedure

Result and Discussion (1)

Based on the theoretical studies that have been discussed in the literature review, it is explained that the implementation of maintenance and nursing work is divided into 4 activities namely Maintenance, Planning, Implementation, and Maintenance Supervision. From the results of data collection from experts who then performed further analysis, obtained 16 business processes and From the 16 business processes, activities were developed in each business process resulting in a total of 164 activities.

STAGE OF MAINTENANCE								
1. MAINTENANCE OF GOVERNMENT BUILDING EMERGENCY								
X1	Work Order							
X1.1	Receive complaints from users							
X1.2	Dissociate into related subsections							
X1.3	Checking the field conditions							
X1.4	Determining the scale of work							
X1.4.1	Small Work Scale							
X1.4.1.1	Perform direct execution when present in the list of consumable materials							
X1.4.1.2	Carry out the work							
X1.4.1.3	Create a job report to the assignor (pphp)							
X1.4.1	Large Work Scale							
X1.4.2.1	Creating an analytics report (letter of suggestion, drawing, boq, photo)							
X1.4.2.2	Review locations with the assignor							
X1.4.2.3	Discuss and wait for a response from the assignor							
X1.4.2.4	Get a job assignment letter from the assignor							
X1.4.2.5	Carry out the work							

Result and Discussion (2)

Developing SOP based on High Risk Identified

Process Business	Developing SOP Risk Based				
Create a Maintenance Schedule	Make a schedule to adjust the additional scope and do				
	supervision so that HR always make maintenance				
	schedule				
Examination of the results of the	Fix the results of checking provisions and made good				
planning process	assessment guidelines				
Monitoring job	Conducted proper monitoring of supervision and				
	manufacture of supervision guidelines, socialization of				
	good supervision				
Supporting data are incomplete	Give warning to the supervisor to address the lack of				
	data				
Carry out the work	Replace with competent and appropriate workers and				
	Coordinate with contractors to replace workers				
Submit a schedule proposal to the	Replace the person who makes the schedule and do				
assignor	the workers review				
Carry out the work	Add workers and evaluate their relation to workers'				
	welfare				
Create HPS	Update HPS according to data and standards				
	Scheduling and improving price gathering mechanisms				

From the table above, it can be seen that the 28 highest risk events coming from different categories, 20 risks have high level and 8 others have moderate level. These 8 moderate risks are further analyzed because they represent some of the existing business processes, and to meet the minimum sample requirement of 10% of 249 risk events. Risk with moderate level should also be responded because at any time the risk can change the level to high. The first highest risk is in the business of routine maintenance processes, second selfmanagement planning, and the third comes from overhaul maintenance.

Conclusion

 Based on the results of data collection and analysis, there are 16 (sixteen) business processes that exist in the stage of Maintenance, Planning, Implementation and Supervision of Building Works of Government Building. The business process is as follows:

1. Maintenance Phase

- X1: Work Order
- X2: Inspection
- X3: Overhaul
- X4: Routine Checkup

• 2. Planning Phase

- X5: Budget planning of building maintenance
- X6: Self-Management Planning
- X7: Planning of selection of public tender services
- X8: Selection planning of services selection consultants with simple method
- X9: Selection planning of consultant general selection services

• 3. Implementation Phase of Treatment

- X10: Selection of Simple Auction Providers
- X11: Selection of General Auction Providers
- X12: Implementation of Direct Selection of Direct Providers
- X13: Implementation of Maintenance Implementation Monitoring

4. Supervision Phase

- X14: Supervision of Selection of Service Provider
- X15: Self-Control
- X16: Monitoring Supervision of Supervision Consultant

Developing SOP

SOP implementation of general auction selection construction service providers

Symbol	Meaning				
	Begin process or end of process				
	Process				
\Diamond	Decision making				
\Box	Page Shifting				
\longrightarrow	Process flow				

		Stakeholders				Standard of Quality			
No	Activity	Director	Head Of Divison	Head Of Sub Division	Analyst	Procurem ent Unit	Input	Time	Output
1	Create TOR and material spesificati on to be used						Survey Data, Pricelist, Supportin g Data	5 days	TOR
2	Create Draft Contract						Survey Data, Pricelist, Supportin g Data	5 days	Draft of Contract
3	Check RAB, RKS, Design, Creating HPS						Survey Data, Pricelist, Supportin g Data, Draft	7 days	Budget Plan, Working Plan, design, HPS
4	Create a letter of request general procurem ent plan						Document Procurem ent	1 day	Letter Of Request
5	create a lette of invitation RUP						Document Procurem ent	1 day	Letter Of invitation RUP
6	Implement ation RUP						Document Procurem ent	1 day	Record RUP
7	auction request to ULP						Auction Document	1 day	Letter Of Request
8	Give auction document to ULP						Letter of Invitation and Auction	1 day	Record Submissio n of Document