

STANDARD OPERATING PROCEDURE (SOP) DESIGN PREPARATION CONSTRUCTION DESIGN PREPARATION PROCESS

Pribadi, E.B.¹⁾, Yasin²⁾, I., Widaryanto, L.H.³⁾

¹ Mahasiswa Prodi Teknik Sipil Fakultas Teknik

² Dosen Prodi Teknik Sipil Fakultas Teknik

³ Dosen Teknik Sipil Fakultas Teknik Universitas Sarjanawiyata Tamansiswa

ABSTRACT

In a construction development project, there is a construction management system to manage the track of a project. However, there were several cases which obstruct the continuity running of work. This happens because there are no Standard Operational Procedure (SOP) like the case in PT Inside Outside Solution Yogyakarta. The problem occurs because of the obscurity scheme between owner, director, Architecture division, estimator division, structural division, and mechanical-electrical division. One of the win-win solutions that can be offered is to apply the SOP with the swimlane flowchart method, so that a new work scheme is obtained. As a result, the new scheme is proven to have an influence on the performance of the architecture division, estimator division, structural division, and mechanical-electrical division both in terms of responsibility in job and estimated time in each job. Significant results can be seen in the involvement of architectural divisions in the initial owner-director meeting to delve deeper into the client's desires related to the desired design. The ideal time for completion of the pre-production design project is 44 days. Faster time can be obtained for 37 days due to the early finishing from architecture division.

BACKGROUND

In construction construction projects, there are several cases that hinder the smooth running of work. This happened because there was no intense communication between the stakeholders involved. However, this can easily be said to be commonplace, due to a lack of sensitivity and responsibility to service users. Some of the cases that have occurred at PT Inside Outside Solution Yogyakarta include the mismatch of designs with existing buildings, materials that do not conform to the specifications presented, and not achieving development targets according to the agreed schedule. This is motivated by the absence of a Standard Operating Procedure (SOP) and a clear division of labor between the Architecture division, the Structural division, the Mechanical-Electrical division and the Estimator Division. The impact arising from the above problems is the owner's dissatisfaction with PT Inside Outside Solution Yogyakarta, the loss of owner's trust, and the emergence of thoughts or labeling not to use PT Inside Outside Solution Yogyakarta's services because they have a bad track record. This impact cannot be allowed to continue. If this is allowed, it will result in bankruptcy of the company. Thus, there is a need for a win-win solution related to the work system between divisions. The problem of division of labor between the Architecture Division and the Estimator Division, the Structural Division and the Mechanical-Electrical Division to the owner during pre-production and the ideal time management scheme at the pre-production stage.

OBJECTIVES

Determine the Standard Operational Procedure (SOP) and the division of labor between the Architecture Division and the Estimator Division, Structure Division and Mechanical-Electrical Division at the pre-production construction design stage at PT Inside Outside Solution Yogyakarta. Obtaining an ideal time estimate in the design process to meet the owner's wishes based on the Standard Operational Procedure (SOP) at the pre-production construction design stage that has been made at PT Inside Outside Solution Yogyakarta.

LITERATURE REVIEW

Construction management is defined as the efforts made in an activity so that the objectives of these activities can be achieved effectively and efficiently. This means that a construction work, starting from the planning stage, implementation and until construction is complete, its activities are arranged sequentially (Wulfram, 2005). For every construction project, there are resources that will be processed. It is during this process that management is needed so that this process can run effectively and efficiently, and to obtain satisfactory results. Resources are various resources to enable a result to be achieved. The resources consist of 6M + I + S + T, namely Money (money), Material (materials), Machine (equipment), Man-power (human labor), Market (market), and Method (method) and Information (information), Space (space), and Time (time). It is shown schematically as shown below (Armani, 2012).

METODOLOGY

Data collection was carried out directly and indirectly. Primary data is direct data from the object under study, namely through field evaluations and interviews. Secondary data, namely data taken from existing data and / or data previously surveyed by other agencies / business entities.

RESULT AND DISCUSSION

PT IOS Yogyakarta is headed by a director and owner of the company and is in charge of the Architecture division, Structural division, mechanical-electrical division, and estimator division. The findings in the field show that PT IOS Yogyakarta has not implemented SOPs so that it has an impact on the completion of construction projects, especially in the early stages, namely pre-construction. This is due to the unclear division of labor. The work scheme is presented in Figure 1.

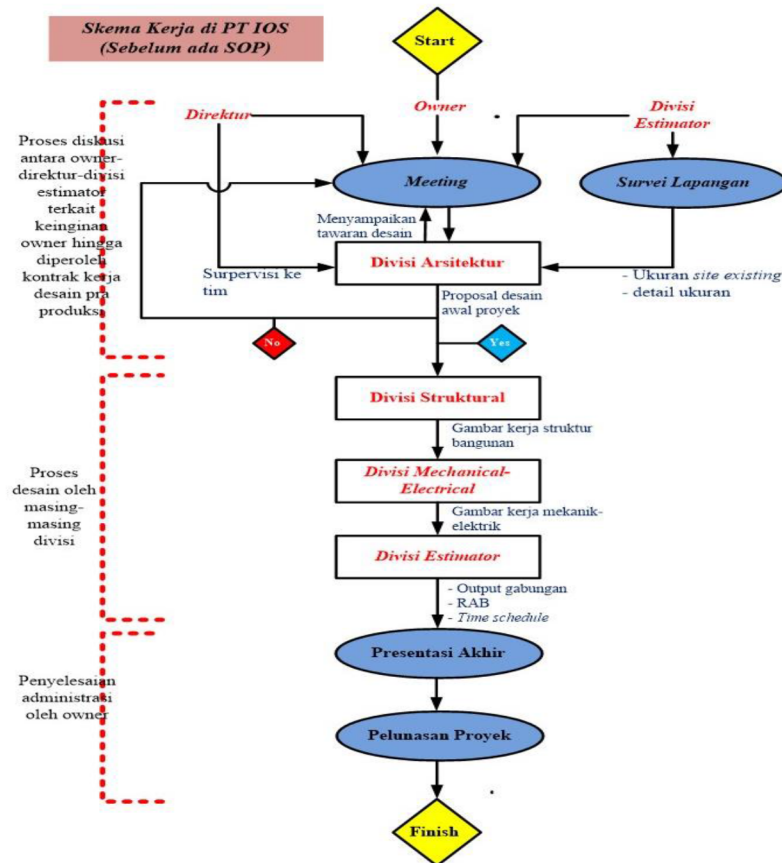


Fig. 1. Skema of Work.

Descriptively the owner entering PT IOS will be met by the director and the architectural division to explain the desired building design. In this case, the role of the architect is very important to extract all the information from the owner to produce a design that is really as expected. Usually, at this stage the owner will ask for the costs to be incurred. Therefore, the director and the architecture division must have a standard price according to the complexity of the work to be carried out so that the project can be started immediately with several applicable stages. Overall the estimated completion of the pre-construction design can be completed in 44 days. But in reality, the Architecture Division was able to complete the initial design creation prior to the revision within 7 days, so the total completion time was 37 days.

CONCLUSION

The conclusions that can be drawn from this research are

1. *The Standard Operational Procedure (SOP) at PT Inside Outside Solution Yogyakarta can be obtained using the swimlane flowchart method and is proven to have an influence on the performance of each Division.*
2. The Architecture Division is in charge of communicating with the owner regarding all information related to the owner's wishes and designing according to the agreement (estimated workmanship of 21 days).

3. The Structural Division is in charge of continuing the work drawings of the Architecture Division related to the building structure with an estimated work of 4 days.
4. The Mechanical Electrical Division is tasked with continuing the work drawings of the Architectural and Structural Division related to Mechanical and Electrical in order to complete all field preparation documents with an estimated work of 3 days.
5. The Estimator Division is in charge of calculating all requirements related to volume and costs of the building specifications to be made with an estimated 3 days work.
6. The estimated ideal time for completion of the pre-production design project at PT Inside Outside Solution Yogyakarta is 44 days. Faster time can be done in 37 days by speeding up work in the Architecture Division.

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