

ABSTRACT

On huge project it is really needed to have a chosen primary contractor for working that project. The process for choosing is always done on the last stage of planning and development and in the beginning of physical implementation. After the primary contractor selected, usually there is an option from primary contractor if they will do the scope by them or must choose sub-contractor to doing some work packet.

In choosing sub-contractor process of course is not enough if we just looking at their price bargain, but also concerning about another need from primary contractor. Like PT.Adhi Karya (Persero),Tbk that role as primary contractor in building Politeknik Telkom, with look at the need from contract document, then there are many criteria for choosing the sub-contractor that have quality so they can feasible to implement as partner in this project. The criteria not only about perception but also from the part of PT. Adhi Karya (Persero), Tbk organization.

With a lot perception that must be thinking will make the decision process harder to choose the feasible sub-contractor. *Analytic Hierarchy Process* (AHP) method can solved the problem with multiple criteria to get a decision, and the princip from this method are decomposition, *comparative judgement*, *synthesis of priority*, *logical consistency*, dan *matriks pair wise*.

From the research the most priority criteria from every level in choosing sub-contractor hierarchy are:

- a. Level 1 :
 - Responsible (58, 4 %)
 - Competency (26, 9 %)
 - Team work ability (14, 7 %)
- b. Level 2
 - Legality (53, 7 %);
 - Financial Condition (46, 7 %)
 - Both of them have same, 14, 7 %.
- c. Level 3
 - The company has Surat Izin Usaha (29, 4 %)
 - There is quality guaranteed during doing the project (63, 4%)
 - Stable financial condition (61, 9 %)
 - Skill of technical (46, 9 %)
 - There is quality material guaranteed (39, 3 %)

Keywords: Criteria, Sub-contractor, *Analytic Hierarchy Process* (AHP)