A Knowledge-Based Development of Risk Management Approaches for Construction Projects

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Abstract : Risk management is a systematic and regular process of identifying, analyzing and responding to risks throughout the project's life cycle in order to achieve the optimal level of elimination, reduction or control of risk. The purpose of project risk management is to increase the probability and effect of positive events and reduce the probability and effect of unpleasant events on the project. Risk management is one of the most fundamental parts of project management, so that unmanaged or untransmitted risks can be one of the primary factors of failure in a project. Effective risk management does not apply to risk regression, which is apparently the cheapest option of the activity. However, the main problem with this option is the economic sensitivity, because what is potentially profitable is by definition risky, and what does not pose a risk is economically interesting and does not bring tangible benefits. Therefore, in relation to the implemented project, effective risk management is finding a "middle ground" in its management, which includes, on the one hand, protection against risk from a negative direction by means of accurate identification and classification of risk, which leads to analysis And it becomes a comprehensive analysis. On the other hand, management using all mathematical and analytical tools should be based on checking the maximum benefits of these decisions. Detailed analysis, taking into account all aspects of the company, including stakeholder analysis, will allow us to add what will become tangible benefits for our project in the future to effective risk management. Identifying the risk of the project is based on the theory that which type of risk may affect the project, and also refers to specific parameters and estimating the probability of their occurrence in the project. These conditions can be divided into three groups: certainty, uncertainty, and risk, which in turn support three types of investment: risk preference, risk neutrality, specific risk deviation, and its measurement. The result of risk identification and project analysis is a list of events that indicate the cause and probability of an event, and a final assessment of its impact on the environment.
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