Fukushima Daiichi

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Determine Budget

Process Purpose Summary

One of the most important aspects of any project is the budget and determining what budget should be used for a project is an important beginning task for all project managers. The budget helps determine the overall success of the project and the status of the project. Based predominantly on historic information, the budget uses information on each resource and task of the project to determine how much of the overall funds should be allotted to that specific part. The total budget is used to assess where the project stands and allows the customers to determine whether the project was successful in meeting their expectations.

PMBOK (2013) states that "determine budget is the process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline".

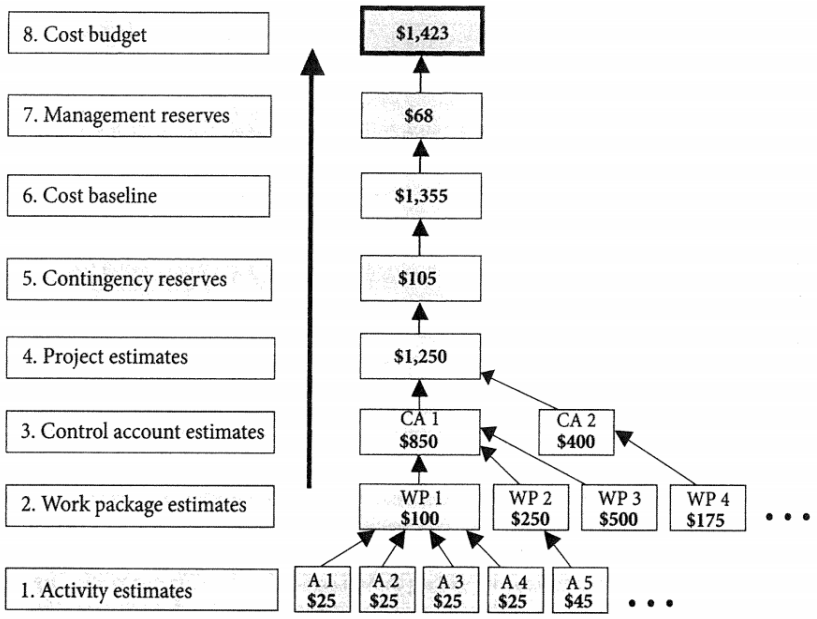

Figure 1. Example: Cost Aggregation

Figure 1, presents an example of cost aggregation from activity cost estimation to cost baseline. This baseline is an integral part in the monitoring and controlling to ensure project performance. Once the baseline has been established, determination must be made as to the need for contingency and management reserves, and at what level. This is where expert judgement becomes critical in the budget process. Expert judgement can come from sources such as stakeholders, industry groups, consultants, and professional associations.

Process Differences in a Global Setting

Determining a budget in a global setting is similar to that in a domestic setting with the exception that global settings utilize a different currency and have a different social, economic, and politic system and process. This is important in a global setting because when working with other cultures, it is important for the project manager to understand how the budget will affect the project along with how that will translate to the people working in the project. The budget may be the similar to what it would be in the United States but just being in a different currency will affect the budget in numerous ways.

As a result of the differences between domestic budget setting and those found in a global setting, budget inputs such as organizational process assets, agreements, risks, resources, and the basis of estimates is quite different. The assessment of risk is based upon ones understanding and view of the world and the situation(s) around them. Failure to properly identify potential risk(s) and their associated probability make it almost impossible to create an accurate budget baseline. In addition to risk identification, the project must be accurately dissected down to the smallest possible deliverable and their associated activities. Without this level of accuracy, the creation of a cost aggregation will be based on incomplete data and thus prevent the creation of a reliable budget from which the project can be managed and controlled.

Process Differences When Taking Over a Failing Project

Taking over a failing project is perhaps one of the most challenging tasks a project management team can undertake. Because project fail for many reasons, it must first be determined what triggered the project slide. When taking over a project, it's important to recognize and understand the existing budget. Many times, projects will begin to fail because they are not following the budget or have fallen away from the budget. The project manager must take over the project and guide it back to being on budget. Each project requires material, manpower, and money. From the budget standpoint, failure to identify required manpower or material will lead to requiring more money than originally budgeted.

The first step is to identify which issue is at hand; failure to identify project labor, or failure to identify material needed to support the project. Project management should revisit the WBS items, their associated activities, and how much has been spent compared to the original budget. This will help determine what is needed to correct the issue. If it is determined that there were required WBS items not properly identified during the project dissection process, these must now be added and the project cost aggregation must be performed again. This process will lead to an increase in the required budget and require a change process to be initiated and approved by the change control board, stakeholder, and the customer.

Proposed Strategies, Tools, and Techniques Applicable to Fukushima Daiichi

The Fukushima Daiichi disaster is without question an example of how failure to identify risk(s), their probabilities, and their impact can lead to a failure of any project. The failure to recognize Japan's tsunami recurrence rate, and the probability that Fukushima could be hit by a tsunami prevented the original project team from properly identifying a WBS in which the

emergency power generators, from each plant, should have been installed in a location least impacted by flooding. Had this been done, reactors 1 through 4 would have had the emergency power necessary to sustain cooling water flow so the reactors could have been shut down safely.

The tools techniques to be utilized by our team are not unlike those required for any project. First, the project must be properly dissected to its smallest deliverable and them each delivery must be defined into activities to support each deliverable. Along with this process comes the requirement to identify risk. This risk is not an arbitrary assignment of what could happen in a vacuum, but rather what could happen based on project location. Once this has been done, the team will utilize a combination of cost aggregation, expert judgement, and funding limit reconciliation. The budget output will include a cost baseline and management, as well as, contingency reserves.