



## White Paper 2025-10

### How much Growth Should be Expected for a Project Estimate between Stages of Project Feasibility Studies

*Project early stage estimates always involve significant uncertainty. Still, it is always a surprise for decision-makers to observe project estimates increase as project development maturity improves. This is actually a normal situation, as long as the increase is not excessive. Following several requests from owner clients, we detail in this White Paper Project Value Delivery’s rules of thumb when comparing project estimates between end of Scoping, Preliminary Feasibility and Detailed Feasibility Study stages.*

*This White Paper complements and quantifies White Paper [2023-03 ‘How to Avoid Underestimating Cost Expectations during Project Definition Phase for Owners’](#)*

#### The anchoring issue on project estimates

One of the most frustrating issues for project managers is that project sponsors tend to anchor on raw early estimates when uncertainties can be very significant (typically 50% uncertainty at the end of the scoping phase). This early anchoring to a low number by management creates difficult situations when estimates are reevaluated during later stages of project development. This even frequently occurs when the level of uncertainty is explicitly stated and insisting that the upper boundary needs to be taken as a reference in particular when considering financing (raw estimate + upper uncertainty level).

Hence, avoidable misunderstandings and discussions can occur when updated, and generally higher, estimates are produced due to a more detailed description of the project in subsequent project development phases. This discussion is often complicated by project scope modifications that often occur during early development phases, making comparisons more difficult.

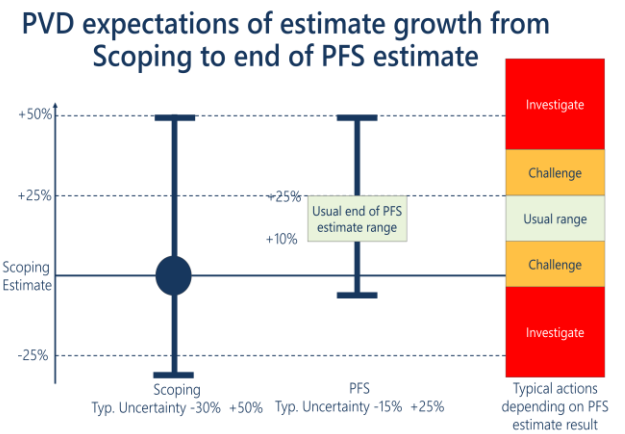
#### Common increases of project estimates from scoping to preliminary feasibility

In general, it is very common for raw Preliminary Feasibility estimates (before any value engineering) to be around 15-20% higher than Scoping Phase estimates. This remains well within the uncertainty range of scoping estimates (typically -30% to +50%). This is due to the natural evolution of detailing the project and thus adding effort, equipment and material which may not have been fully contemplated in the previous stage.

**Estimates usually do increase significantly as project definition progresses, This needs to be understood by project sponsors and executive management of owners.**

PVD has rules of thumb on the matter which determine actions depending on the observed difference between the two estimates. The following figure summarises those rules of thumb. We consider that variances between +10 to +25% are quite common. Variances above that magnitude will require some challenge or investigation. To be noted, the actions to better understand the reasons for abnormal estimate number should be performed before any value engineering effort which would seek to better

align the expenditure with the expected value creation. Such value engineering efforts are generally the last step of the Preliminary Feasibility or the first step of the Detailed Feasibility Study.



If the estimate is close to the usual uncertainty range, the “challenge” action is simply to understand what factors could have driven a slightly unexpected evolution of the estimate. The “investigate” action is for abnormal deviations, which necessarily have to be explained.

Explanations can vary from a poor quality scoping estimate, to change of estimating approach, to substantial scope discovered or being modified during the Preliminary Feasibility phase. There are generally a limited number of main causes for such important deviations.

#### Common increases of project estimates from preliminary to detailed feasibility

Again, we generally observe some increase of project estimates between the Preliminary Feasibility Study and the end of the Detailed Feasibility Study, which will normally be at to the time of Final Investment Decision

for the project. This is again due to more precision in project planning which generally leads to the discovery of missed items in the estimate. Changes are generally less substantial than between previous phases, but can still remain significant from the budget holder's perspective.

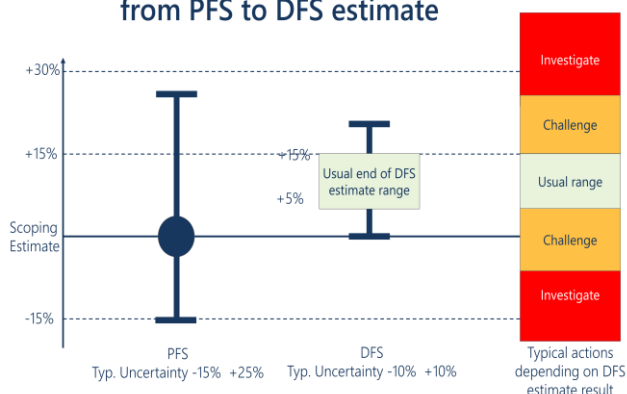
**One of the most frustrating issues for project managers is that project sponsors tend to anchor on raw early estimates when uncertainties can be very significant**

It is thus possible to observe that a significant increase in the project Capex estimate can be expected from initial scoping study values which unfortunately too often are used as anchors by executive management.

**Summary**

This White Paper provides an overview of PVD rules of thumb when we are called to assess whether it is normal to have deviations in the Capex estimates between different stages of project development. It provides thresholds where challenges or even investigations should be initiated. Moreover, it shows that estimates usually do increase significantly as project definition progresses, This needs to be understood by project sponsors and executive management of owners.

**PVD expectations of estimate growth from PFS to DFS estimate**

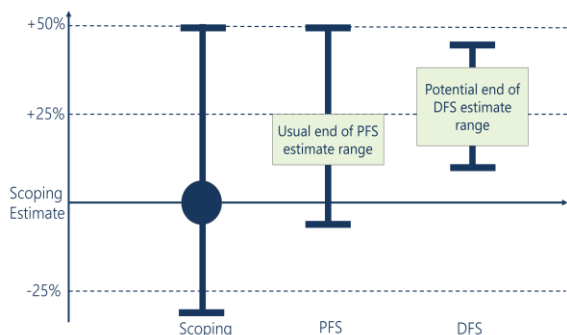


The suggested actions will make it possible to find explanations for abnormal variances. At this stage, offers from contractors and suppliers should have been received for a large part of the project scope. The assumptions regarding the negotiation gains from these offers or allowances for growth post-award are crucial when assessing the quality and uncertainty of the estimates.

**Summing up the evolution from Scoping to Detailed feasibility estimates**

The following figure sums up our rules of thumb starting from the scoping stage. In this figure, the uncertainty of the Detailed Feasibility is compounded by the uncertainty at Preliminary Feasibility stage.

**PVD expectations of estimate growth from Scoping to end of PFS estimate**



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