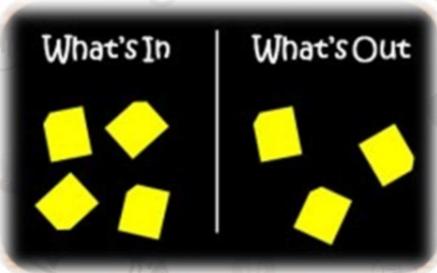


# Project Planning Guideline

Principles of planning the project scope, time and cost

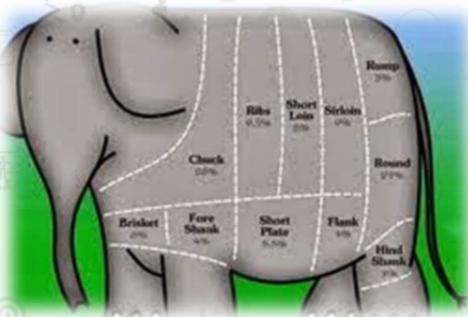
## 1. Know your project objectives and scope



After the project is initiated, you need to **understand fully what is in and out of your scope**, especially in the lump sum contracts, where there is a fixed work to be done within an agreed time and cost. The Scope of Work, Scope Statement or Tendering Technical Specifications are example of such documents to be carefully established.

**Don't make confusion between scope and objective!** (e.g.: Project Scope-engineering, procurement, construction & commissioning of a gas processing facility; Project/Company Objective: make profit/ safe operation...)

## 2. Breakdown the scope into manageable pieces (Work Breakdown Structure)



Based on the principle *How to you eat an elephant? Piece by piece*. **Managing smaller work packages is always easier for contracting, planning and reporting.** Be careful not to break it down too much. This needs to be done according to the Contracting strategy and company's requirements.

## 3. Detail each work package into activities/tasks



Each work package is usually defined as a list of required activities/tasks to be performed. It is recommended to **use verbs when naming** them and use sufficient activities to be able to measure the progress, according to the contract type. Each of these activities will represent parts of the project scope and will have an estimated time and cost.

## 4. Estimate the activities durations, considering the available resources



After you've ensured the list of all activities has been defined according to the project WBS, you can start with the time estimates, preparing to build the schedule. Each **estimate** should be performed **objectively together with the project team** and documented, as future progress will be measured against these estimates. Despite **the most used technique is the expert judgment**, different other techniques can be used: analogues projects, parametric, three point, group decision making and reserve analysis. **Avoid padding** by including additional reserves when doing the estimate. This might lead to a longer schedule!

## 5. Establish the schedule network logic with the project team



finish milestones.

A good project schedule is obtained with the **project team involvement**. It is not sufficient that only the project manager or planner to make the initial scheduling, because the rest of the team will not have the project buy in to complete their tasks within the given time. **Ensure all the project constraints and interfaces between different contractors are considered!** Check that **all activities are linked**, except the start and

## 6. Understand the Critical Path and Near Critical paths



planned in parallel)

The project finish date is represented by the Critical Path or **the sequence of activities with float zero**. Depending the project constraints, you might have negative or positive total float; in this case the Critical Path is defined by the longest path. It is advisable to analyze also the activities with **small float, or near critical**, as schedule can always change. **How many critical paths does a project have? One or several.** (e.g.: 2 or several activities

## 7. Estimate the costs



and ensure the company has the required money to sustain the project, **according to the Payments Plan.**

Project estimation is maybe the most important step for the project managers, as the cost performance is measured against the initial estimate. **The most used technique for cost estimation is the bottom up, from the lowest detail to the project level**, by adding the required project resources (human, equipment, material). Other techniques are: expert judgement, analogues projects, parametric, bid analysis, group decision techniques. By adding the costs on the project activities, you can generate the **project cash flow**

## 8. Perform a Project Risk Assessment



Initial estimates of your project in terms of time and cost represents the deterministic plan. As mentioned in the beginning, **64%** of the worldwide projects are facing **cost overruns** and **73%** are reporting **schedule delays**. **Considering additional risks or uncertainties before signing the contract**, will help you prepare reserves and **expect for the unexpected**. With a chosen probability of 50%, you have good chances to complete the project within the given constraints.

## 9. Define the Progress Measurement Procedure



You've finalized your project estimates, now think to the future. How will you measure your performance? What will it mean that the project progress is 35%? How will you collect data? Are your activities measurable?

**Setting up a progress measurement procedure** will make sure you know what the progress means. A **project weighting** will enable you to **compare progress against cost and measure project performance.**

## 10. Get project baseline approval



Before starting the work, be sure your project baseline is approved by all required parties (project manager, contractor, project owner, project team...). The project baseline represents the initial agreement at the project start date, in terms of scope, time and cost. Getting the formal approval will help you in the future to support claims, or to explain project deviations. Be careful as the approval might come against you if you are signing an overoptimistic plan.