IT Project Planning, Estimating and Resourcing

Project Planning

☐ **Planning** is the definition of work to be done, including resource requirements, dependencies and timing

☐ **Estimating** is the calculation of the amount of time and effort that will be required per type of resource for each part of the work to be done

☐ **Resourcing** is the allocation of actual resources (usually the project's workforce) to the plan

Planning Approaches

☐ **Top down and bottom up**

☐ **All in one go or exploding detail in stages**

☐ **Fully detailed or streamlined or summary**

1. Top down and bottom up

☐ **TOP DOWN PLANNING**

- The **classic approach** to planning is top-down
- **The most logical way of thinking** about the project and is usually the **best approach to new endeavors**
- It provides an **early high-level plan**, including initial costs and timings, which can be used in the project's definition and benefit case

☐ **BOTTOM UP PLANNING**

- **Start with the full detail or a previous plan** and adjust the precise details, estimates and dependencies to be correct for the new project
- **A majority of projects will be similar to something that has been done before** and it make sense to use that as starting point.

- This **will save time and allows to learn lessons** from the previous experiences

2. All in one go or exploding detail in stages?

☐ Where you have started from a detailed plan and worked bottom-up, **you already have the full detail - but remember to review that detail as you progress through the project as things will inevitably change**

☐ You may choose to review the detail in stages in a similar manner to the way you would deal with a top-down plan.

Reasons to Explode the detail in Stages

☐ No one needs to know **precise details** so far in advance that it is of no consequence

☐ **Giving precise detail too far in advance** inevitably means it will be wrong

☐ More important things to be doing with your time **during the definition** and launch of a project than worrying about the precise timing of events in the distant future.

☐ This means that **detailed plans are best prepared per phase** during the project

Fully detailed or streamlined /summary?

☐ The **full detail** is rarely appropriate for anyone except the Project Manager and the Project Office team.

☐ The project sponsors and other concerned parties **will only want to see key summary information** such as milestones and overall costs.

☐ Project Team members only need to see the **full detail where it is related to their own activities.**

One plan or several sub-plans?

☐ A good way to deal with complexity and with unwieldy large plans is **to use a number of sub-plans.**

☐ There will be **one overall plan showing the whole project**, but for its detail it will link to various sub-plans.

☐ The sub-plans would deal with **various subsets** of the overall project, for example, there might be one per workstream or one per sub-team.

Issues in Sub-plan

- identifying and working to overall project milestones,
- cross dependencies,
- scheduling and contention when the same resources are used in more than one sub-plan, and
- ensuring compatibility and standards.

Scheduling Approaches

☐ **Automated Scheduling or Manual Scheduling**

☐ **Activity-Focused**

-It's what many people are familiar with - instructions that tell them what they have to do

☐ **Process-Focused**

- Very good at explaining how things are done

☐ **Deliverable-Focused**

-Focuses attention on delivering the

deliverable

☐ **Outcome-Focused**

-Focuses attention on what really counts

☐ **Milestone-Focused**

Presents a simple picture focusing on

critical information

☐ AUTOMATED SCHEDULING

- Investment
- It can take a huge effort to get the plan
- Adjusting the plan during the project will allows you to perform "what-if" analysis during the planning stages

☐ MANUAL SCHEDULING

- Common approach
- It can be justified on the basis that progress is more important than accuracy and optimum performance.

Initial Planning During Project Start

☐ This management-level plan **defines all major work for the duration of the project.**

☐ The structure of the work will need to be **clear**.

☐ **The phases, major deliverables, activities, workstreams and significant milestones** will be defined.

Detailed Planning for the Phase

☐ Planning is always linked to **estimating and resourcing**

☐ All these details must be combined to calculate a detailed schedule of work

☐ A **well thought-out Work Breakdown Structure (WBS), milestones, careful recording of dependencies, effort and resource allocation** you should be able to calculate the detailed schedule automatically

Tools in Scheduling

- **Gantt Charts**
- **CPM/PERT**
- **Milestones**

Gantt charts

□ **Gantt charts** are the **most popular** as they present a simple picture of the work and make it easy to see when things start, how long they are and how they are sequenced.

□ They are particularly helpful in **communicating the plan to people** unfamiliar with Project Management.

□ **The Gantt chart represents each piece of work** as a bar on a chart with a horizontal scale to show dates.

CPM or PERT charts

□ **PERT (Project Evaluation and Review Technique)**

□ **CPM (Critical Path Method**)

□ PMs believe that PERT and CPM network is a more scientific way to think about a project.

□ The PERT chart makes you think in detail about the logic and dependencies of a project

Milestones

□ Milestones are useful tools in planning and scheduling.

□ Used at a high-level to present the overall project plan.

□ Used tactically to identify **completion of significant achievements, identify cross-dependencies**, then subsequently provide a control and reporting mechanism during the project

Dependency Types

□ **Finish-Start**

Successor really cannot start until the predecessor is completed

□ **Finish-Finish**

You could reasonably make progress on the successor but you cannot finalize and agree it until the predecessor is safely completed

□ **Start-Start**

You cannot start the successor without at least some output from the predecessor - but you don't need to wait for it to finish

□ **Start-Finish**

The successor cannot finish until the predecessor has started.

DURATION = Required Effort / resources applied