

### Week 1

- Projects are unique focused (objective goal) and temporary
- There are 3 main constraints on a project: time, cost and scope all impacting quality.

A project has seven main characteristics:

- 1) uniqueness;
- 2) focused;
- 3) temporary;
- 4) change orientated;
- 5) integrating;
- 6) social constructed
- 7) has emergent aspects and uncertainty

Every project has interacting key constraints of time, cost and scope, known as the Project Management "iron triangle".

Project management triangle is time, scope, cost and quality

### Week 2

Project leadership involves 4 main aspects:

1. Establishing and maintaining vision
2. Critical thinking
3. Motivating team members
4. Interpersonal skills

Group is when 2 or more people who are connected by social relationships, whereas a team is when 2 or more people with common goals and shared responsibility.

Teams go through 4 steps: forming, storming, norming and performing. It is important to be aware about these steps in your project and manage them effectively.

### Week 2 (cont)

A high-performing team is comprised of nine roles, some are task oriented, some are thinking-related and some are social-oriented.

### Week 3

The Project Start Up determines what the project is about and what is not.

Develop knowledge on the management of these activities, PMI's (2017) 5 processes groups: initiating, planning, executing, monitoring and controlling and closing.

Projects objectives should be SMART. Specific, Measurable, Activity and Achievement based, Realistic and Relevant, and Timed.

Stakeholders need to be managed as they can impact and are impacted by the project.

The internal team project, core externals and rest of the world are the main stakeholder groups.

Power(high/low) and interest(high/low) of each stakeholder needs to be considered.

Project risks can arise from internal (time, cost, scope, quality, health and safety legal and resources) and external sources (PESTLE).

To effectively plan scope stakeholder engagement is vital – collect and manage requirements.

### Week 4

The Project Management Plan includes key project information and can be used to introduce to the project members. Typical contents: What, Where, When, Who, Why and How.

Stakeholder engagement is vital for requirements collection and measuring quality.

Projects can spiral out of control through scope creep – this needs active management.

WBS shows the scope of the project and divides the work into manageable tasks.

Quality standards that can be measured aid in bridging the gap between expectation and perception.

Product scope: The features and functions that categorise the product, service or result.

Project scope: The work performed to deliver a product, service or result with the specified features and functions.

Scope creep is the uncontrolled expansion to product or project scope, without adjustments to time, costs and resources.

Manage this by focusing on ensuring the project contains all the work required and only the work required for the project to be successful.

### Week 5

Network Analysis/Critical Path Analysis is a tool to plan and allocate resources and to minimise total project duration and costs.

"Activities" are known as a specific task, or set of tasks, that are required by the project

"Network Diagram" is the combination of all activities that define the project and the sequence of relationships between them

A zero-duration activity, also known as a "Milestone", is a task that does not involve any work, but is acknowledged as a key achievement

A Critical Path is the sequence of activities where if delayed, the entire project is delayed

The Critical Path is the slowest/longest path in a network

To construct a network diagram, you first identify all the activities undertaken in the project, estimate the time each activity takes to complete, and pinpoint the order of activities that need to be completed

Network diagrams usually include the duration of tasks, as well as their earliest and latest start/finish times

"Duration" is the total time it takes to finish a task/activity

The earliest an activity can start is known as the Earliest Start Time, or "EST"

### Week 5 (cont)

The earliest an activity can finish is known as the Earliest Finish Time, or "EFT". The "EFT" can be calculated by adding the earliest start time and duration of an activity

The latest an activity can finish is known as the Latest Finish Time, or "LFT". The "LFT" of the activity can be calculated by the lowest LST of the previous activity/activities.

The latest an activity can start is known as the Latest Start Time, or "LST". The "LST" can be calculated by deducting the latest finish time of the activity with the duration of the activity

The difference between the EST + Duration and the LFT is known as FLOAT (or Slack). In other words the activity can "float" for a specific period without it becoming a problem.

### Week 6

Project resources are anything that is necessary for the project to be completed. The four resource categories present within a project are Human Resources, Materials, Equipment, and Cash (Capital/Budget)

A resource constraint is any limitation and/or risk associated with project resources

### Week 6 (cont)

Resource Constrained Projects should be levelled, allowing end dates to move. It forces the resources scheduled to not exceed the limits of resources available.

Time Constrained Projects should be smoothed, to move or split tasks or to assign replacement resources. It ensures resources are used as efficiently as possible by utilising float/slack of activities to increase or decrease resources needed at one specific activity and spread it throughout the project.

Costs can be required by time, materials, capital equipment, overheads, and contingency

Top-down budgeting approach are when budgets are prepared by top management and imposed on the project manager. This approach clearly shows the business performance goals and expectations of top management, however it can be unrealistic because they do not incorporate the specialist input and knowledge of the project staff.

### Week 6 (cont)

The Bottom-Up approach is project managers and planning/cost engineers prepare the budget based on a detailed analysis of all the resources needed for the project tasks, and then the budget is passed up the chain of command for review and approval. Bottom-up budgets tend to be more exact and can have a positive impact on project morale because staff have played an active role in the budgeting process.

Risk management refers to activities for minimizing project risks, therefore ensuring completion within time and budget and fulfilling the scope. The risk management process consists of 5 stages. These are to Plan Risk Management, Identify, Analyse Risks, Response Plans, Implement Responses

A risk matrix is a matrix that is used during risk assessment to define the level of risk by categorizing the probability against the impact of consequence.

There are 5 risk strategies that can be used to respond to risk. These are Escalate, Avoid, Transfer, Mitigate, and accept.

Escalation is appropriate when the project team or project sponsor agrees that a threat is outside the scope of the project or that the proposed response would exceed the project manager's authority.

### Week 6 (cont)

Avoid is when the project team acts to eliminate the threat or protect the project from its impact.

Transfer involves shifting ownership of a threat to a third party to manage the risk and to bear the impact if the threat occurs.

Action is taken to reduce the probability of occurrence and/or the impact of a threat. Early mitigation is usually more effective.

To accept is to acknowledge the existence of a threat, but no proactive action is taken.