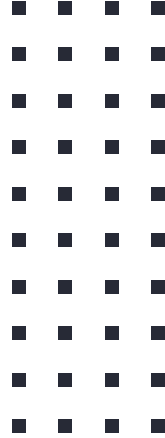
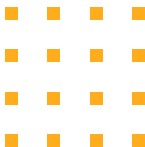




(University of Virginia)



Fundamentals of Project Planning & Management





Hello!

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(MBA – Hospital and Health
Management, 2019-21

IIHMR University, Jaipur.)



1. Course Description

Let's start with the basic description of the course

Course Description

- This course provides the knowledge for scoping projects, sequencing activities, minimizing risks and utilizing resources. It introduces basic concepts from project planning, critical path method, network analysis and simulation for project risk analysis and Agile project management. Some behavioural biases and their impact on planning and execution have been described.
- In this course the different Software tools, things concerned with Project planning and management were covered.



A series of four horizontal bars of varying lengths, stacked vertically, in a dark blue color.

2. Objectives of the Course

Next, we move on to the objectives of the course



Objectives of the Course

- To learn the details about Fundamental aspects of Project Planning and Management.
- It is an introductory course on the key concepts of planning and executing projects. It trains the learner to identify the factors that lead to the success of a project. It also equips the learner to plan, analyse, and manage projects. Learners are exposed to state-of-the-art methodologies and to the challenges of various types of projects.





3. Course Content

Now we move towards the main content

What is a Project?

Definition:

- According to **Harvard Business Review**, "A project is a unique set of activities, meant to produce a defined outcome within an established time frame, using specific allocation of resources."
- According to **Project Management Institute**, "A project is a temporary endeavour undertaken to create a unique product or service."

All Projects:

- Have a **specific** and **unique aim** to create a **specific** and **unique product or service**.
- Are **temporary**.
- Have a **specific start and finish**.
- Have a **temporary organization**.
- Require **multi-disciplinary coordination**: Individuals with different set of expertise from different locations coming together.
- Are constrained by **time, cost or resources**.

Objectives of a Project

THE HOLY TRINITY OF PROJECTS

SCOPE

It is description of requirements, qualities and specifications of a product to be delivered.

TIME

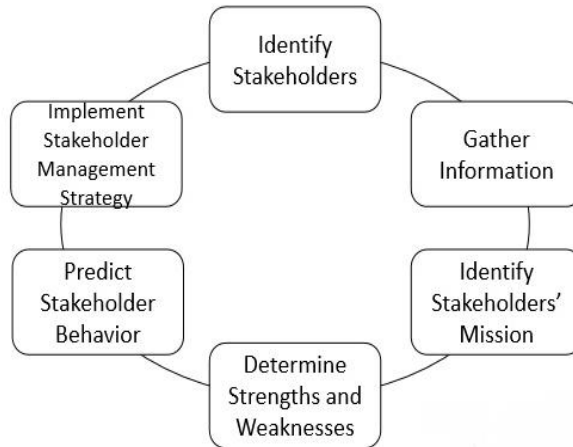
Duration of the project

BUDGET

It is concerned with cost and resources available for the project.

Organisation & Stakeholders

Stakeholder Cycle
(Cleland & King, 1988)



Stakeholder Power Interest Grid
(Freeman, 1983)



Success & Failure of a Project

Success of a Project:

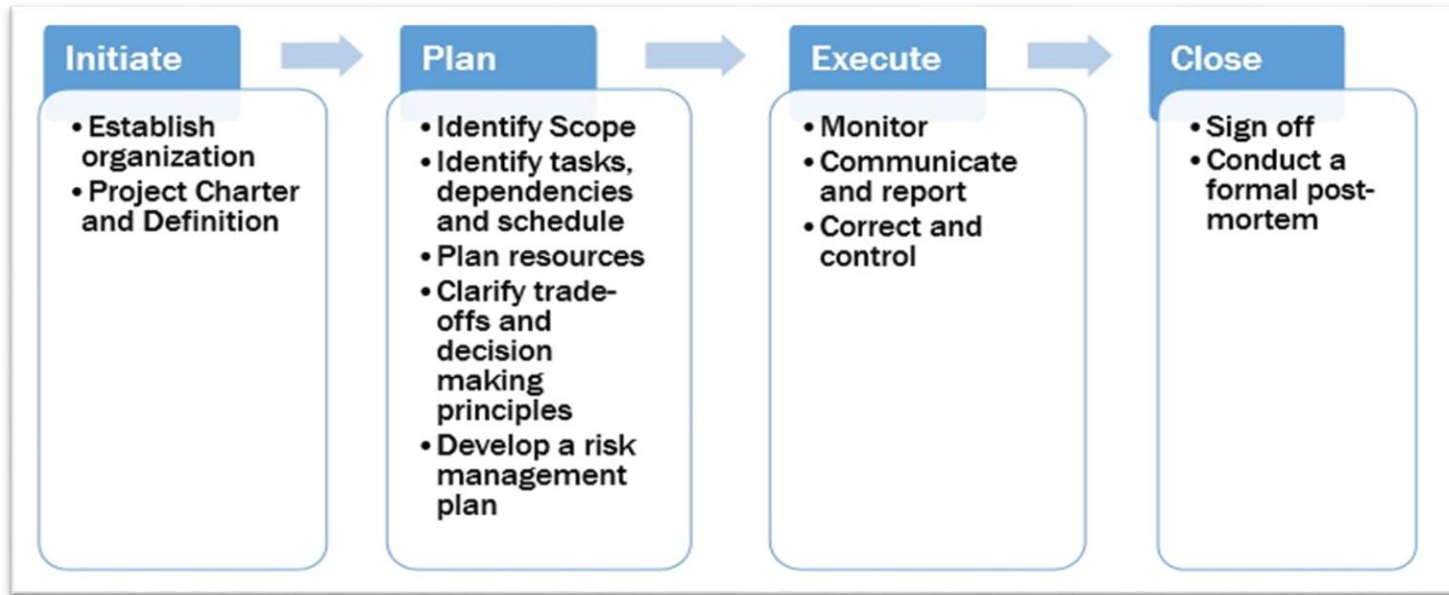
The success of a Project is defined with respect to its objectives.

A successful project will be ***a project that delivers the scope and is on time and within the budget.***

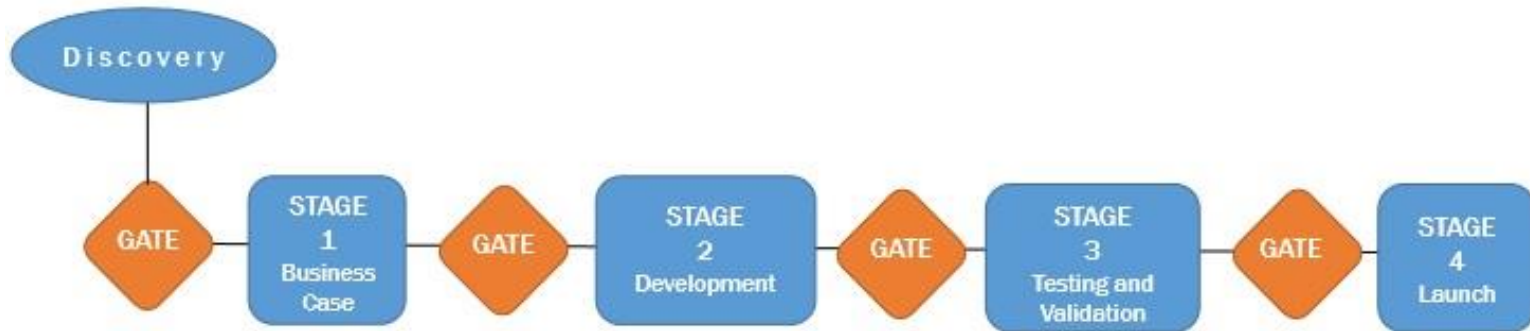
Main Reasons for the Failure of a Project:

- No clear goal, no planning at all, no identification of scope and no estimated timeline.
- Lack of leadership and commitment by stakeholders. If we lack to consider them and they are not committed to our project our project cannot succeed.
- Lack of training on new technology.
- No lesson learned from historical projects.
- Lack of proper project management training: Project manager without taking a course having no certificate and having no knowledge about project management.
- There are certain individual biases being sanguine and overconfident about capabilities. At times, the cost is ignored, and timely decisions are not taken.

Project Life Cycle



Stage Gate Process (Cooper & Edgett, 2011)



Planning

According to **Peter Ducker**, a management guru, an action plan is a statement of intention but is not a commitment. Plan must be revised often and continuously. Plan must become basis of executive time management. It includes:

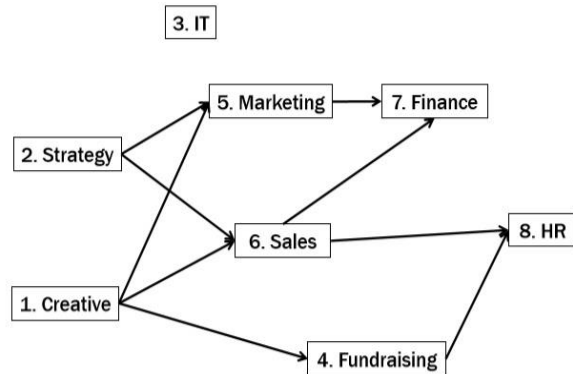
- Identifying scope,
- Identifying all the tasks and dependencies among them &
- Scheduling

Planning a Project (Work Breakdown Structure) : Scoping project properly is the most neglected step. The **Work Breakdown Structure** visually breaks down Project Scope as follows:

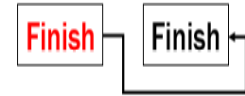
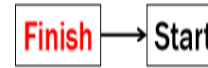


Identifying Dependencies

For instance,



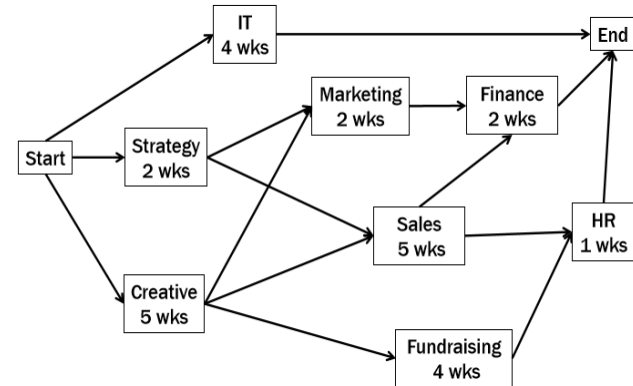
Types of Dependencies:



Determining the Completion Date

For instance,

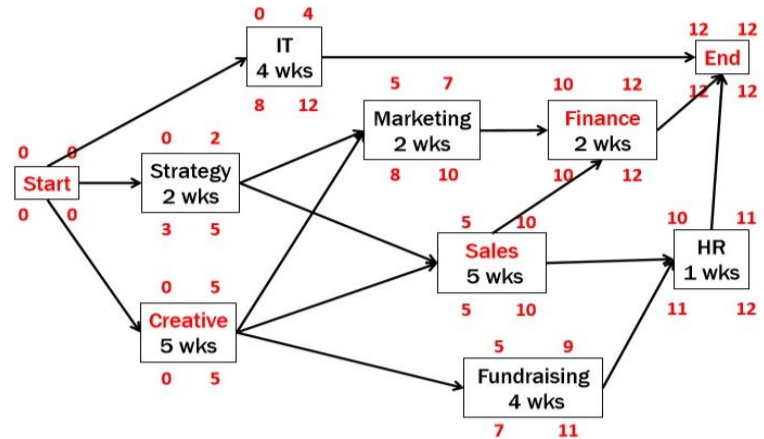
Activity #	Description	Predecessors	Duration (Weeks)
1	Creative	-	5
2	Strategy	-	2
3	IT	-	4
4	Fundraising	1	4
5	Marketing	1,2	2
6	Sales	1,2	5
7	Finance	5,6	2
8	HR	4,6	1



The Critical Path Analysis

We can start each of the tasks in two ways:

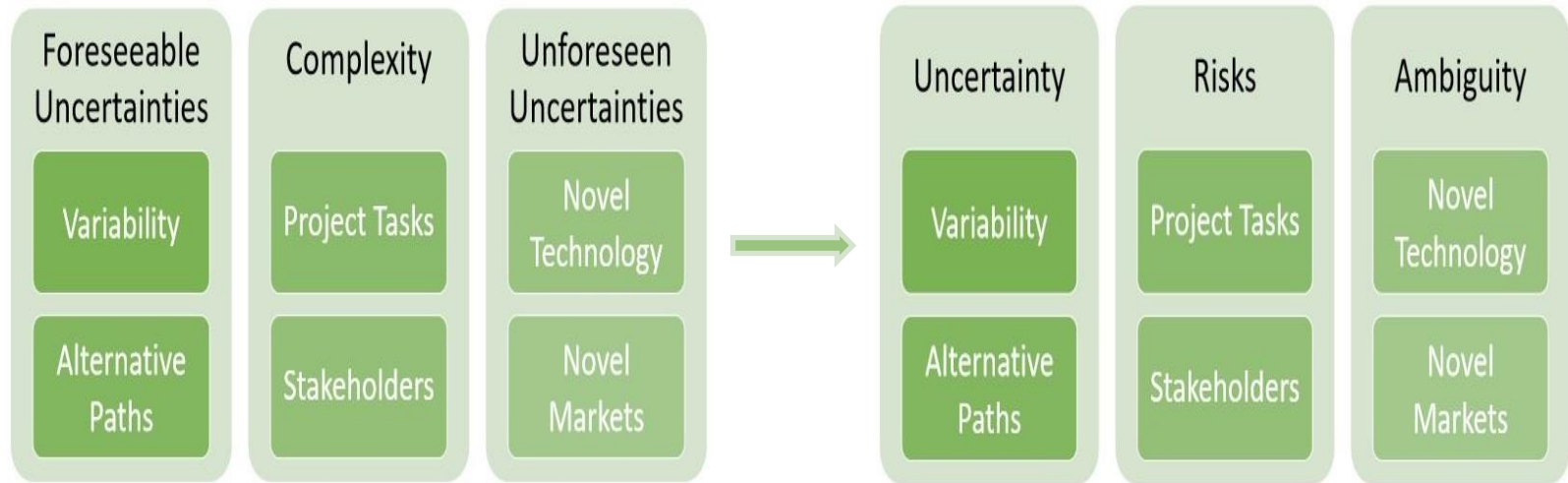
	Cost	Time
As Soon as Possible	✗	✓
As Late as Possible	✓	✗



Checklist to Prevent Planning Mistakes:

- Is **work breakdown structure** available and complete?
- Have enough individuals in organization seen and agreed to it?
- Have we seen the **network diagram**?
- Do we have **one start and one finish**?
- Do we have **successors and predecessors** to all tasks?
- Are there natural points in our project that have important deliverables or many different paths meet and come together?
- Did we look at **Gantt chart**?
- Are **dependencies properly presented**?
- Are we making use of dates in a correct way?
- Do we have a **clear path from start to finish**?

What is Risky About Projects?



Identifying & Assessing Project Risks

Plan to Match Risk

(Loch, DeMeyer, Pich - 2006)



Identifying & Assessing Project Risks

Project Risk Management



Identifying & Assessing Project Risks

Risk Assessment

Likelihood	Almost Certain (>75%)					
	Likely (50-75%)					
	Moderate (25-50%)					
	Unlikely (10-25%)					
	Rare (<10%)					
		Insignificant	Minor	Moderate	Major	Catastrophic
		Impact				

Identifying & Assessing Project Risks

Probability Impact Matrix

Risk Score = Probability X Impact

Probability	0.8	0.04	0.08	0.16	0.32	0.64
	0.6	0.03	0.06	0.12	0.24	0.48
	0.4	0.02	0.04	0.08	0.16	0.32
	0.2	0.01	0.02	0.04	0.08	0.16
		0.05	0.1	0.2	0.4	0.8
		Impact				

Changing the Critical Path

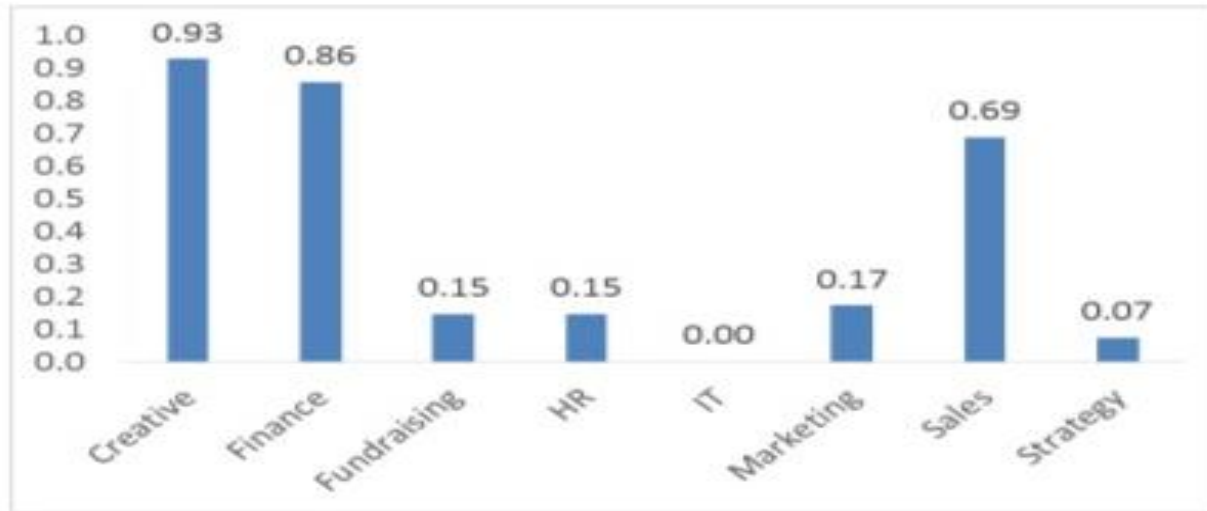
- As task durations changes, critical path might change.
- We will no longer ask – which tasks are on the critical path?

But:

- How likely are tasks to be critical?

Criticality Index

- Probability that an activity is critical



Budget Risks

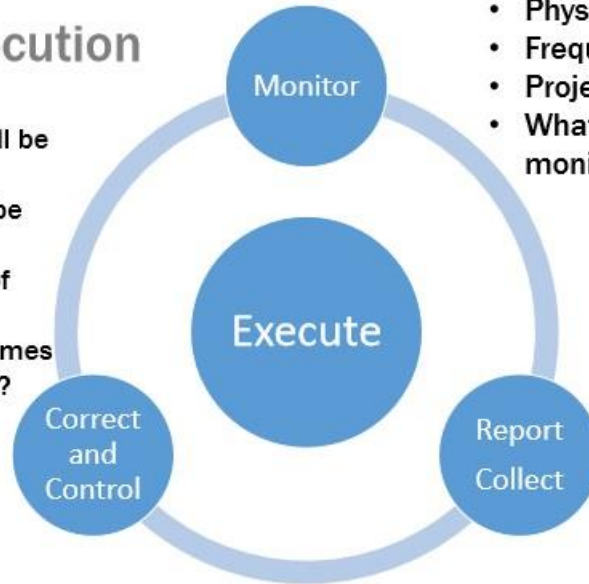
- Cost estimates are subject to variations.
- Foreseeable risks can cause the actual project cost to differ from planned.
- Establish some contingency budget.
- Budget contingency should be allocated at a project not task level (provides more flexibility for the project manager).



From Plan to Action

Project Execution

- What decisions will be made?
- What actions will be taken?
- Who is in charge of the execution?
- How will the outcomes be communicated?



- Physical or Virtual?
- Frequency?
- Project Management Office?
- What information will be monitored?

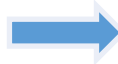
- Frequency?
- By Who?
- To Who?

Earned Value

Let us take the same example as before:

Startup Project: 12 Weeks, \$8500

Activity #	Description	Predecessors	Duration (Weeks)	Cost
1	Creative	-	5	\$1000
2	Strategy	-	2	\$500
3	IT	-	4	\$3000
4	Fundraising	1	4	\$500
5	Marketing	1,2	2	\$2000
6	Sales	1,2	5	\$500
7	Finance	5,6	2	\$750
8	HR	4,6	1	\$250



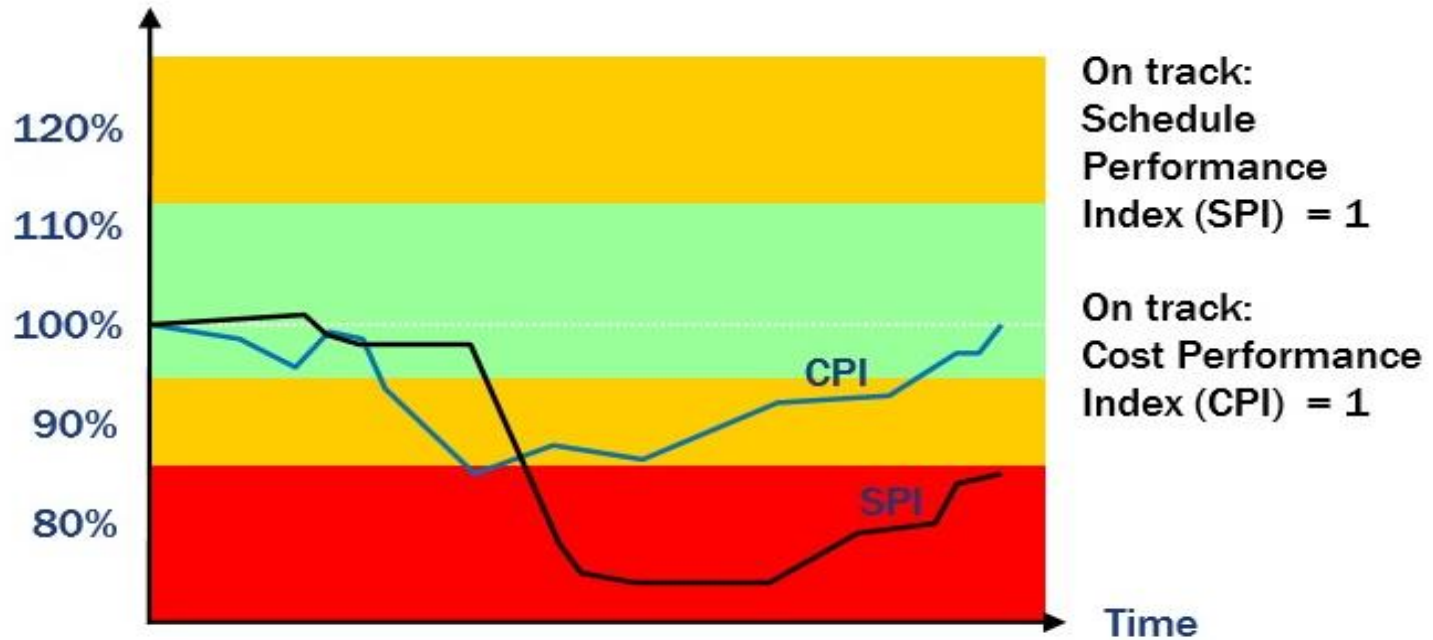
Earned Value Analysis

• Creative: 25% completed, actual cost \$ 500

- Scheduled work = 40% (2w/5w)
- Actual work = 25% (1.25w/5w)
- Budgeted Cost = \$ 1,000
- Planned Value = 40% x 1,000 = \$400
- Earned Value = 25% x 1,000 = \$250
- Actual Cost = \$500

- Schedule Performance Index (SPI) = Earned Value / Planned = 63%
- Cost Performance Index (CPI) = Earned Value / Actual = 50%

Performance Indices



Agile, Scrum & Kanban

Why Agile?

- Technology firms
- Release pace was declining
- Quality was suffering
- Engineer moral
- Padding and no accountability

AGILE PROJECT MANAGEMENT

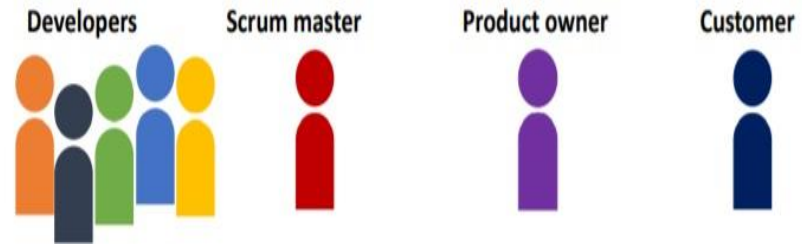
popular especially in software development firms, in year 2000 many firms were growing. The release schedule of product was slowed down and there was a decline in the quality of product. The morale of engineers working on the product became low. A group of 17 visionaries **came together in 2001 and signed Agile Manifesto**. They came up with a few mechanisms. Two of those are discussed here:

- **Scrum Sprints:** The work is done in an iterative fashion, to limit the amount of working small iterations in a very collaborative fashion to ultimately deliver to the customer the working product.
- **Kanban Approach:** It has to do with working continuously, limiting the amount of work in progress at any given time in the system but constantly delivering output.

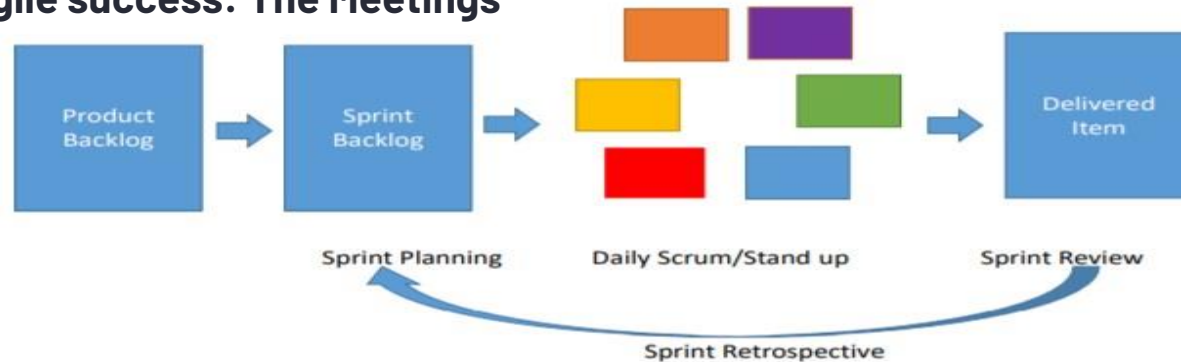
Agile, Scrum & Kanban

Agile (Scrum) Team:

- Cross-functional (programmers, test, design)
- Members should be committed full-time
- Self-organizing team



Critical to Agile success: The Meetings



Benefits & Contentions of Agile

Benefits:

- Empowers the Development team-
 - Independence, autonomous, focused team.
 - Developers want to deliver a product to the client.
- Creates joint incentives and transparency with the client.
- Helps firms build the right thing, at the right time, and build it right!

Contention Around Agile

- A “living in the moment” culture.
- Less documentation.
- #noestimates movement
- Hard to master – requires the right mindset.
- Can be challenging with Distributed teams.



4. Learning Methodology

Lectures, Presentation, Videos, Cases and 4 weekly tests

Week 1	Course Overview and Objectives	What is a Project?	Define the project and objectives	Organization and stakeholders	Project Success and Failure	Project Life-Cycle
Week 2	Purpose and Misuse of a project plan	Detailed Scoping	What are Dependencies?	What is the Critical Path?	How do we Schedule?	What if I don't like the plan? Making changes
Week 3	What is Risky about projects?	Identifying and Assessing Project Risks	Schedule Risk Analysis 1	Schedule Risk Analysis 2	Cost Risk Analysis	Planning for Ambiguity
Week 4	From Plan to Action	Earned Value	Those who execute	Agile, Scrum and Kanban	Course Wrap Up	

[16 Slides, 8 videos (Total 34 min), 4 readings, 1 quiz- 10 questions]

[Case Study: Heathcare.gov]

[19 Slides, 9 videos (Total 57 min), 1 reading, 1 quiz- 10 questions]

[Case Study: Virginia Festival of the Book]

[14 Slides, 9 videos (Total 60 min), 1 reading, 1 quiz- 10 questions]

[Case Study: Lumi Juice]

[17 Slides, 9 videos (Total 65 min), 2 readings, 2 quizzes- 10 questions each]

[Case Study: Salesforce.com]



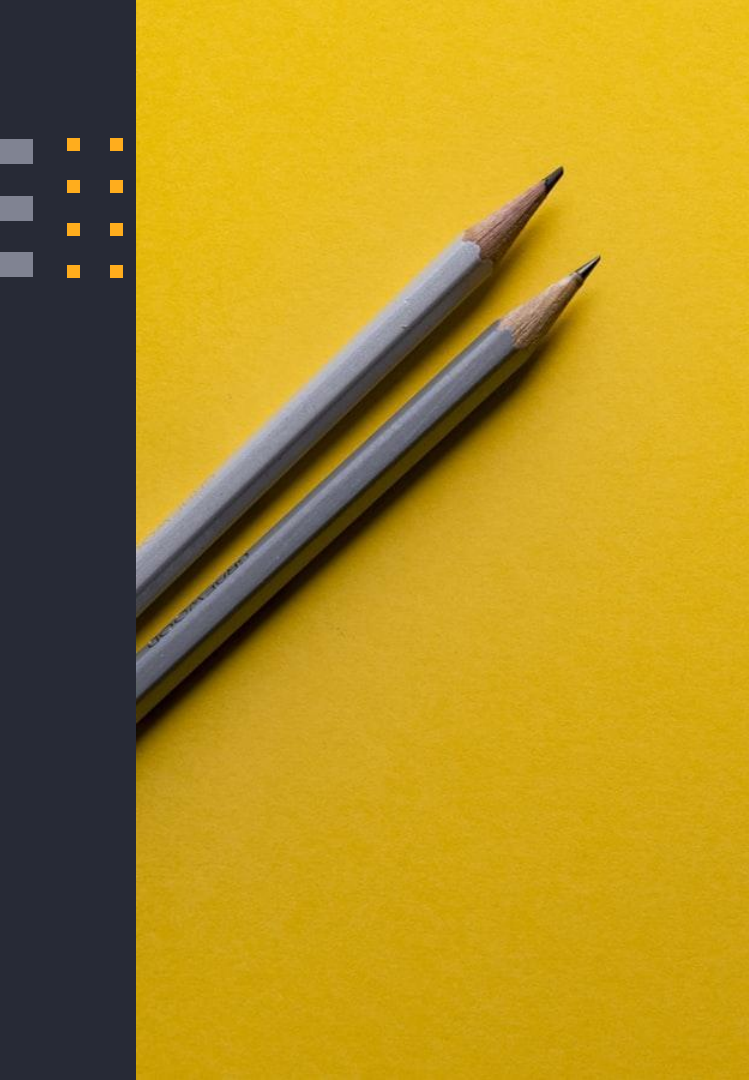
5. Key Learnings

What did I learn from this course?

Key Learnings

After completing the course, the learner possesses the art of properly setting the goals and objectives and capability to prioritize amongst the objectives in the planning and management of project. Learners will be more cognizant of considering project stakeholder's opinions, recognise the need and benefits from proper project planning. They will also be capable of selecting the most appropriate Project Management Methodology - given the project objectives, the degree of uncertainty and constraints of project.

- How to define, organise and initiate a project.
- How to develop a project plan, including scoping, sequencing tasks, and determining a critical path.
- How to assess, prioritize and manage project risk.
- How to execute projects and using earned value approach for controlling progress and monitoring.



Thanks!

Do you have any questions?