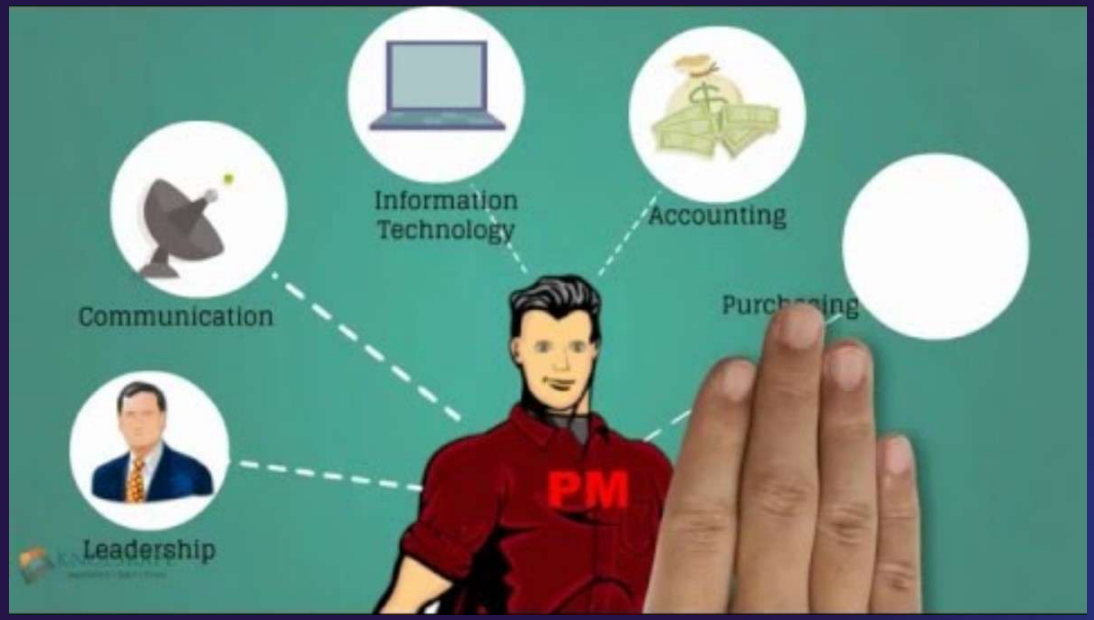
Project management

Lecture 03

Overview of Project Management



https://www.youtube.com/watch?v=BOU1YP5NZVA

WHAT IS A PROJECT ?

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What defines a project ?

- **Temporary:** A project has a clear start and end date. It is not ongoing and must be completed within the given time frame.
- **Unique:** Projects are designed to achieve a specific goal or result, which makes them different from routine tasks.
- **Defined Resources:** Every project has a set amount of resources (people, budget, technology, etc.) that must be managed effectively.
- **Collaboration:** Often involves people from different departments or organizations who don't usually work together.

Example: Developing a new software for a client is a project. Daily maintenance of that software is an ongoing operation.

Key attributes of a project

- **Time Frame:** Defined start and finish date (e.g., Project must be completed within 6 months).
- **Purpose:** The main goal the project aims to achieve (e.g., Build a new website to enhance customer engagement).
- **Ownership:** Stakeholders responsible for overseeing and ensuring project success (e.g., project manager, sponsors).
- **Deliverables:** Tangible outcomes (e.g., delivery of a functioning software tool).
- **Resources:** Assigned resources such as budget, technology, and human capital. (e.g., $5000, design mobile app, a team of 5 people).
- **Roles:** Each team member has specific roles and responsibilities (e.g., project manager, developers, testers).
- **Risks:** Projects face uncertainties (e.g., risk of budget overrun or delays).
- **Tasks:** Divided into independent and dependent tasks.

WHY DO WE NEED PROJECT PLANNING & MANAGEMENT ?

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Why is project planning & management important ?

- **Time Management:** Ensures tasks are completed on schedule, avoiding delays and penalties.
- **Cost Control:** Helps manage the budget effectively by allocating resources and tracking expenses.
- **Scope Definition:** Avoids scope creep by clearly defining project objectives and deliverables.
- **Quality Assurance:** Ensures the final deliverable meets the set quality standards, reducing the chance of failure.

Example: In a construction project, poor time management could lead to extended deadlines, increasing costs and reducing profits.

WHAT IS PROJECT LIFE CYCLE ?

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Project Life Cycle Phases

1. **Initiation:** Define the project, its goals, and feasibility. Identify stakeholders. (e.g., Define software needs)
2. **Planning:** Develop a roadmap with tasks, schedules, and budgets. Create risk management and communication plans. (e.g., Develop a timeline, allocate resources)
3. **Execution:** Carry out the project plan by assigning resources and managing teams. (e.g., Write code and develop software).
4. **Monitoring & Controlling:** Track progress, adjust schedules, and manage quality and performance. (e.g., Tracking testing and progress)
5. **Closing:** Finalize the project, deliver outputs, and close contracts. (e.g., Deliver final software and close the project)

Project Proposal

- A project proposal outlines the work plan and ensures stakeholder alignment
- Questions to answer:
  - *What works need to be done ?*
  - *Who will do the work ?*
  - *When will they do the work ?*
  - *How long will it take ?*
  - *What risks are associated with the project ?*

Project Proposal Elements

- **Client and Team:** Details about project clients and roles of team members.
- **Project Description:** Clear goals, background information, and objectives of the project.
- **Scope:** Clearly define what will and will not be included in the project.
- **Schedule:** Timeline for tasks, milestones, and the overall project completion.
- **Risks:** Highlight major risks and how you plan to mitigate them

Example: If the project is to build a mobile app:

- Client: VNU Company
- Description: Develop a user-friendly mobile app for shopping
- Scope: App includes product listings and purchase options but excludes inventory management

Project Proposal Structure

- **Project Client and Team Members**
  - Name and details of client(s) involved in the project
  - Titles & roles
  - All contact details including business address, phone number, mobile number, email
  - Details of all team members including mobile number, email, team number
  - Formal reporting
    - Communication between client, team and supervisor: type/frequency

Project Proposal Structure

- **Project Description**
  - Nature of the organization
  - Background of the project
  - Definition: an agreement on clear project objectives or goals
  - Details of the identified problems
    - Problem statement

Project Proposal Structure

- **Project Scope**
  - Clear scope definition
  - What will be included in the scope of this project ?
  - Clearly define deliverable(s) or product(s)
  - What will be considered outside the scope of this project ?

Scope Description	IN SCOPE: - An IVR system to handle and direct sales calls. - Setup of the IVR system ready to handle all sales enquiries - Training for the sales team on how to use the system - An administration system so the IVR system can be configured by the sales team OUT OF SCOPE: - Support for any other team other than sales - The ability to route complex sales enquiries, such as partnerships etc.
Project Deliverables	- A customer facing IVR system - An IVR configuration system - A training manual for new and existing sales team members

Project Proposal Structure

- **Scope Grope:** Difficulty defining project scope.
- **Scope Leap:** A sudden, drastic change in project goals.
- **Scope Creep:** Unplanned additions to the project scope without adjusting timelines or budgets.
- **Management Strategies:**
  - Use a formal change request process.
  - Regularly review project scope with stakeholders.
  - Document all changes and their impact on cost and timelines.

Example: A website design project that initially involved only front-end design suddenly adds a back-end database without adjusting the timeline (scope creep).

Project Proposal Structure

- **Project Schedule**
  - Project start date/Project end date.
  - Total hours for project completion.
  - Clear details on: What? Who? When? How long?
  - Resources allocated for each Task.
    - People (Team)
    - Technology
    - Resources to be provided (perhaps external)
    - External resource(s): details, name and date
    - Other
  - Method to create schedule: Gantt Chart

PROJECT MANAGEMENT TOOLS

What is Gantt Chart ?

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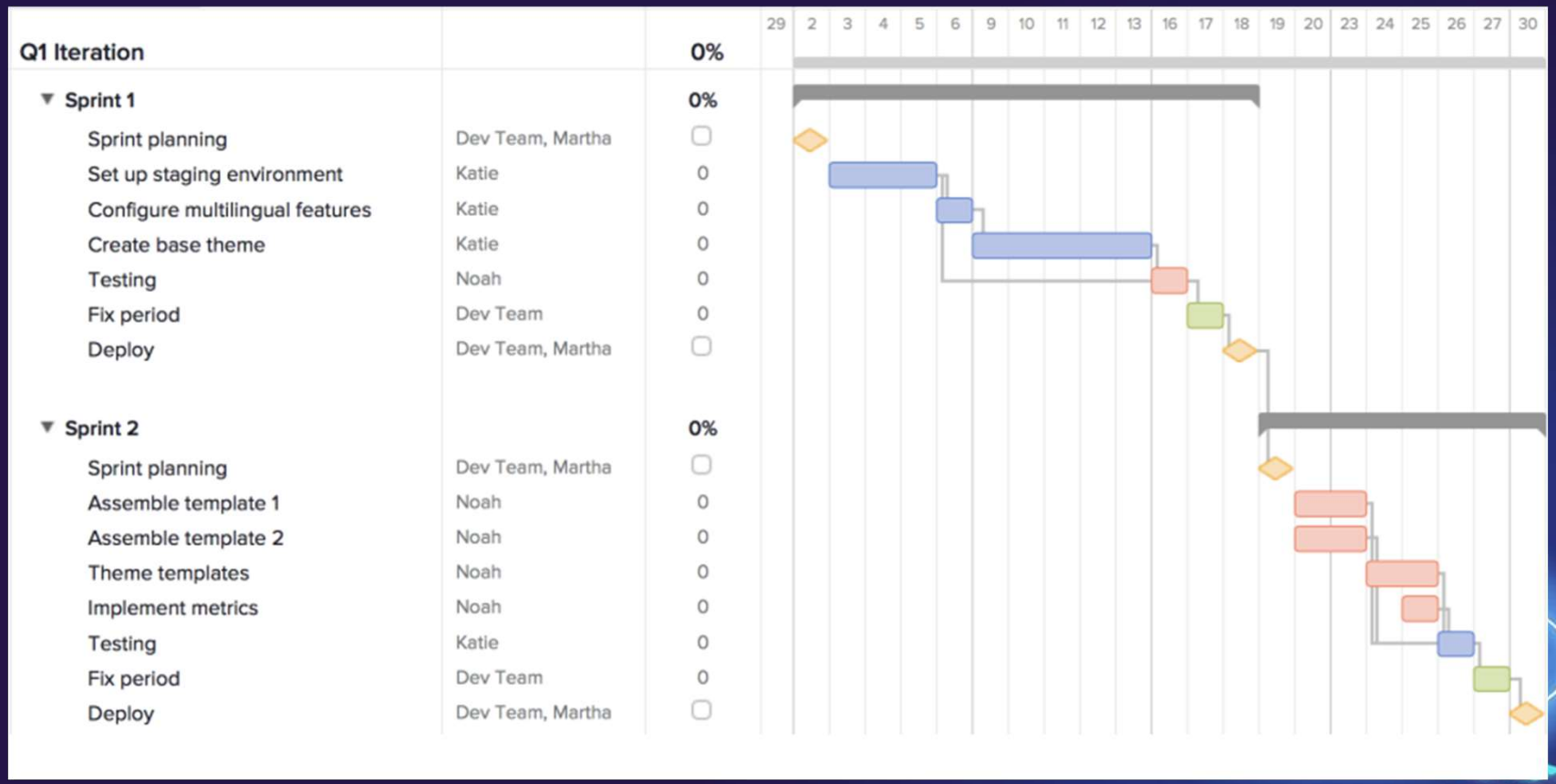
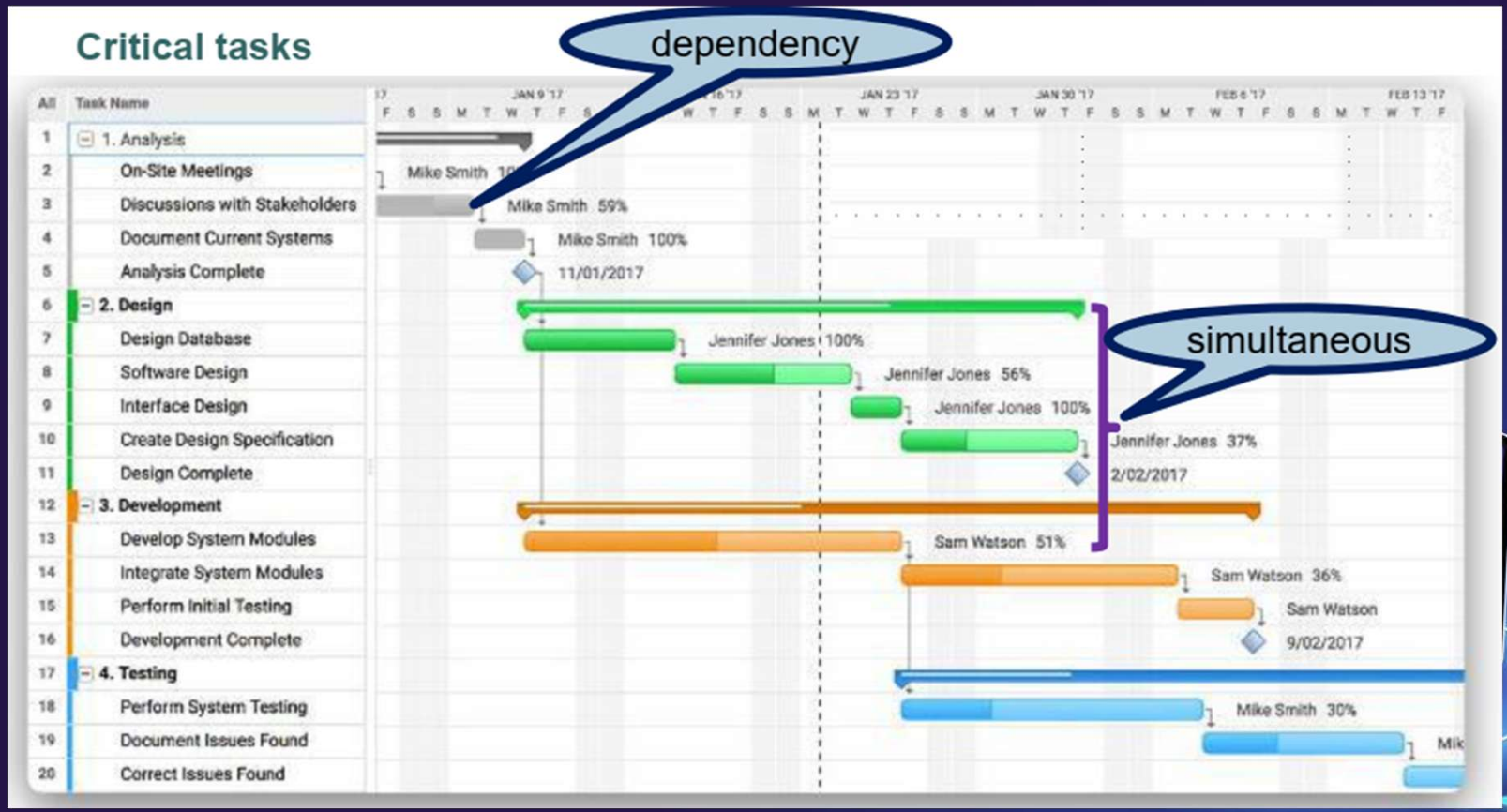
Gantt Chart



Q1 Iteration		0%
▼ Sprint 1		0%
Sprint planning	Dev Team, Martha	☐
Set up staging environment	Katie	0
Configure multilingual features	Katie	0
Create base theme	Katie	0
Testing	Noah	0
Fix period	Dev Team	0
Deploy	Dev Team, Martha	☐
▼ Sprint 2		0%
Sprint planning	Dev Team, Martha	☐
Assemble template 1	Noah	0
Assemble template 2	Noah	0
Theme templates	Noah	0
Implement metrics	Noah	0
Testing	Katie	0
Fix period	Dev Team	0
Deploy	Dev Team, Martha	☐

Time management & sample



Project Proposal Structure

- **Project Risks**
  - Identify any key risks (categories of risk) unique to the project
  - Risk identification: process of understanding what potential unsatisfactory outcomes are associated with a particular project
    - Risk/Impact Matrix must be included in the Project Proposal

Risk examples

- The export license may not be guaranteed
- Key system interface may not be compatible
- There may not be the physical space for a required equipment
- Data rates for required image quality may exceed capacity
- The regulator may introduce new requirements relating to …
- Severe weather may impact progress

Risk Management Matrix

Risk Management Matrix								
Status	Risk	Impact	Likelihood	Metric	Threshold	Current Value	Date	Action Plan
	Global team does not communicate frequently enough. Want to keep weekly communication high.	4	7	Meetings per week	2	2.5	Current	Invoke team's elevation plan, purchase videoconferencing systems, change incentives
	Data captured on long forms from online interaction sessions must not be lost if user gets error message or returns to screen.	6	6	% Data Lost	10%	25%	Q4 FY '13	Design review current forms layout, bring in Expert Co. consulting firm, change staff balance
	Server must respond to users rapidly under fairly high loads - expect page to be updated way under a second.	7	7	Ms at 1000 Users	259	1000	Q4 FY '13	Add architect and create tiger team with system optimization experience
	Financial partner cooperation is critical to this household finance program, and we need to have a sufficient number at launch.	4	6	Instructions	1000	247	Q4 FY '13	Increase business development staff, change incentive compensation, add external business development firm
	Mobile operating system support must be in place at the same time as launching the desktop version.	5	6	On Time	Q4 FY '14	Q4 FY '14	Current	Track schedule prediction accuracy. If slip then recruit internal team from Vietnam (permission already granted)

Risk management

- **Risk Categories:** Technology risks, financial risks, schedule risks, stakeholder risks
- **Risk Assessment:** Identify the probability and impact of risks
- **Risk Mitigation:** Develop a plan for each risk, like risk avoidance, transference, mitigation, or acceptance
- **Risk/Impact Matrix:** A visual tool used to categorize risks based on their likelihood and impact

Example:

- *Schedule Risk:* Delays in software development can push back product release.
- *Mitigation:* Implement project tracking tools like Gantt charts

Project Proposal Structure

- Your response, management to the risks.

Four main strategies:

  - Risk Avoidance
  - Risk Acceptance
  - Risk Transference
  - Risk Mitigation

- Explain how you will monitor and control the risks

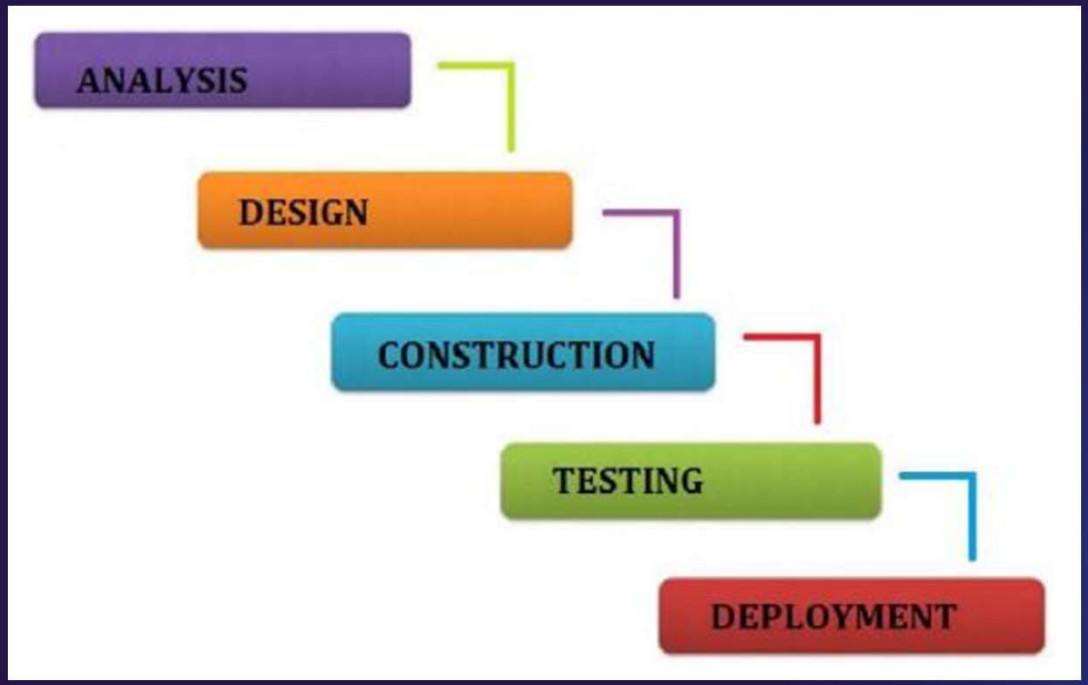
Project Proposal Structure

- **Project Acceptance and Approval**
  - Names
  - Signatures
  - Date of Approval

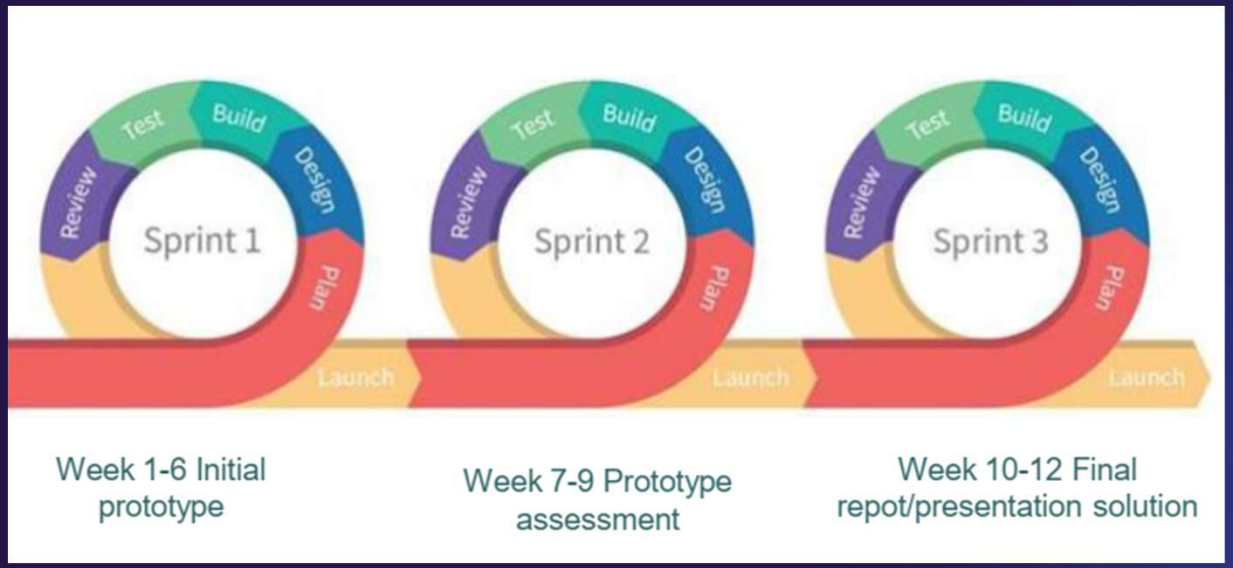
Project Methodologies

- Linear Sequential model (Waterfall model)
- Agile model

Waterfall model



Agile model



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Benefits of Agile

- 41% were better in terms of overall business value
- 83% showed quicker time-to-market speeds
- 50% were higher in quality
- 50% were less costly
- 83% were more productive

Waterfall vs. Agile

- **Waterfall:**
  - Sequential, linear approach
  - Each phase must be completed before moving to the next
  - Best for projects with clearly defined requirements
- **Agile:**
  - Iterative approach
  - Allows for changes and feedback at every stage
  - Best for projects with evolving requirements


THANK YOU