AGILE PROJECT MANAGEMET

What is Agile Project Management

- Agile project management is an approach based on:
  - delivering requirements iteratively and
  - incrementally throughout the project life cycle.
  - At the core of agile is the requirement to exhibit central values and behaviours of
    - trust
    - Flexibility
    - empowerment and collaboration.

Characteristics of Agile

- Agile project's defining characteristic is that it produces and delivers work in short bursts (or sprints) of anything up to a few weeks.
- These are repeated to refine the working deliverable until it meets the client's requirements.
- Unlike the traditional waterfall project management Agile starts work with a rough idea of what is required and by delivering something in a short period of time, clarifies the requirements as the project progresses.
- Collaborative relationships are established between stakeholders and the team members delivering the work

Characteristics of Agile

- Agile projects need documentation, reviews and processes just as traditional projects do to meet requirements, manage costs and schedules, deliver benefits and avoid scope creep;
- Agile does not expect to fully understand the requirements before work can begin.
- Instead it emphasises the importance of delivering a working product as something tangible for the client that can then be refined until it fulfils the client's needs.
- The key measure of project progress is this series of working deliverables

Pareto Principle

- 20% of the User Stories (functional work) probably contain 80% of the customer value. So find them and do those first
- Find the 20 percent that delights customers, deliver them, and repeat.

Prioritisation - MoSoCoW

- **Must-** Cannot deliver/go live without this.
- **Should-** Important but not vital
- **Could**- Wanted or desirable but less important. ”nice to haves”
- **Won’t-** team has agreed it will not deliver

Principles of Agile

- Customer collaboration over contract negotiation
- Individuals and interaction over process and tools
- Responding to change over following a structured plan
- Prototyping/working solutions over comprehensive documentation

Traditional PM versus Agile Methods

- Traditional PM Approach
  - Concentrates on thorough, upfront planning of the entire project.
  - Requires a high degree of predictability to be effective.
- Agile Project Management (Agile PM)
  - Relies on incremental, iterative development cycles to complete less-predictable projects.
  - Is ideal for exploratory projects in which requirements need to be discovered and new technology tested.
  - Focuses on active collaboration between the project team and customer representatives.

Traditional Project Management versus Agile Project Management

Traditional	Agile
Design up front	Continuous design
Fixed scope	Flexible
Deliverables	Features/requirements
Freeze design as early as possible	Freeze design as late as possible
Low uncertainty	High uncertainty
Avoid change	Embrace change
Low customer interaction	High customer interaction
Conventional project teams	Self-organized project teams

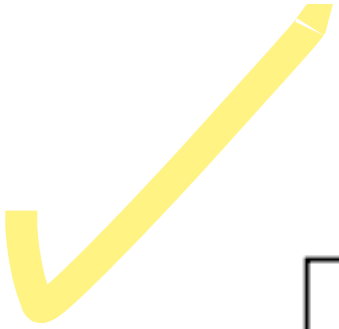
Waterfall Vs Agile

WATERFALL	AGILE
• Detailed, long-term project plans with single timeline	• Shorter planning based on iterations and multiple deliveries
• Definitive and rigid project management and team roles	• Flexible, cross-functional team composition
• Changes in deliverables are discouraged and costly	• Changes in deliverables are expected and less impactful
• Fully completed product delivered at the end of the timeline	• Product delivered in functional stages
• Contract-based approach to scope and requirements	• Collaborative and interactive approach to requirements
• Customer is involved only at the beginning and end of a project	• Customer is involved throughout the sprint

AGILE PM

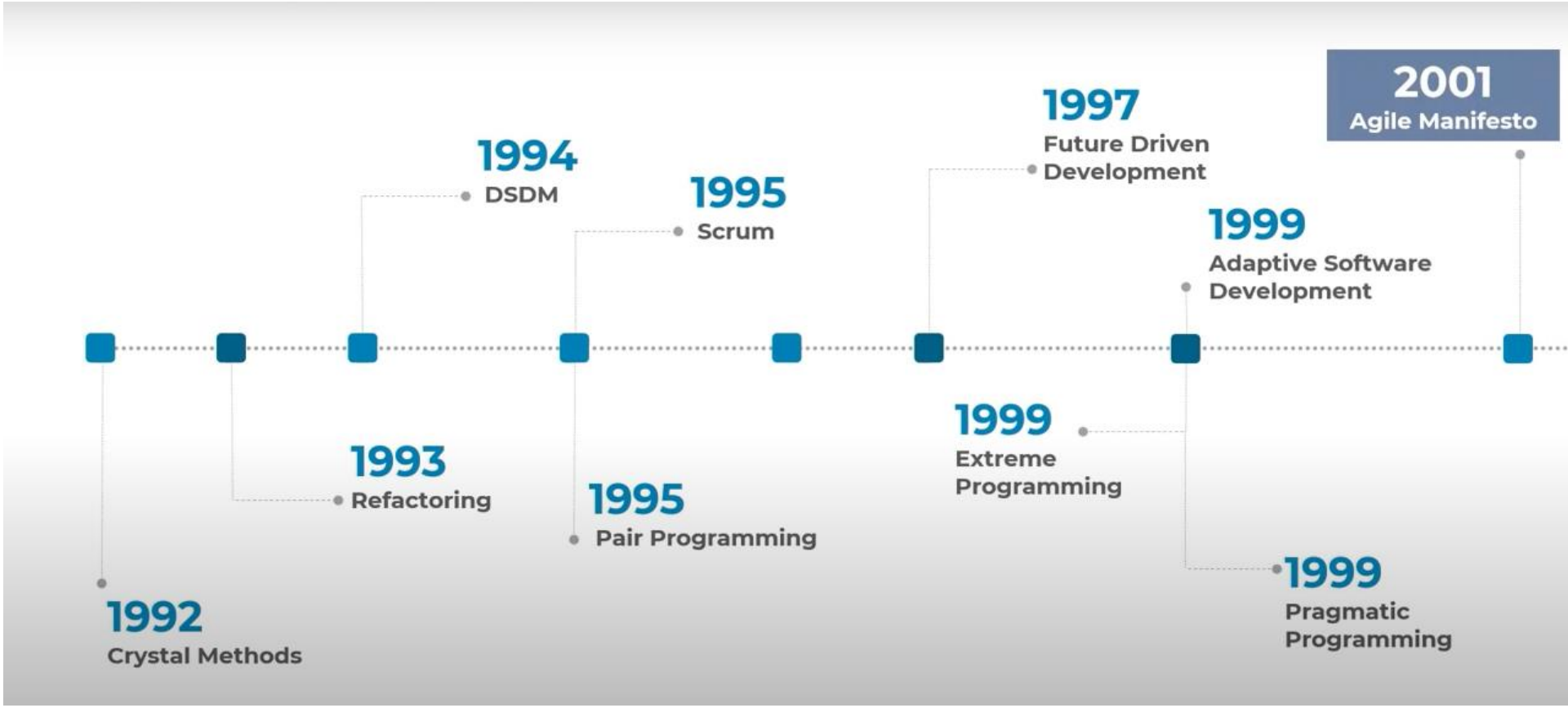
- Is related to the rolling wave planning and scheduling project methodology.
  - Uses iterations (“time boxes”) to develop a workable product that satisfies the customer and other key stakeholders.
  - Stakeholders and customers review progress and re-evaluate priorities to ensure alignment with customer needs and company goals.
  - Adjustments are made and a different iterative cycle begins that subsumes the work of the previous it

Agile PM Principles

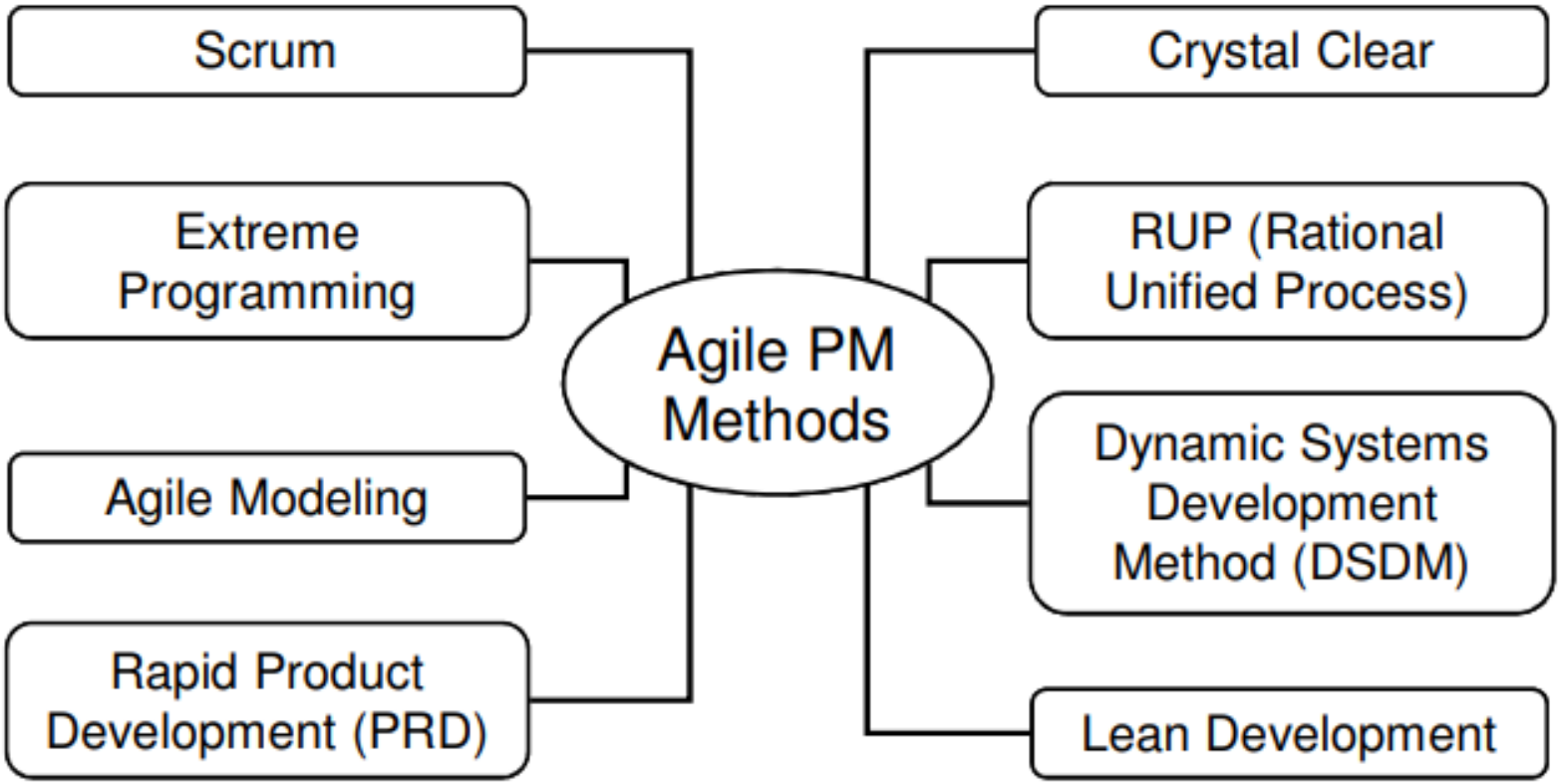


- Focus on customer value
- Iterative and incremental delivery
- Experimentation and adaptation
- Self-organization
- Continuous improvement

Historical Timeline



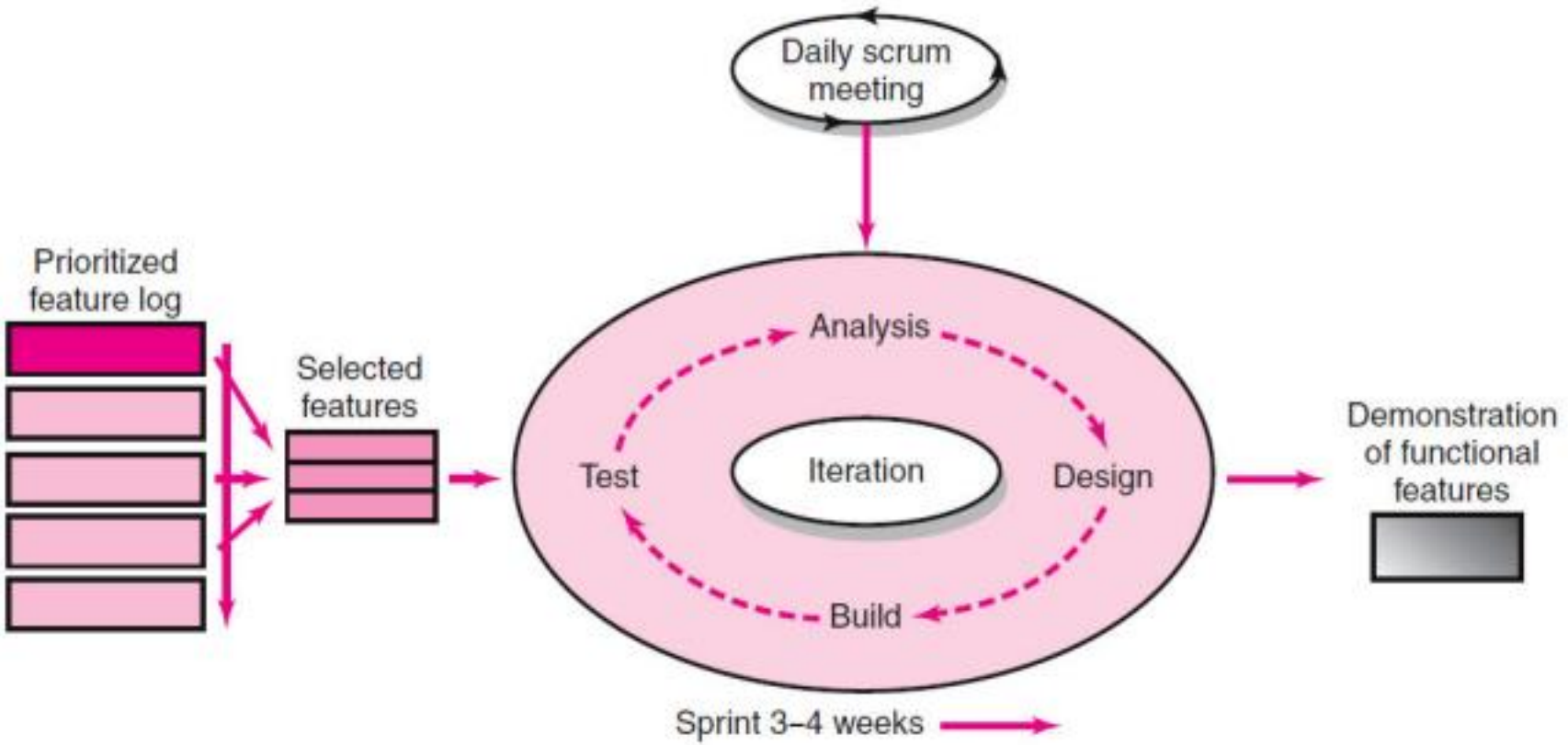
Agile PM Methods



Agile PM in Action: Scrum

- **Scrum Methodology**
  - is a holistic approach for use by a cross-functional team collaborating to develop a new product.
  - Defines product features as deliverables and prioritizes them by their perceived highest value to the customer.
  - Re-evaluates priorities after each iteration (sprint) to produce fully functional features.
  - Has four phases: analysis, design, build, test

SCRUM Development Process



Key Roles and Responsibilities in the Scrum Process

- Product Owner
  - –Acts on behalf of customers to represent their interests.
- Development Team
  - –Is a team of five-nine people with cross-functional skill sets is responsible for delivering the product.
- Scrum Master (aka Project Manager)
  - –Facilitates scrum process and resolves impediments at the team and organization level by acting as a buffer between the team and outside interference.

Limitations and Concerns of Agile PM

- It does not satisfy top management's need for budget, scope, and schedule control.
- Its principles of self-organization and close collaboration can be incompatible with corporate cultures.
- Its methods appear to work best on small projects that require only five-nine dedicated team members to complete the work.
- It requires active customer involvement and cooperation

Implication of Agile to Project Management

Project Management Function	Implication
Planning	Less formal, based on sprints
Scope	Collaborative and interactive approach to requirements as they are not fully known. Change is welcomed, scope creep is expected
Cost	Based on number of sprints and effort, iterative, bottom up
Quality	Early testing, continuous improvement
Project Team	Greater communication and collaboration

Agile Team Roles

- The agile mindset
- 3-9 collocated members dedicated to the project
- Self-organizing
- Cross-functional teams (in Scum called Scrum team)
- Product owner (often with business background)
- Team facilitator (in Scrum called Scrum Master)
- Servant leader

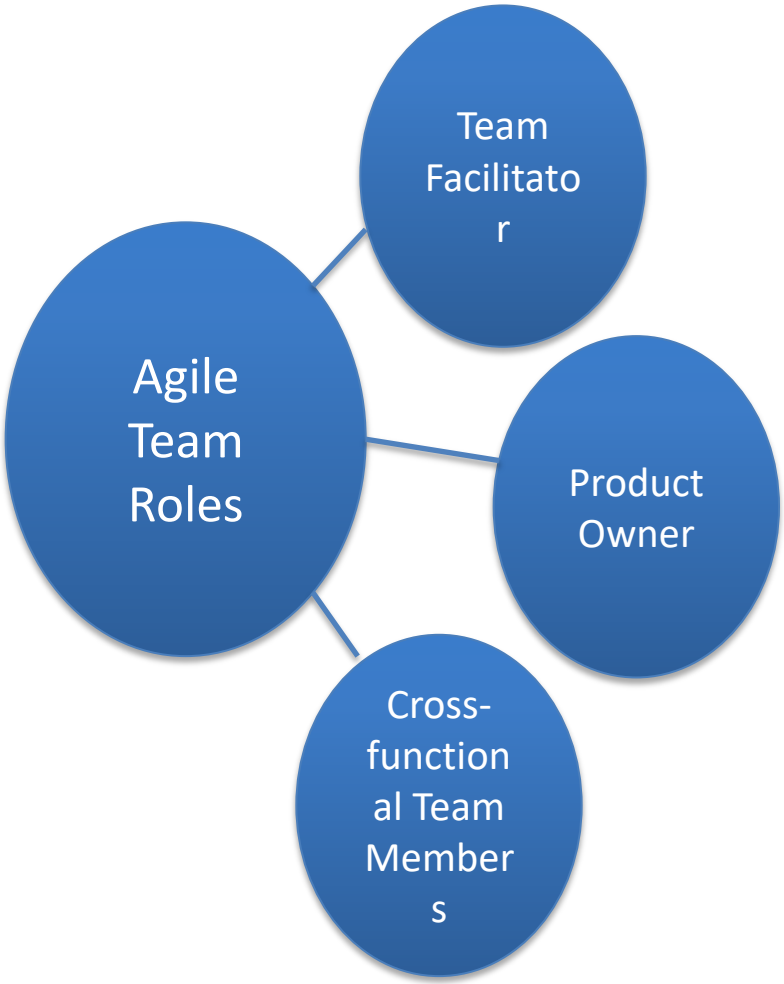


Figure: Three distinct roles in agile teams

Collocated & Distributed Teams

- Agile teams require close collaboration, daily standups, dedicated space, and minimal interruptions
- Collocation is typically regarded as essential
- However, Agile is practiced among distributed teams
- Distributed teams require communication technology such as always-on videoconferencing (fishbowl window), repositories, etc.
- Problem of time zones still remains

AGILE TUTORIAL

- https://www.youtube.com/watch?v=KNBHQ0pyaG8