

# Applied Software Engineering SIT725

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# **Lecture 5**

## **Software Project Management**

# Outline

- Software project management
- Brief history of PM
- Agile project management
- Scrums: Meeting

# What is Project Management?

PM helps the development of any software.  
Having a good PM in place can really speed up the tracking of faults and efforts.  
Not having PM will probably cause your project to fail.



**More than 90% of projects in Victoria go overbudget or over their deadline."**

# So What is it?

It is the planning, organising, securing, motivating and controlling the resources to successfully complete a project.

You can clearly assume that it is about defining the success of your project.

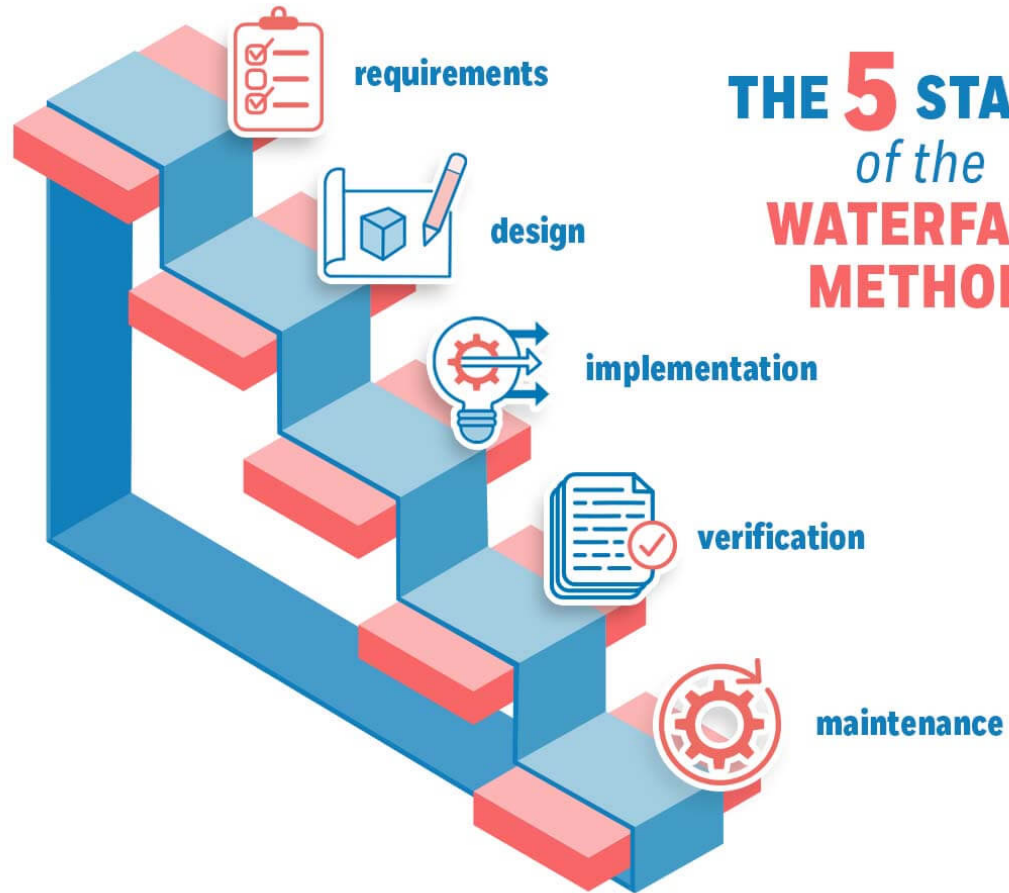
It is about .....



<https://twproject.com/blog/choose-project-management-software-mother-tongue/>



# Project Development Process- Waterfall model



## THE 5 STAGES of the WATERFALL METHOD

Waterfall focuses more on requirements gathering, but it is not reactive.

# If your users are not happy with the product..

- The software is not good, maybe not engaging, maybe not doing the right functionalities.
- Your Design **Changes**
- Your Schedule **Changes**
- Your project Management **FAILED**

## Advantages/ Disadvantages of Waterfall?

### Advantages

- Simple and easy to understand and use
- Clearly defined stages.
- Works well for smaller projects

### Disadvantages

- No working software is produced until late during the life cycle.
- High amounts of risk and uncertainty.
- Not a good model for complex project
- Adjusting scope during the life cycle can end a project.

# Agile Development



# Agile Manifesto

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

# Agile Values- Individuals

Valuing people more highly than processes or tools is easy to understand because it is the people who respond to business needs and drive the development process

## What We Value

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### Individuals and Interactions Over Processes and Tools

*While there is value in the item on the right, we value the item on the left more.*  
<http://agilemanifesto.org>

**Individuals and  
Interactions Over  
Processes and  
Tools**



# Agile Values- Working Software

- **Working Software Over Comprehensive Documentation**
- Prioritizing Working Software
- Balancing Documentation
- Adaptability and Responsiveness
- Customer Collaboration
- Minimizing Waste

# Agile values- Customers

## **Customer Collaboration Over Contract Negotiation**

- Customer-Centric Approach
- Continuous Feedback
- Flexibility and Adaptability
- Trust-Based Collaboration
- Value Delivery
- Empowered Customers

# Agile Values- Be Reactive

## Responding to Change Over Following a Plan

- Agility and Flexibility
- Embracing Iterative Development
- Customer Collaboration
- Empowering Teams
- Value-Driven Development
- Adaptability

# **AGILE IS GOOD, NOT PERFECT**

**AGILE assumes easily interchangeable tasks and developers, and often that's not the case....**

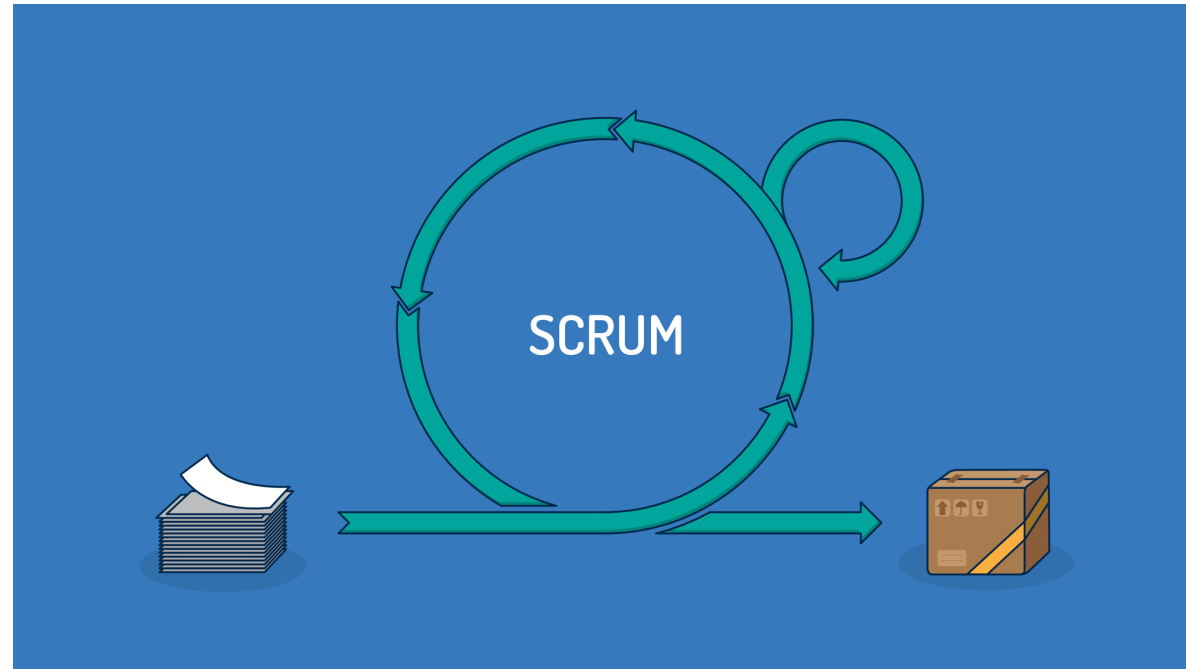
## **Challenges:**

- **Learning Curve**
  - **Lack of Detailed Documentation**
  - **Predictability**
  - **Scope Management**
  - **Team Collaboration**
  - **Project Size**
  - **Customer Availability**
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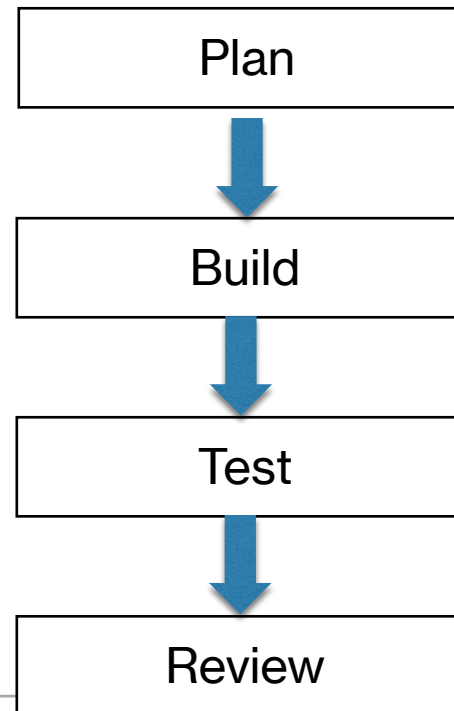
# Scrums

- Transparency
- Inspection
- Adaptability



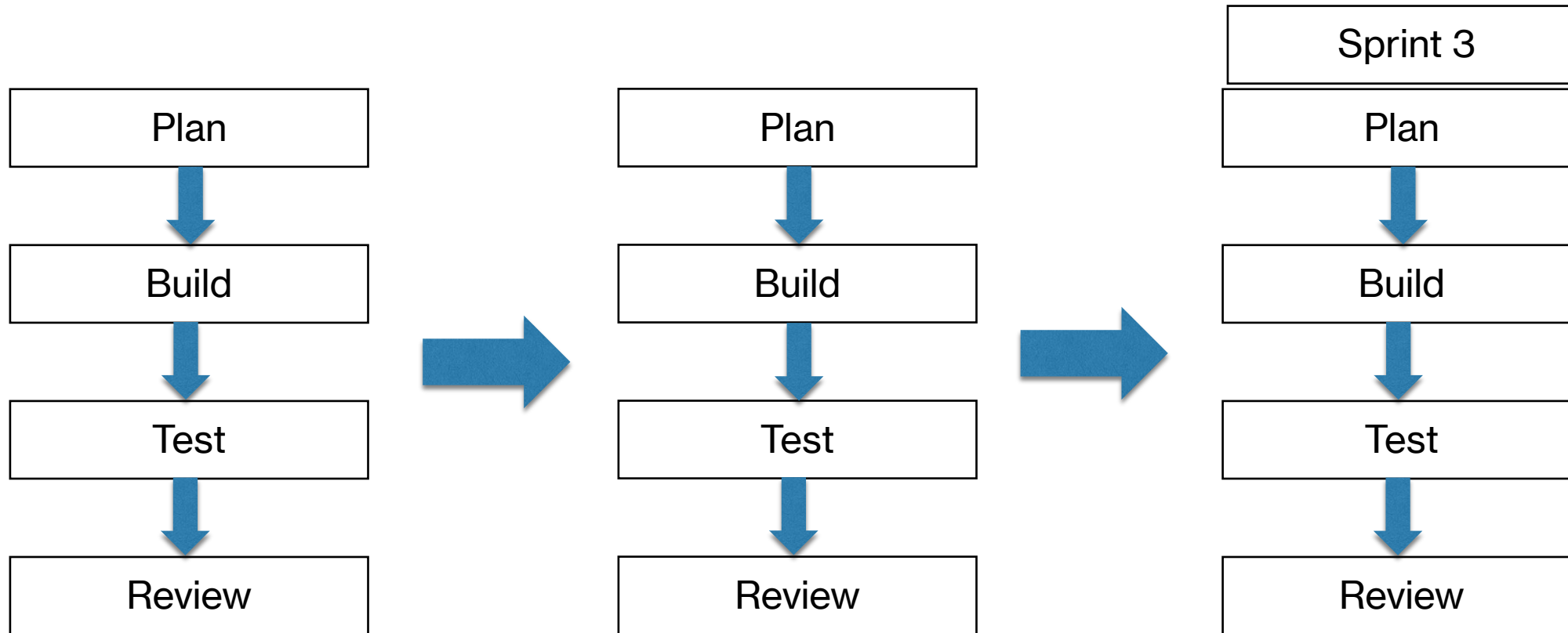
# SCRUM- Enter iterative

- When we work in agile, our aim is to build small and demonstrable increments.



# SCRUM- Sprints

Each iteration starts and ends at set time, normally 2 weeks. Sprints never overlap or change in size and length. Each is incremental, until you ship your product.



# SCRUM- Roles

## Product Owner

- Is the person in charge of the “functionality” of the product and represents the final say, you can see him as the client

## Scrum Master

- Servant and Leader and Takes care of the team. He runs the meetings and protects the team from “uncertainty” and from the client

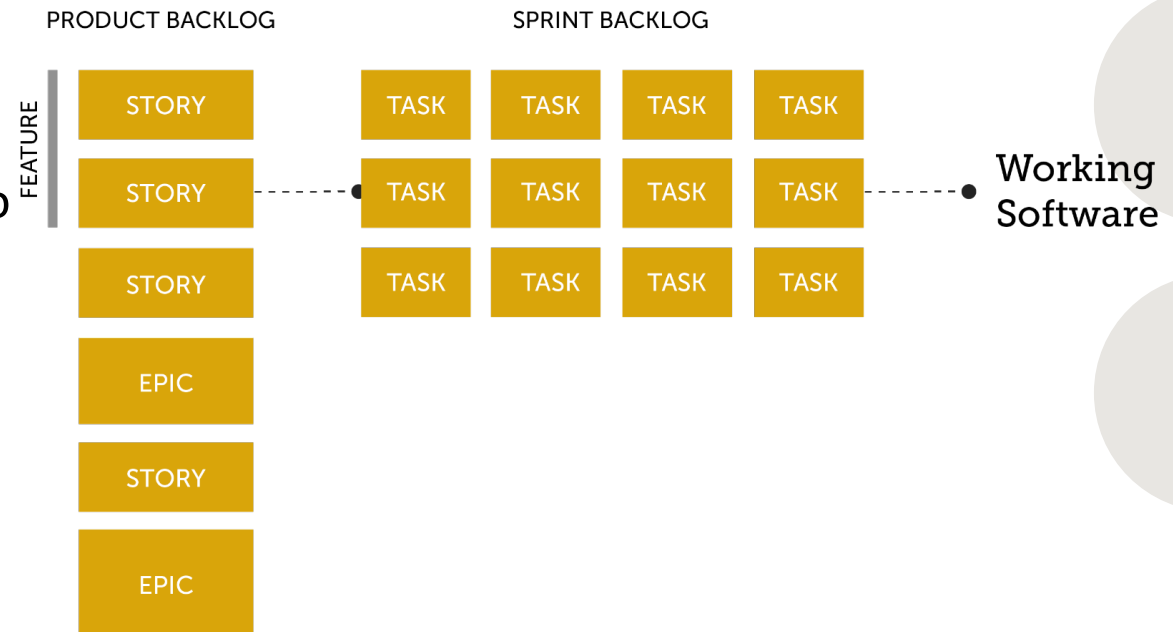
## Team

- These could be developers, testers, designers, or a person may play different roles depending on the team size



# SCRUM- Product Backlog- Artifact

- “An ordered list of everything that might be needed in the product and is the single source of requirements for any changes to be made in the product.”
- This is owned by the product owner, and it comprises of all the stories which will turn into the sprint backlog.



# What was a user story?

- The user stories define what the product will do because we know what the “user” will be able to do .

**AS THE**  
User  
Designer  
Artist

**I WANT TO**  
Describe  
something here

**SO THAT**  
Explain reason  
here for taking the  
action



# Story VS Feature

A product owner will provide stories, the stories turn into features. The feature must be clear, while the story must explain why in order to decrease misunderstanding

## STORY

- As a user, I want to be able to set my max withdraw limit to X so that I don't overdraft

## FEATURE

Limit withdraw limit to X

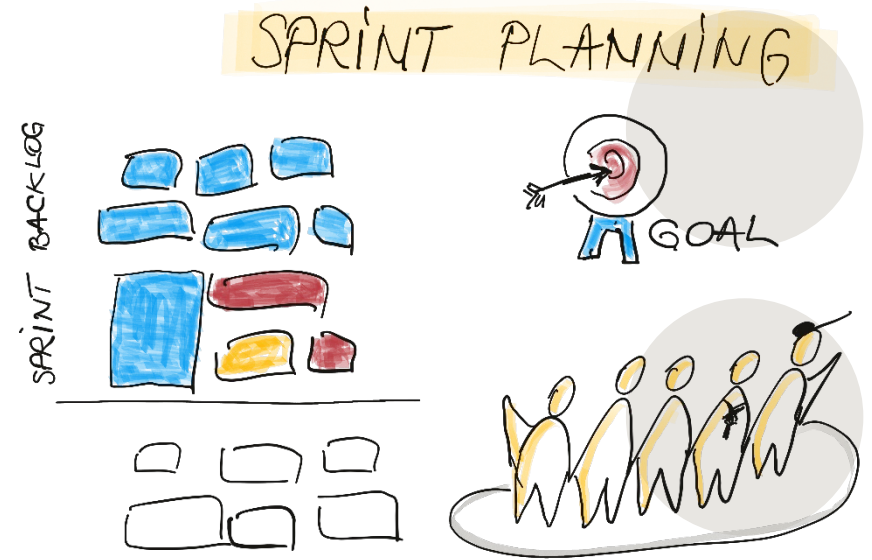
# Running Scrums

In scrums we have three major events

**Sprint Planning** – we discuss exactly what will be “done” in the coming sprint

**Daily Scrums** – is a quick meeting, generally driven by the scrum master, that updates the status of the team. Generally looks at Done, Doing and Blockers

**Sprint Review and Retrospective** – at the end of the sprint, we generally present to the client.



# Planning

Planning normally happens on the day before the start of the new sprint or earlier.

During this time, the scrum master and the product owner, and some members of the team, discuss exactly what stories to look at and divide everything into smaller tasks.

Stakeholders agree on the Hours value of the tasks, normally by voting.

# Scrum Meeting

- The utopia of scrums defines the scrums meeting as a 10 minutes session where everyone says exactly what they have done and what they are working on and if they had any blockers.
- Realistically, it will go way beyond that. It is the work of the scrum master to keep it short and concise.

# Review

This is where you will discuss with the stakeholders, potentially the client and the PO to understand where everything is going.

Potentially, you might have a working prototype.

This is where you decide if changes are to be made.

# Summary

- Software Project management
- Agile project management
- Scrums



Thank you  
Question?

