

IFB295 – IT Project Management

Week 3 - Tutorial No.2 (3 – 7 August, 2020)

Agile & Scrum Framework Story Prioritization, Story Estimation

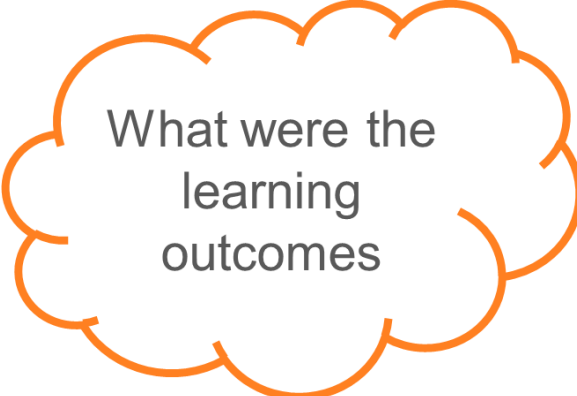
Tutor: <your name>

Agenda

- Recap Last Week's Tutorial
- This Week's Learning Outcome
- Overview of Agile Values / SCRUM Framework
- User Story Prioritization
- User Story Estimation
- Retrospective (Review and Close)

Recap of Last Week's Tutorial

- Team formations
- Overview of Project Management, Assessments and Case Study
- Gathering user requirements and creating User Stories
- Defining & writing Acceptance Criteria
- Identifying team roles and responsibilities
- Documenting Team Social Contract
- Setting up Trello and Communication channel



What were the
learning
outcomes

Today's Learning Outcomes

- Overview of Agile Values and SCRUM Framework
 - Principles, Processes, Team Behaviour
- User Story Prioritisation
- User Story Estimation

Values of Agile Development

Individuals and
Interactions

over

Process and Tools

Working Product

over

Comprehensive
Documentation

Customer
Collaboration

over

Contract Negotiation

Responding to
Change

over

Following a Plan

Source: www.agilemanifesto.org

Self Organizing Team Behaviors

Directed Team **WATERFALL**

Project Management Behaviours

- Prepare detailed staffing plan
- Negotiate for part-time specialists
- Command & control individuals
- Conduct individual performance reviews

Team Behaviours

- Take direction
- Seek individual reward
- Focus on low-level objectives
- Compete
- Comply with processes
- Avoid conflicts

• **AGILE** **Self Organising Team**

• **Project Management Behaviours**

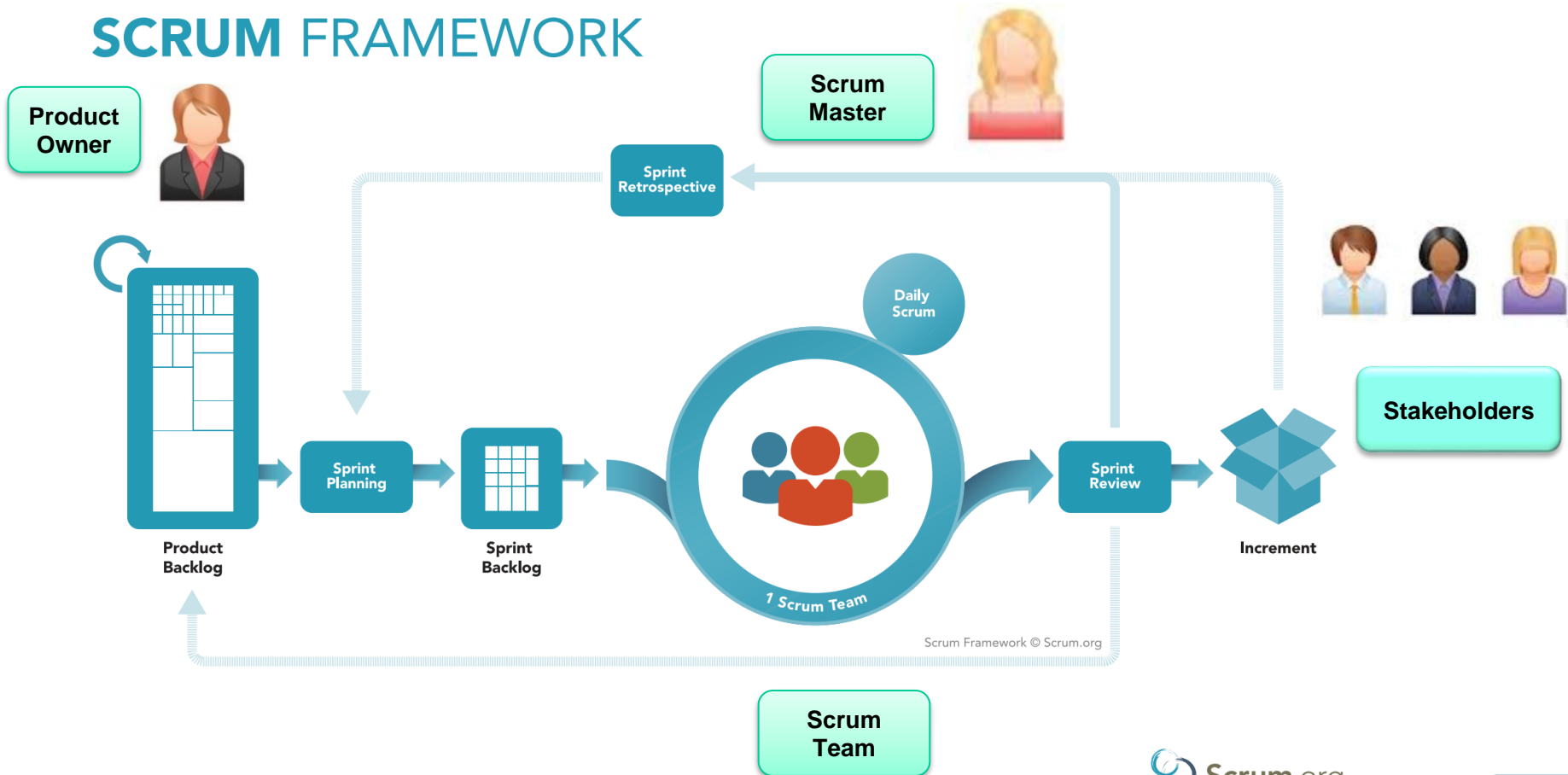
1. Gather cross-functional team
2. Negotiate for full-time generalists
3. Facilitate teams and remove impediments
4. Conduct team retrospectives

• **Team Behaviours**

1. Take initiative
2. Focus on team contributions
3. Concentrate on solutions
4. Collaborate
5. Continuously improve
6. Navigate conflicts

Overview of SCRUM

SCRUM FRAMEWORK



SCRUM Principles

Developing and Sustaining Complex Products

PRINCIPLE #1

Incrementally deliver
Value in each sprint (2-
4 weeks)

Optimize Value

PRINCIPLE #2

Foster
Self-Organising
Teams
[6 +/- 3 People]

**Optimise
Productivity**

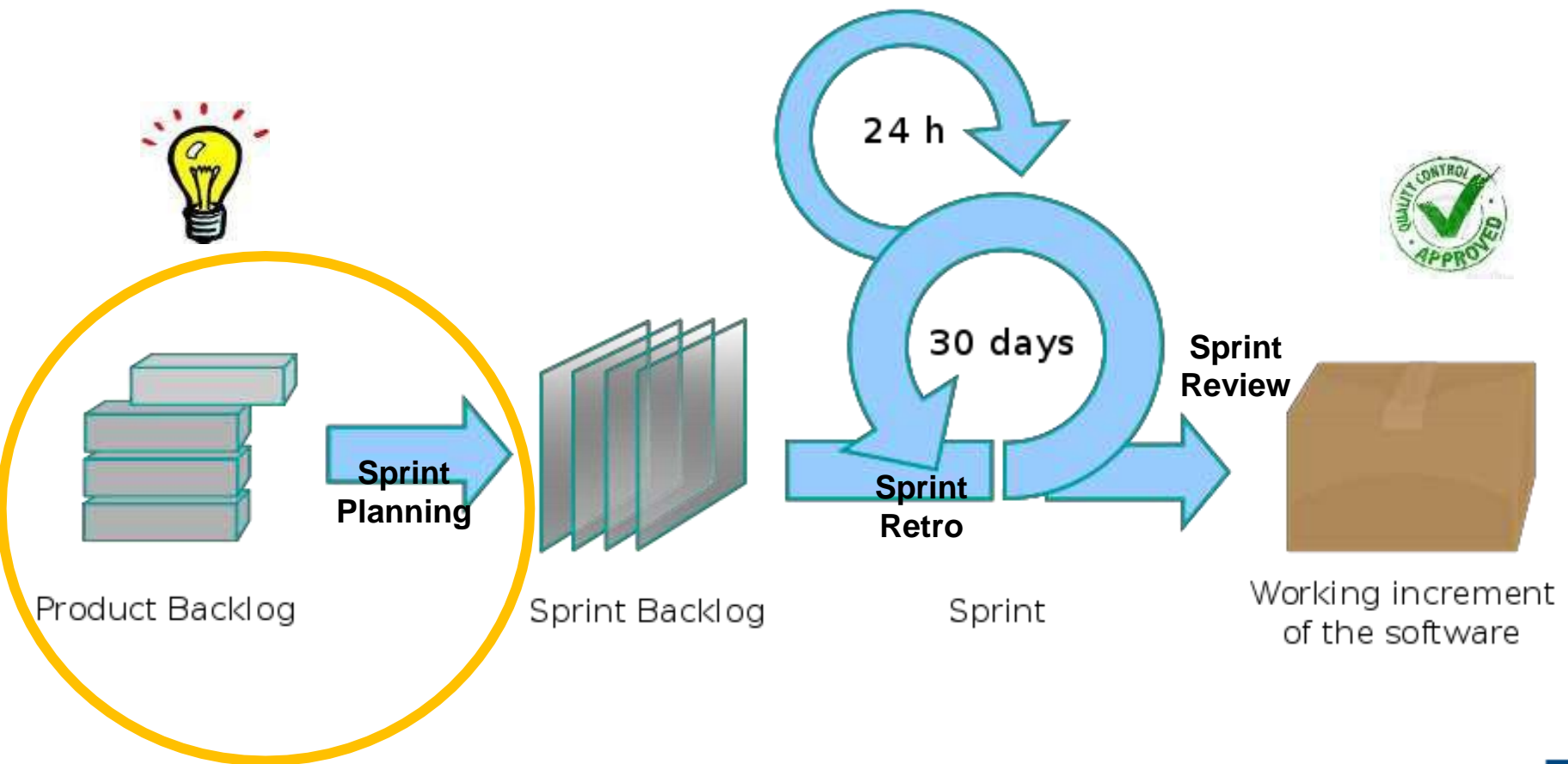
PRINCIPLE #3

Use Empirical Process
Control

**Optimize
Predictability**

Agile Manifesto

SCRUM Process



Example of User Story

As a *lecturer* I want to *see a list of all students enrolled in my classes* so that *I can see class lists and total enrollment*.

Acceptance Criteria – Show class details

Given I have a “Show Classes” link displayed for the classes I lecture,

When I click on “Show Classes”,

Then the system should display the list of classes together with class activity, class no, day, time, and room where classes are held for each class.

Example of User Story (P/Backlog)

As a	I want	So that	Acceptance Criteria	Est	Priority
Lecturer	to see a list of all students enrolled in my classes	I can see total enrolment and student details.	Given I have a “Show Classes” link displayed for the classes I lecture, When I click on “Show Classes”, Then the system should display the list of classes together with class activity, class no, day, time, and room where classes are held for each class.	TBC	TBC
Student	a list of all available offerings of my classes	I can chose a class that is convenient to me	Given I have a “Available offerings” link displayed for each of my classes is displayed , When I click on “Available offerings”, Then the system should display a list of offerings for that class together with “Register” button.	TBC	TBC
Unit Co-ordinator	to be able to modify unit outline	the unit outline is up to date and accurate	Given I have a textbox option to search unit outline, When I search for a unit outline for the unit that I coordinate, Then the system should display “Download” and “Upload” buttons.	TBC	TBC

Story Estimation

Why is Estimation Important?

- Get initial feel for project cost
- Determine if project is still feasible
- Cull and re-prioritise stories based on cost
- Estimates are very coarse-grained
 - this is a first pass
 - we inevitably revise these as more info arrives
- Done as a team



User Story Estimation

Story Points are not units of time!

- It is a metric used in agile project management to estimate the difficulty (complexity) of implementing a given user story.
- It is an abstract measure of overall effort required to implement a product backlog item.
- *IFB295 example:*
Team of five. Each member is expected to spend around 10 hours on the project each week. So, 2 hours a day for ideal day / person day. 10 hours a day for team day over five days

When estimating, important elements to consider:

Technologies to be used (refer Technology Grid), Manpower, time, resources, difficulty in developing a feature, etc.

- Consistency - all 2's require the same amount of effort,
- Relativity - a 4 is twice as big as a 2
- Fungibility - all 4's are interchangeable



Technology Grid

- It is easy to miss aspects of a story.
- Draw a grid with a row for each technology
 - or complex system interaction
- Use as a cross-reference when discussing stories
 - helps ensure complete scope of story is understood
- First pass
 - select 10 highest priority stories
 - discuss each story's scope and high-level acceptance criteria
 - with product owner
 - mark each needed technology on the grid



Technology Grid – Sample template

Stories



	001	003	002	004
HTML	X	X	X	
JS			X	X
AJAX			X	X
DB	X	X		
XML	X			
Msg.	X			

Things to Count

Tally Board



- Group story cards that are the same size in columns
- Limited numbers make it easier to get consensus
 - emphasises that larger estimates are “fuzzy”
 - conveys lack of precision in estimates



Getting Your Priorities Right

Why should we prioritise?

- Make the business benefit explicit – maximise ROI
- Develop a common understanding of essentials
- Eliminate wasted effort on non-essentials
- Provide qualitative and quantitative measures for the project
- Start to see the size and shape of release and sprint plans

Setting Priorities - Technique

- **MoSCoW**

- Must have
- Should have
- Could have
- Won't have this time

- **Others**

- High / Medium / Low
- Ranking (1..n)

Factors to Consider:

- Desirability to
 - broad base of users
 - small group of important stakeholders
- Cohesiveness of functionality
 - Impact on other high priority stories
- Impact on other stories
- Risk involved implementation

Prioritization Strategies

- **Collective Effort by Team**
 - Product Owners establish the priorities
 - Development Team provide input / expert advise
- **Deliver Important Business Value Early**
 - Consider risks and infrastructure requirements
- **Focus on Must Haves vs. the Others**
- **Split Stories with mixed priorities**
 - A story may have aspects that are high and those that are low

Example of User Story (Product Backlog)

As a	I want	So that	Acceptance Criteria	Est	Priority
Lecturer	to see a list of all students enrolled in my classes	I can see total enrolment and student details.	Given I have a “Show Classes” link displayed for the classes I lecture, When I click on “Show Classes”, Then the system should display the list of classes together with class activity, class no, day, time, and room where classes are held for each class.	8	M
Student	a list of all available offerings of my classes	I can chose a class that is convenient to me	Given I have a “Available offerings” link displayed for each of my classes is displayed , When I click on “Available offerings”, Then the system should display a list of offerings for that class together with “Register” button.	5	M
Unit Co-ordinator	to be able to modify unit outline	the unit outline is up to date and accurate	Given I have a textbox option to search unit outline, When I search for a unit outline for the unit that I coordinate, Then the system should display “Download” and “Upload” buttons.	3	S

Mika Music School - Case Study

- Refer to the Case Study for Assessment 1 – on blackboard
- Go through this document in your groups. Group tasks -
 - Develop additional User Stories based on the solution you would like to provide to the client.
 - Develop Acceptance Criteria for your user stories.
 - Prioritise your user stories using the MoSCoW framework
 - Identify story points (estimation) for each user story.

Homework

1. Social Contract & Trello

- Finalise your social contract and upload on Trello
- Ensure your Trello boards are set up and invite your Tutor to join

2. Assessment 1 – User Stories, Release Plan and Sprint 1 Plan – Preparation activities

- Finalise backlog of User Stories negotiated among team members.
 - Produce a fully developed backlog of existing of User Stories which include Acceptance Criteria.
 - It is expected that the backlog will be bigger than can be developed during the semester.
- Develop estimates for all user stories.
- Prioritize all user stories (Must, Should, Could & Won't Have)

Close / Wrap Up

**I look forward to your
contributions next week**

Thank you for your participation.