

# **Computer Science / IT Project**

**COMP3900/9900**

**Matthew Sladescu, Week 1, T2 2021**

Why?

Course Introduction  
Assessment Overview  
Interface and Flow Diagrams  
User Stories  
Scrum Preview (including on scrum roles)

# Assumed Knowledge

**Before commencing this course, students should be able to:**

- produce correct software programs in Python, Java or C/C++, i.e., compilation, running, testing, debugging, etc.
- produce readable code with clear documentation.
- have basic knowledge of database programming, Web programming and/or script programming (such as Python, PHP, JavaScript).

# Assumed Knowledge

**For COMP9900, students must:**

- Be in their final semester of study, and
- Have completed at least 66 UOC towards MIT program 8543.

# Assumed Knowledge

**For COMP3900, students must:**

- Have successfully completed COMP1531 and (COMP2521 or COMP1927)
- Be enrolled in a BSc Computer Science major
- Have completed at least 102 UOC

# Learning Outcomes

- be able to work effectively in a project team, and lead when required
- be able to work from a set of requirements, elaborate them, and produce a specification
- be able to use software development and software project management tools
- be able to design and build a correct, efficient and robust software system from specification
- be able to validate the correctness and robustness of software
- be able to communicate technical information clearly, both verbally and in writing
- be able to manage their time effectively, and make reasoned trade-offs over competing demands

**Getting to know you, getting to know me ...**



Dr. Matthew Sladescu  
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# What is the Capstone Project?

This is a software project capstone course. Students work in teams of ideally five (5) members to define, implement and evaluate a real-world software system. Most of the work in this course is team-based project work, although there are some introductory lectures on software project management and teamwork strategies. Project teams meet weekly starting from Week 1 with project mentors to report on the progress of the project. Assessment is based on a project proposal, two progressive demonstrations and retrospectives, a final project demonstration and report, and on the quality of the software system itself. Students are also required to reflect on their work and to provide peer assessment of their team-mates' contributions to the project.

# What is the Capstone Project?

A capstone software project

Students work in teams

To define

To implement

To evaluate

A real world software system

# Classes

*Lectures:* Weeks 1, 2, and 10 - Monday 9am

Week 3 - Tuesday 8am

***Where: Online - via echo360 and WebCMS***

*Labs:* Weeks 1-5, 7-10

2 hours per week, as scheduled on your timetable

***Where: Online - via Blackboard Collaborate Ultra***

# Online Resources

*Moodle:* <https://moodle.telt.unsw.edu.au/login/index.php>

Links to:

“Lectures” : echo360 Lecture Recordings

“Labs” : Blackboard Collaborate Ultra Lab sessions

Course website : WebCMS site

<http://www.cse.unsw.edu.au/~cs3900/>

<http://www.cse.unsw.edu.au/~cs9900/>

Main course website: slides, assessments, groups,  
and all other main course content

# Labs

- Weekly online meeting with mentor
  - Project progress updates
  - 2 x Progressive Demos
  - 2 x Team Retrospectives
  - 1 x Final Project Demo
- Attendance to labs is important!
- Regular online group meetings (more than once per week) among team members

# Assessment Overview

# Assessment Overview

- No written exam

# Assessment Overview

- A team-based project
- Each team has ideally five (5) members



# Assessment Overview

Item	Topic	Due	Marks	Contributes to
Proposal	Project	Monday, Week 4 @ 9:00am (21 Jun)	10%	CLOs 1,3,5-7
Progressive Demo A	Project	Week 5 Lab Time	2.5%	CLOs 2-7
Retrospective A	Project	Week 7 Lab Time	2.5%	CLOs 5
Progressive Demo B	Project	Week 8 Lab Time	2.5%	CLOs 2-7
Retrospective B	Project	Week 9 Lab Time	2.5%	CLOs 5
Software Quality	Project	Monday, Week 10 @ 10:00pm (2 Aug)	20%	CLOs 2-7
Project Report	Project	Monday, Week 10 @ 10:00pm (2 Aug)	20%	CLOs 1,2,5-7
Final Project Demo	Project	Week 10 Lab Time	20%	CLOs 2-7
Participation & Peer Assessment	Project	Friday Week 10 @ 10:00pm (6 Aug)	20%	CLOs 1-7

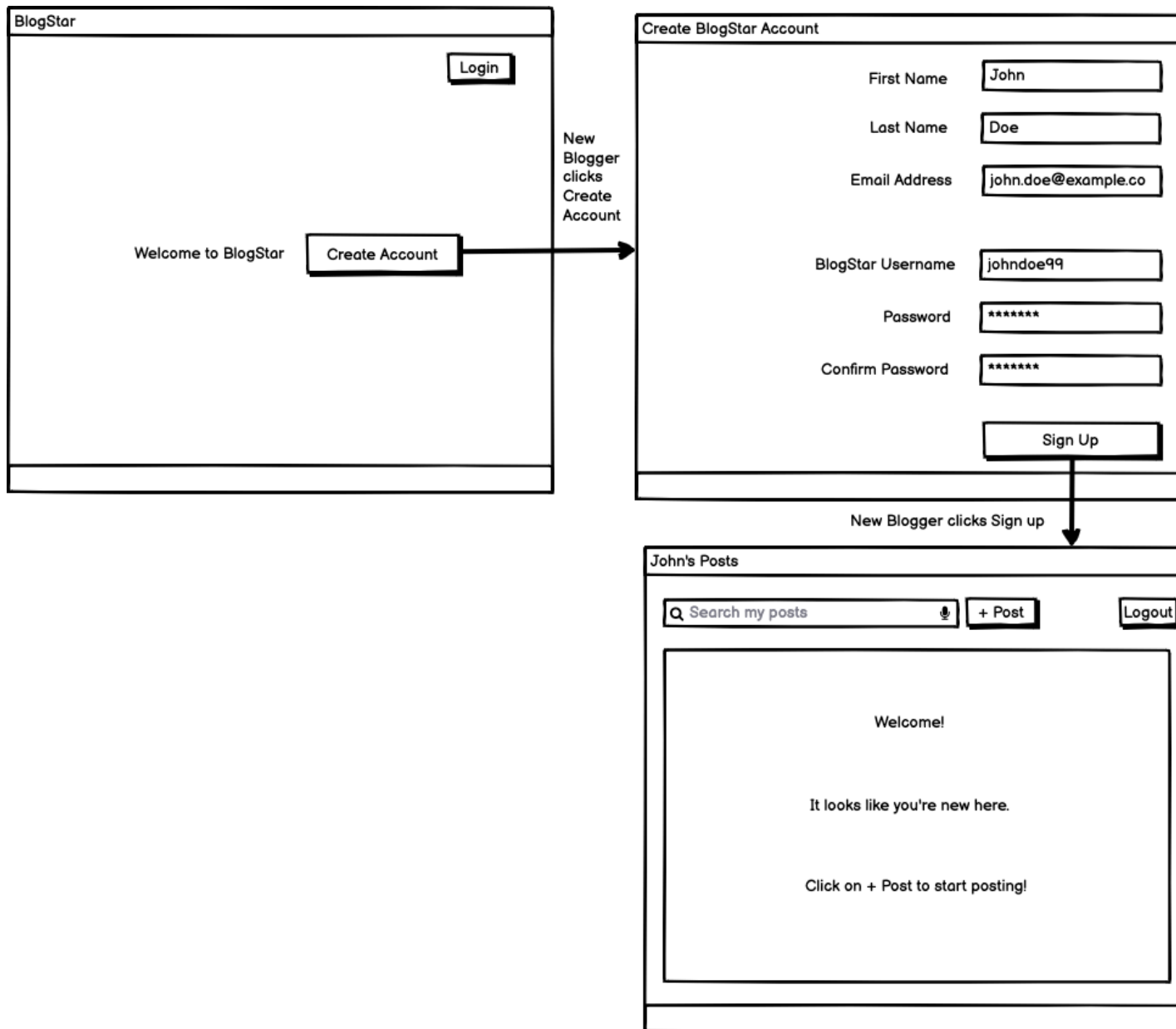
## Charity Connect

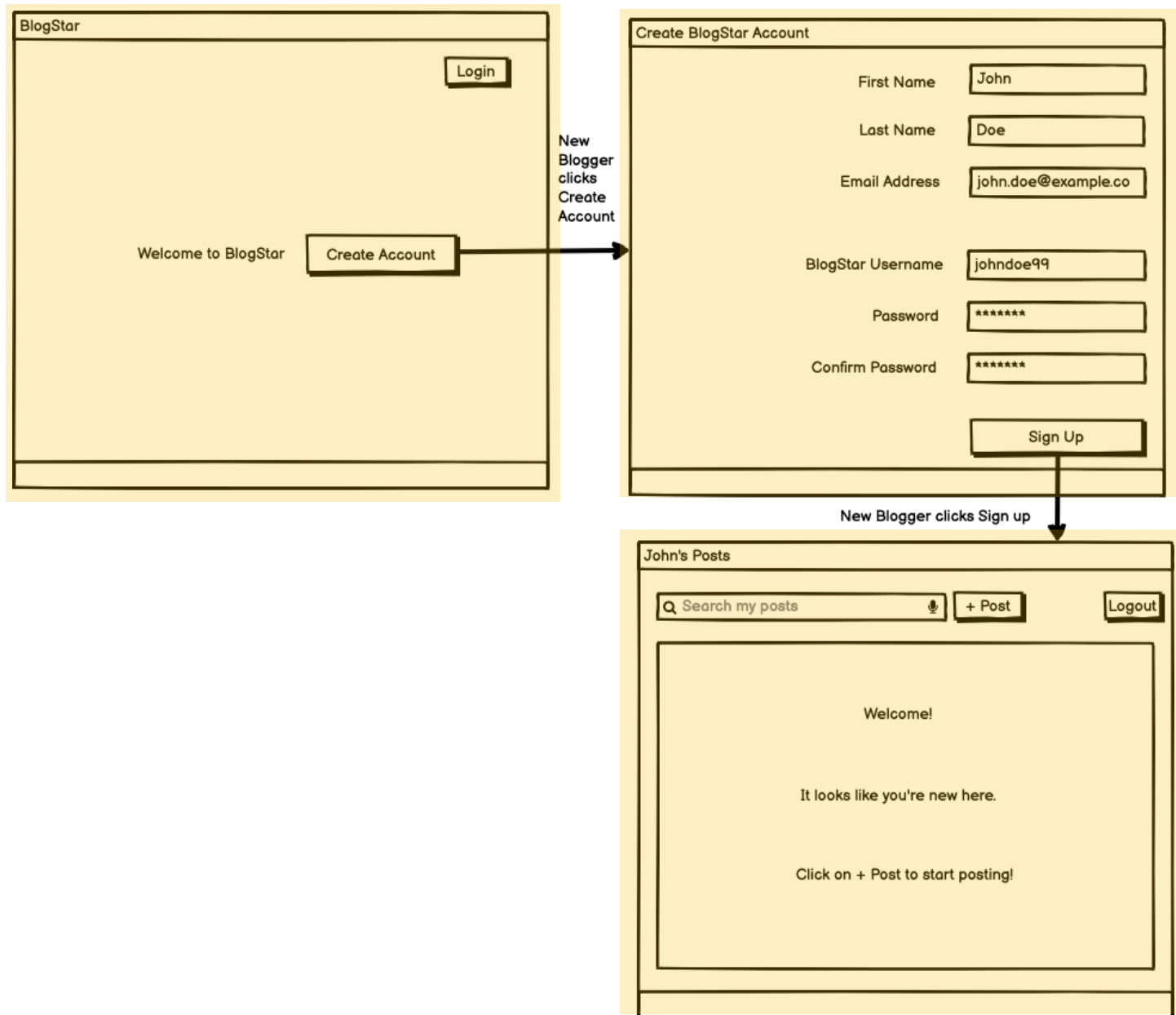
Charities have needs, and sponsors can be out there to satisfy those needs. That's the motivation behind Charity Connect. The platform will allow sponsors and charities to register their details, along with the needs they can help with (sponsors), or the needs they have (charities). Once registered, these charities and sponsors can request to be connected, with sponsors being rewarded for their support through advertisements on their sponsored charity pages and on the "Biggest Sponsors" page if they qualify. Sponsors can look for charities they think they can support the needs of, and the platform can also provide recommendations to charities on sponsors that might be able to help them. See the project objectives for further details on what this platform must be able to do.

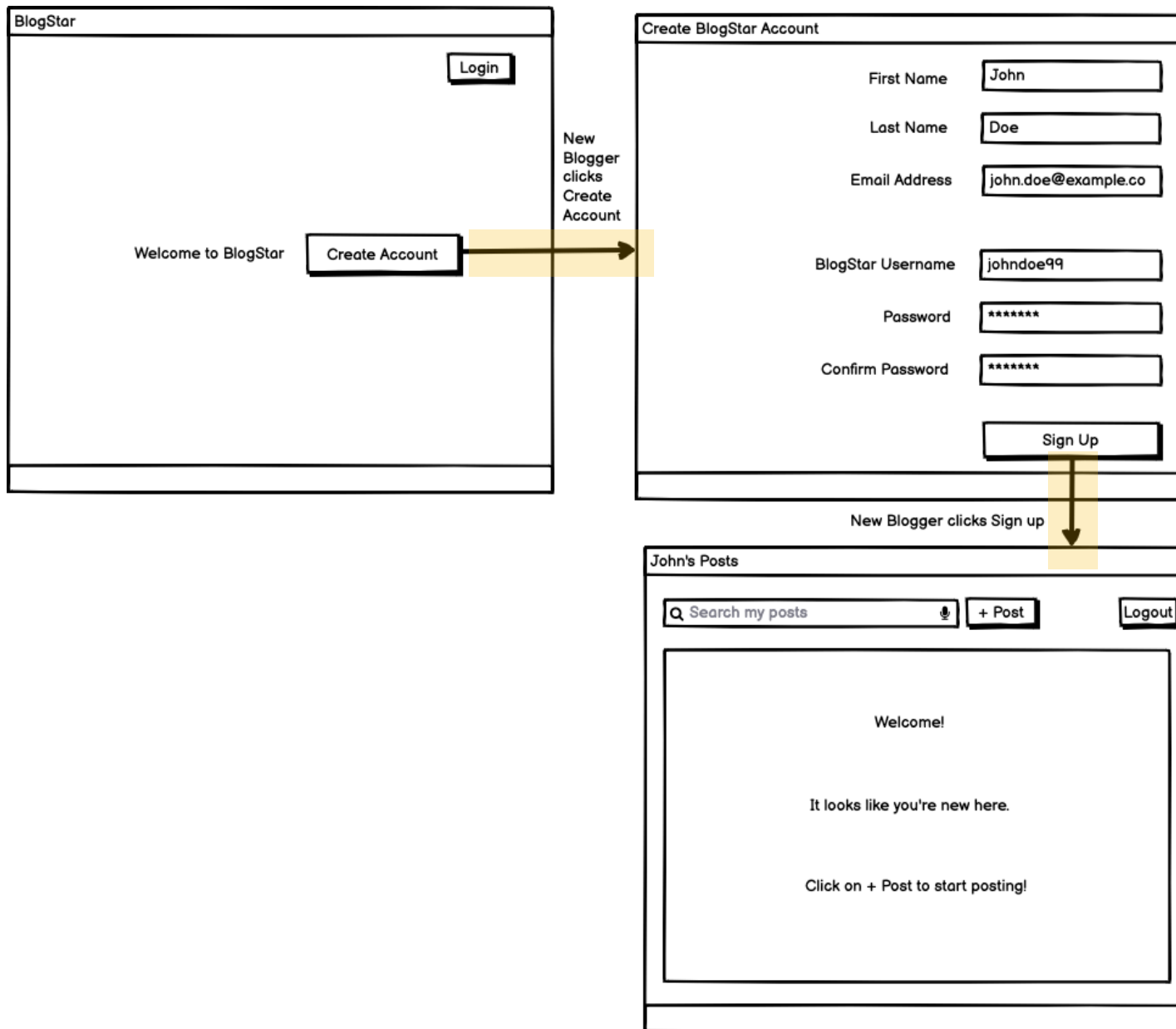
## Project Objectives

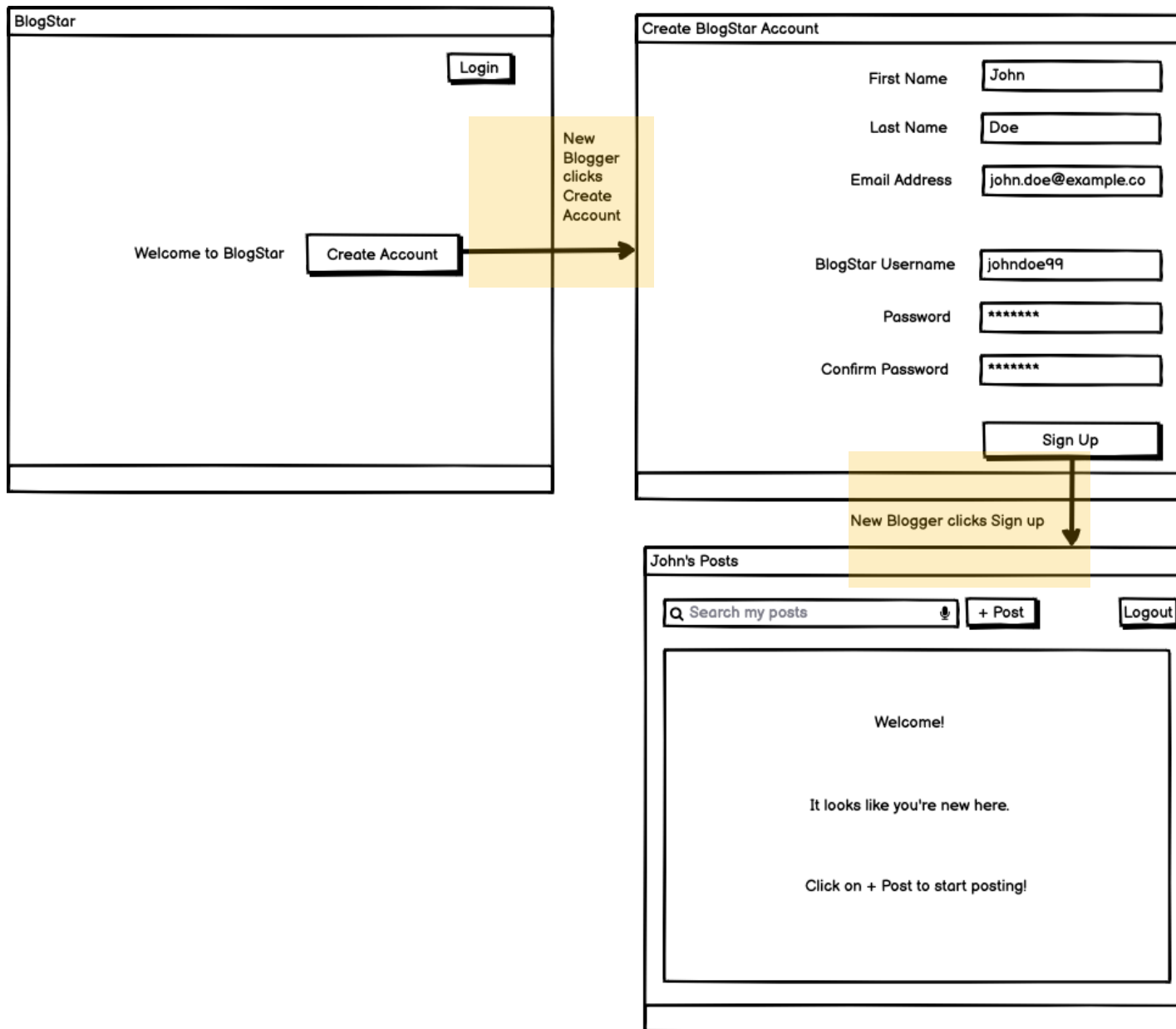
Each charity must be able to create a profile to advertise who they are by specifying their charity name, as well as a description of themselves and their cause. A charity must also be able to maintain a list of needs on their profile, where the system should be able to indicate a list of needs they can choose from based on a needs registry, (eg: food, clothes, accommodation, etc), and allow a charity to define a new "need" if it's not already included on the needs registry. Sponsors wishing to help charities with their needs must also be able to register on Charity Connect, and create a profile that advertises their name, a description of what they do, the needs they can help with, and (optionally) a link to their business website. These sponsors must then be able to find charities they think they can help through searching by keywords that match on any combination of charity name, description, and/or needs. If a sponsor thinks they can help a charity they find, they must be able to request

# Interface & Flow Diagrams / Storyboards









Use flowchart(s) if there is no user-interface



# User Stories

With content inspired by User Story Mapping  
Discover the Whole Story, Build the right product, Jeff Patton et al, 2014

Why?

**Why do we build software?**



State of the world  
before your software

Deliver software



State of the world  
before your software

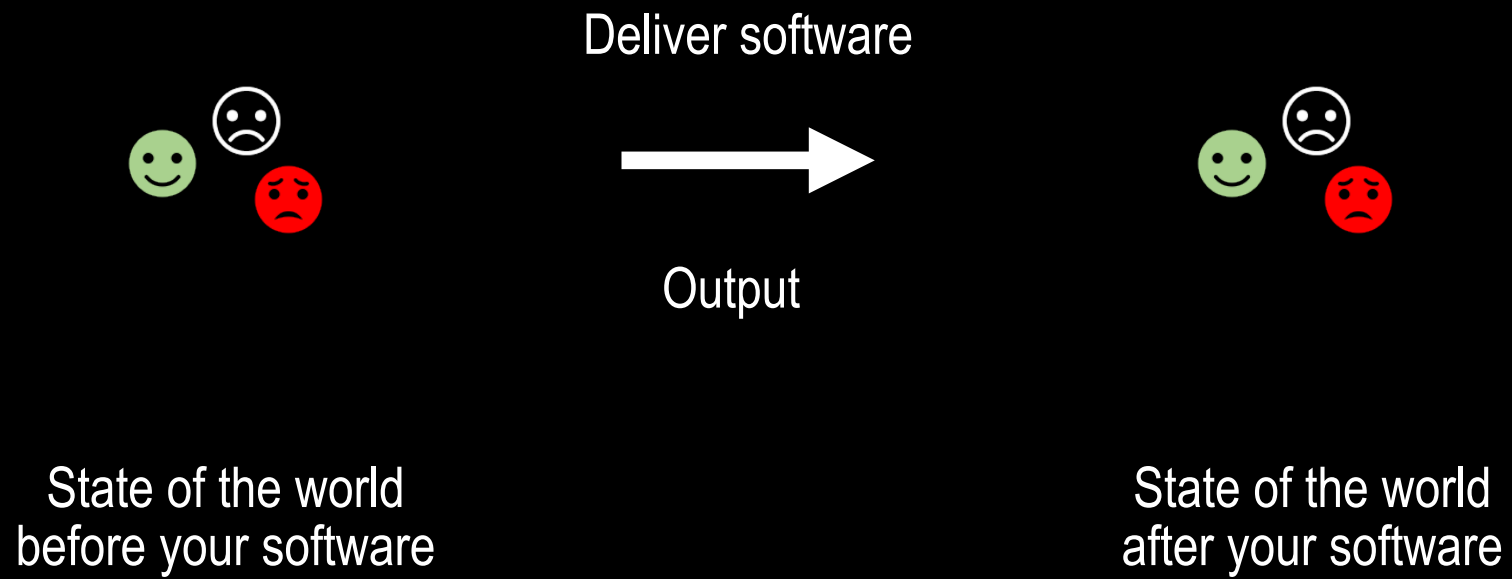
Deliver software



State of the world  
before your software



State of the world  
after your software





State of the world  
before your software

Deliver software



Output

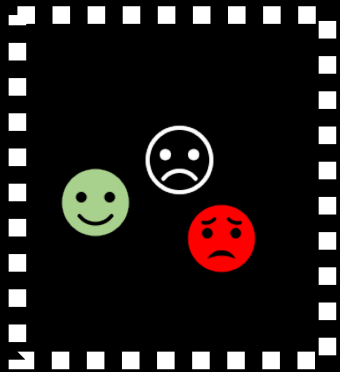


State of the world  
after your software



**How do we maximise outcome/impact?**

WHO



Deliver software



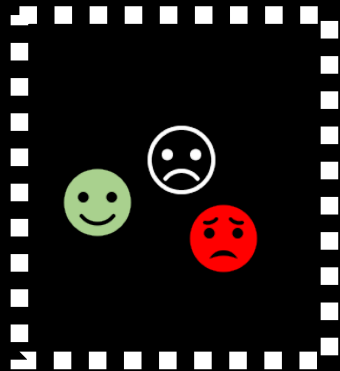
Output



State of the world  
before your software

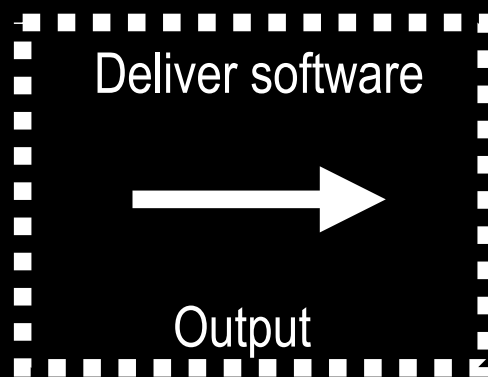
State of the world  
after your software

WHO



State of the world  
before your software

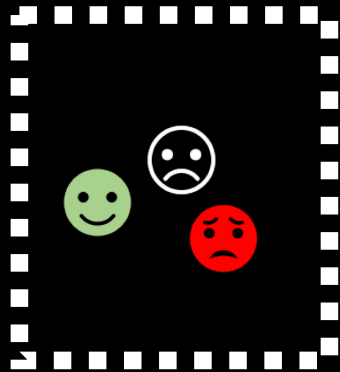
WHAT



State of the world  
after your software

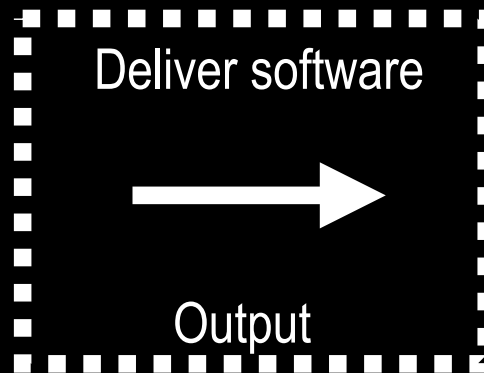


WHO

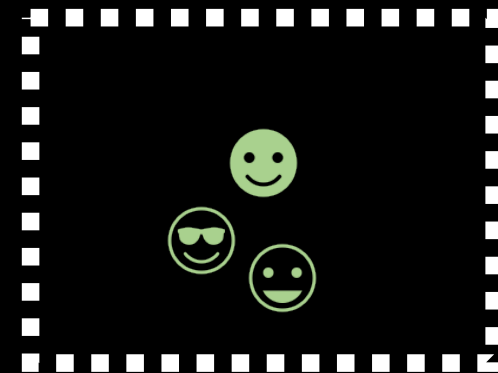


State of the world  
before your software

WHAT



WHY



State of the world  
after your software

# User Stories

## User Stories

Who

What

Why

# Connextra Format

## Connextra Format

**As a [who] I want to [what] so that [why]**



## Connextra Format

**As a [who] I want to [what] so that [why]**

**As a customer, I want to request assistance from a waiter at any time,  
so that I don't have to wait for the waiter to see me**


**As an employee, I want to be able to predict my leave balance on a given date,  
so that I can plan the time and length of my holiday**

# User Stories in Jira

# Your work

Jira Work Management is available. Jira Core. Say hello to new ways of working with list, calendar, timeline, and more. [Show me](#) · [Dismiss](#)

## Recent projects

 **COMP3900\_H14A\_Wildfire**  
Team-managed software

**QUICK LINKS**

My open issues

Done issues

0


1 board ▾

RECENT

 COMP3900\_H14A\_Wildfire (CHW)  
Software project

[View all projects](#)

[Create project](#)

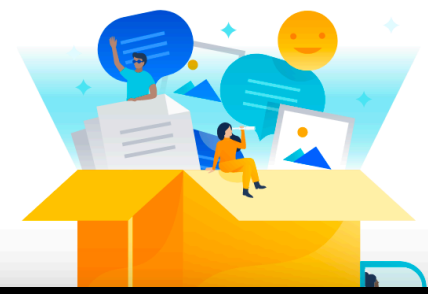
 **Set up a customer service project**

[TRY IT NOW](#)

[Requests queue](#) >

[View all projects](#)

[Worked on](#) Viewed Assigned to me 0 Starred





## Project templates

Software development

Service management

Work management

Marketing

Human resources

Design

Personal

Operations

Legal

Sales

### PRODUCTS

 Jira Software

 Jira Service Management

 Jira Work Management

### Project templates

## Software development

Plan, track and release great software. Get up and running quickly with templates that suit the way your team works. Plus, integrations for DevOps teams that want to connect work across their entire toolchain.



### Kanban

Visualize and advance your project forward using issues on a powerful board.



### Scrum LAST CREATED

Sprint toward your project goals with a board, backlog, and roadmap.



### Bug tracking

Manage a list of development tasks and bugs.





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### PRODUCTS

Jira Software

Jira Service Management

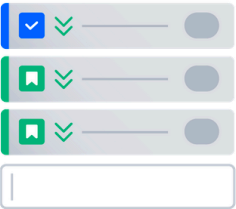
Jira Work Management

## Scrum

Use template



The Scrum template helps teams work together using sprints to break down large, complex projects into bite-sized pieces of value. Encourage your team to learn through incremental delivery, self-organize while working on a problem, and regularly reflect on their wins and losses to continuously improve.



### Plan upcoming work in a backlog

Prioritize and plan your team's work on the backlog. Break down work from your project roadmap, and order work items so your team knows what to deliver first.

[Learn more about the backlog](#)

### Organize cycles of work into sprints

Sprints are short, time-boxed periods when a team collaborates to complete a set amount of customer value. Use sprints to drive



### PRODUCT

Jira Software

### RECOMMENDED FOR

Teams that deliver work on a regular cadence

DevOps teams that want to connect work across their tools

### ISSUE TYPES

Epic

Story

Bug

Task

Sub-task


### WORKFLOW

Next: Select a project type

Use template

[← Back to project template](#)

## 1 Project template



Scrum

Sprint toward your project goals with a board, backlog, and roadmap.

Change template

## 2 Choose a project type

You'll need to create a new project if you decide to switch project types later.

### Team-managed

#### Set up and maintained by your team.

For teams who want to control their own working processes and practices in a self-contained space. Mix and match agile features to support your team as you grow in size and complexity.

Simplified configuration

Select a team-managed project

### Company-managed

#### Set up and maintained by your Jira admins

For teams who want to work with other teams across many projects in a standard way. Encourage and promote organizational best practices and processes through a shared configuration.

Expert configuration

Select a company-managed project

The last project you created was a team-managed project

# Create project

Name \*

Enter a project name

Access

Anyone with access to comp3900-h14a-wildfire can access and administer this project. [Upgrade your plan](#) to customize project permissions.

Key ⓘ \*

Template



## Scrum

Sprint toward your project goals with a board, backlog, and roadmap.

Change template

☐ **Connect work across your tools**

Sync work from other tools so your team can easily access code, deployments, wiki, and more from your Jira project.

Left sidebar navigation menu:

- MyProject (Software project)
- Roadmap
- Backlog
- Board (selected)
- Code
- Project pages
- Add item
- Project settings

Footer text: You're in a team-managed project. [Learn more](#)

Does your team need more from Jira? [Get a free trial of our Standard plan.](#)


Projects / MyProject

# MYP board

Search bar with a magnifying glass icon and a user profile icon (MS).

GROUP BY: None

TO DO



**You haven't started a sprint**

You can't do anything on your board because you haven't started a sprint yet. Go to the backlog to plan and start a sprint.


[Go to Backlog](#)


IN PROGRESS


DONE ✓


+





 **MyProject**  
Software project


 Roadmap


 Backlog

 **Board**

 Code

 Project pages

 Add item

 Project settings

You're in a team-managed project

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Projects / MyProject


# MYP board

MS 



GROUP BY **None** ▾

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[Go to Backlog](#)

IN PROGRESS

DONE ✓



🔖

MyProject

Software project

📅

Roadmap

📋

Backlog

📊

Board

🔗

Code

📄

Project pages

📁

Add item

⚙️

Project settings

You're in a team-managed project

Learn more

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Projects / MyProject

## Backlog

🔍

MS

👤

Epic ▾

▾ Backlog (0 issues)

0 0 0

Create sprint

Your backlog is empty.

🟢 ▾ What needs to be done?

🔖

MyProject

Software project

📅

Roadmap

📋

Backlog

📊

Board

🔗

Code

📄

Project pages

📄

Add item

⚙️

Project settings

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Projects / MyProject

Backlog

🔍

MS

👤

Epic ▾

▾ Backlog (0 issues)

0 0 0 Create sprint

Your backlog is empty.

📌 ▾ What needs to be done?

Does your team need more from Jira? [Get a free trial of our Standard plan.](#)

Projects / MyProject

## Backlog

Q

MS

Epic ▾

▼ Backlog (1 issue)

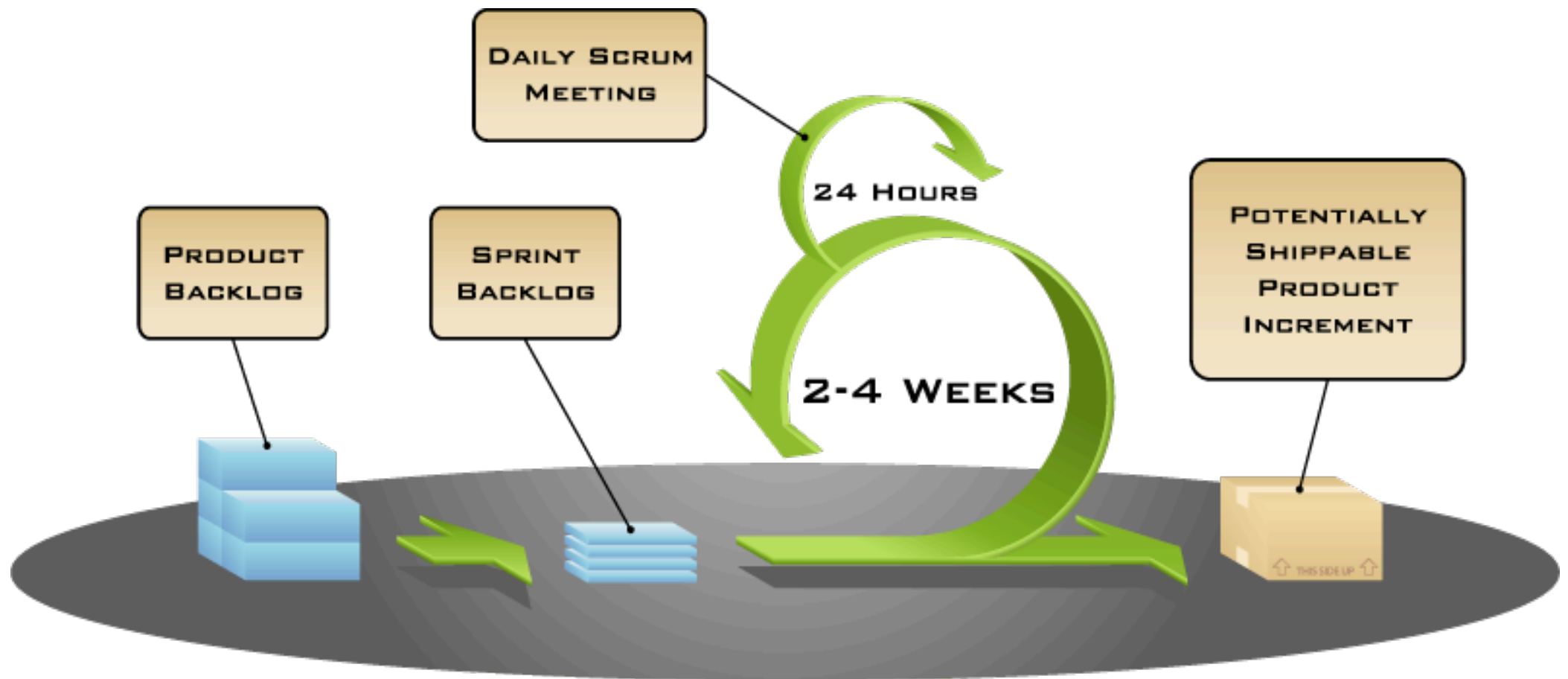
000

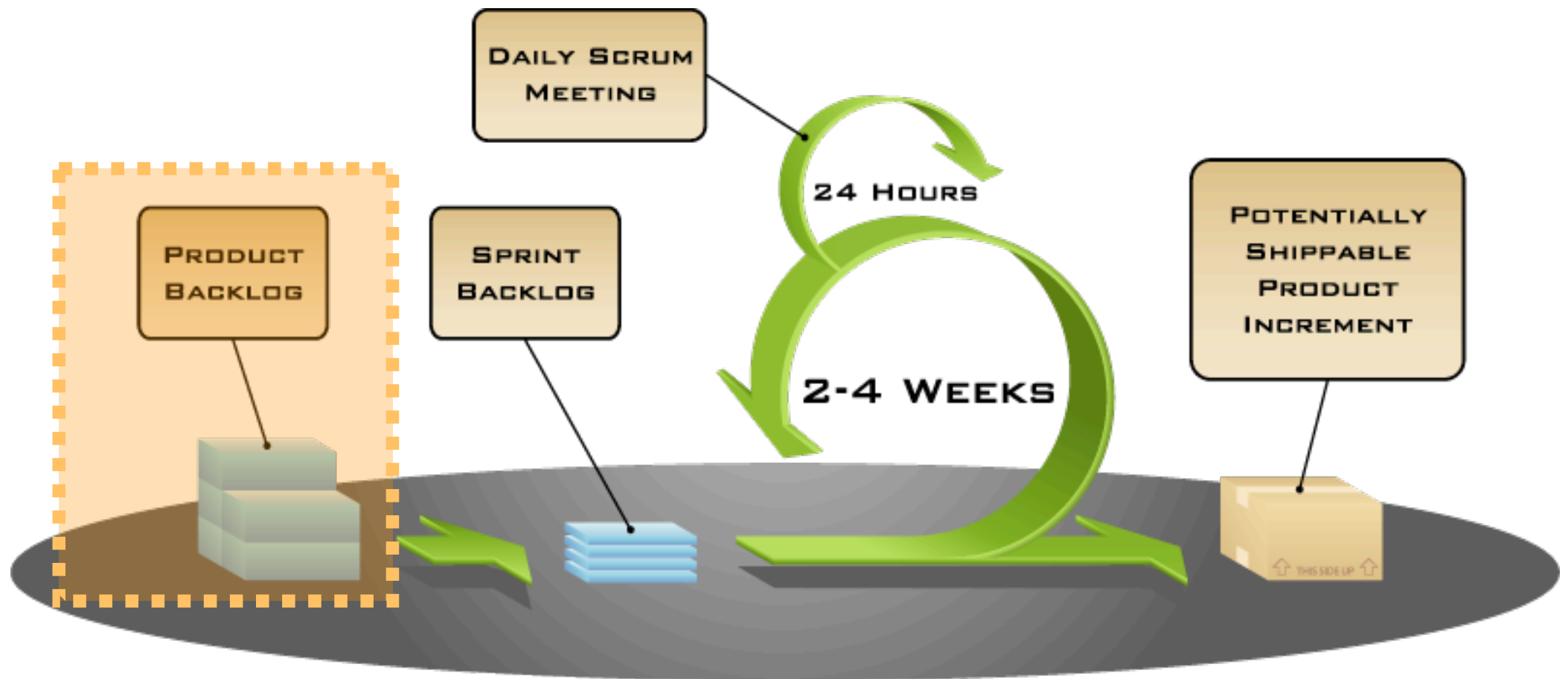
Create sprint

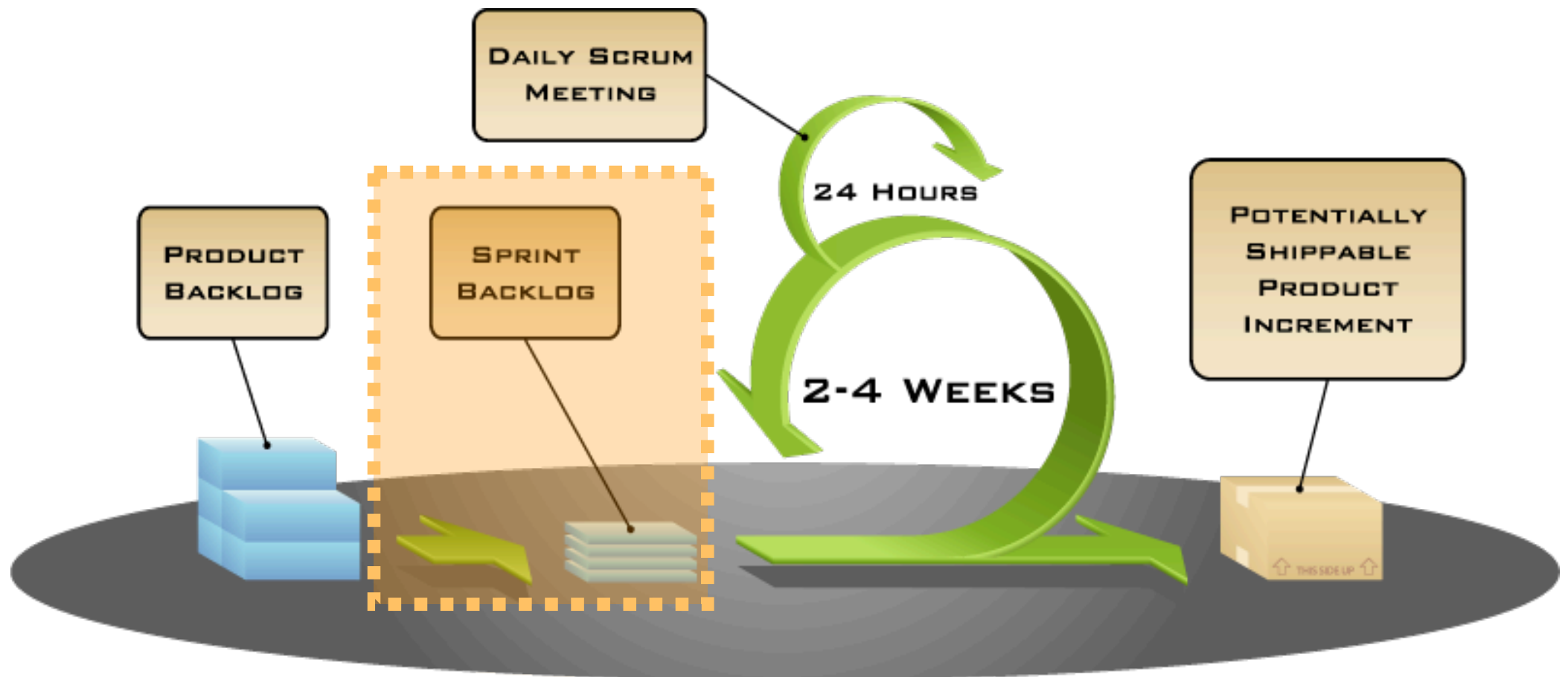
MYP-1 As a waiter, I want to request assistance from a waiter at any time, so that I don't have to wait for the waiter to see me.

+ Create issue

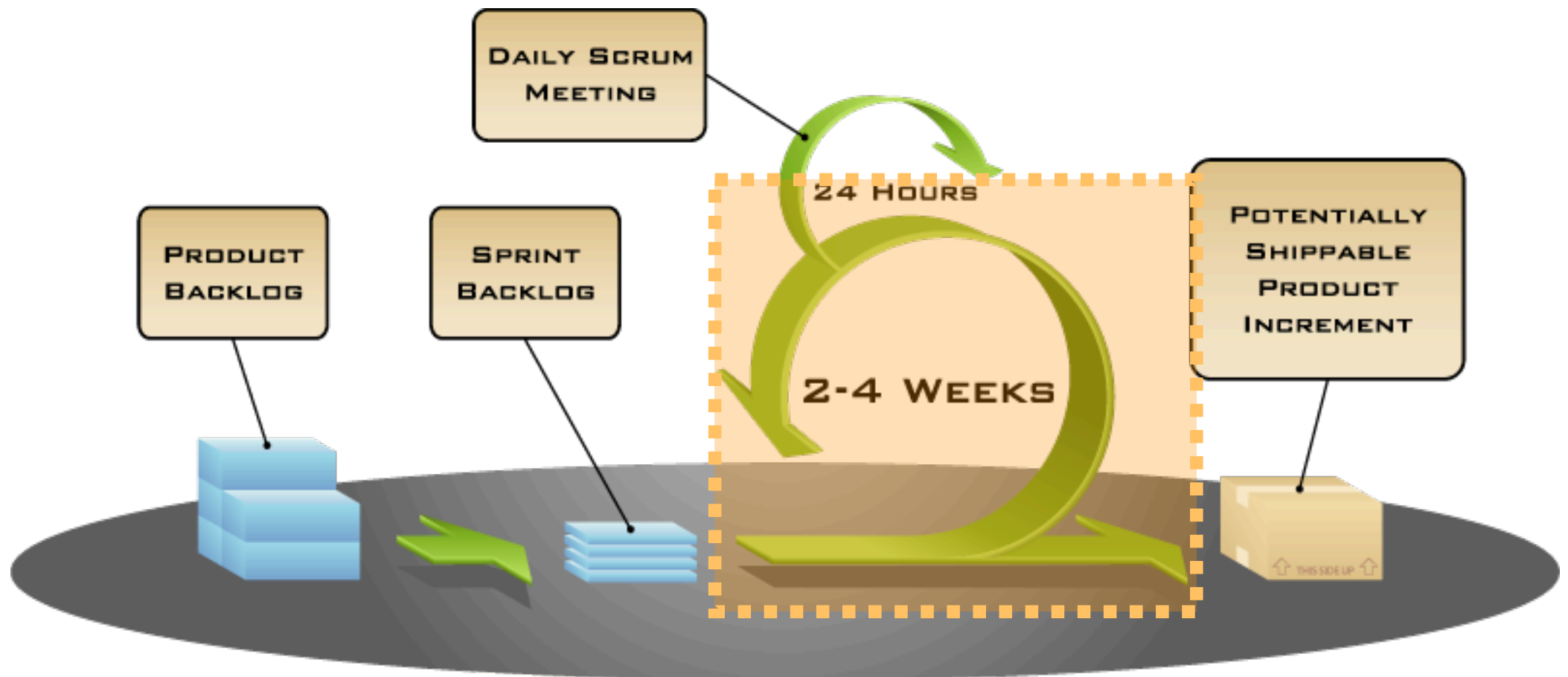
# Scrum: Preview

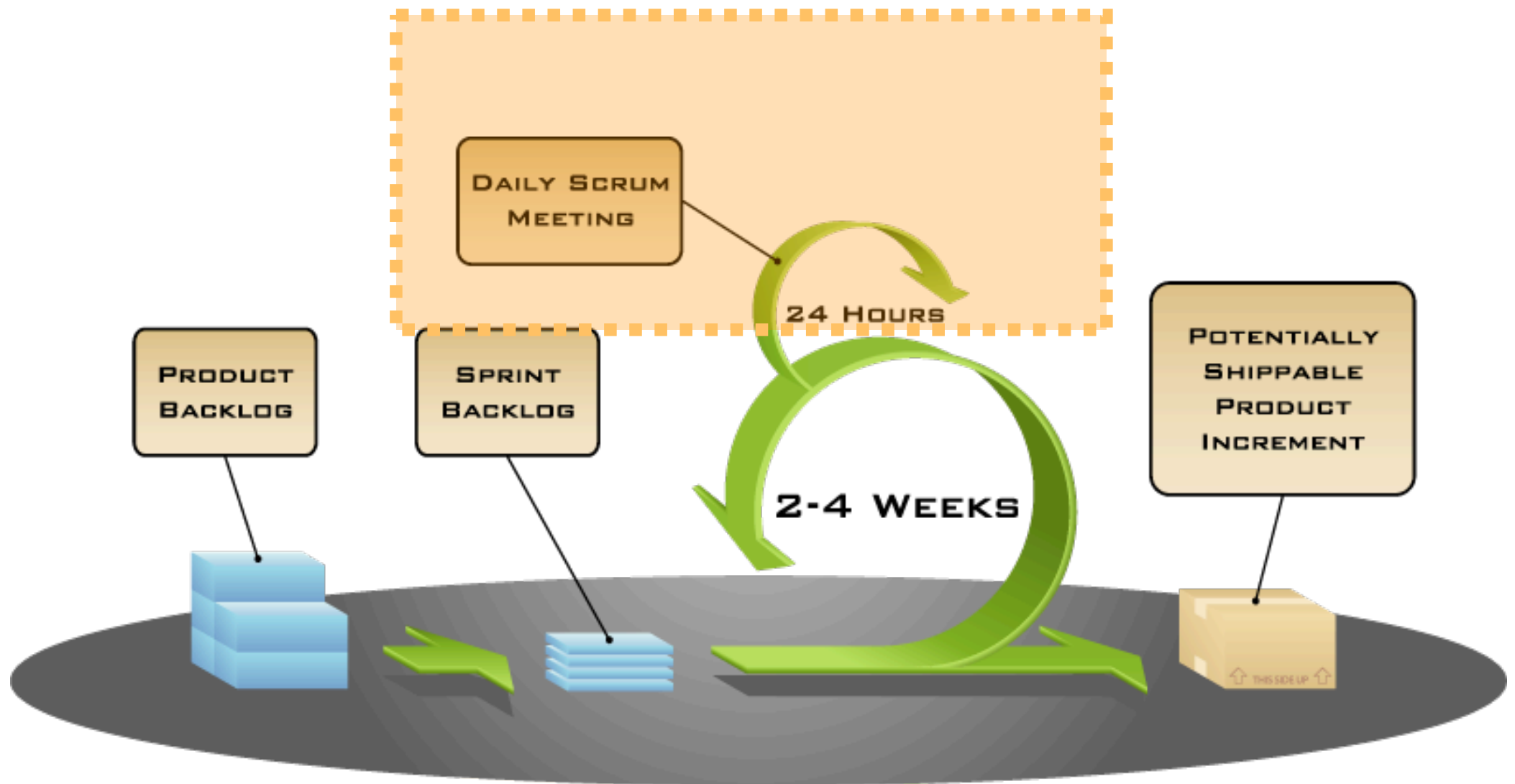


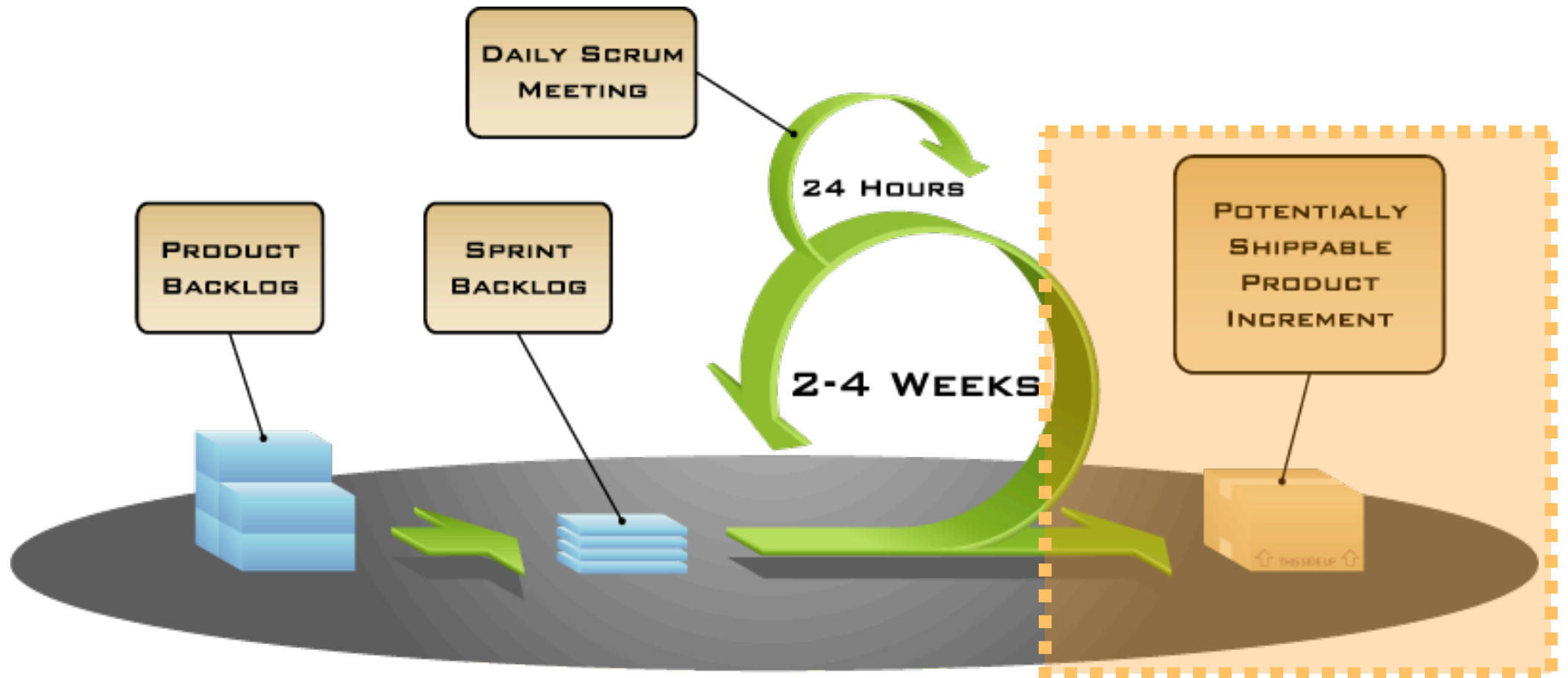












## Scrum Roles:

Product Owner

Scrum Master

Developer

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Product Owner

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Developer

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Product Owner

Scrum Master

Developer

## Scrum Roles:

Product Owner

Scrum Master

Developer

# Enrol your Group on WebCMS

WebCMS3

COMP9900



COMP9900 21T2

Home

Course Outline

Course Work ▾

Lectures

Assessments

Projects

Jira

Forums

Timetable

Groups

Staff ▾

Activities

Wikis

Q and A

## Groups

+ Create

Group Types

### Groups you are in

Group

Group Type

Default

Any groups can be created under this type

Leave

### Other joinable groups

Default

Group

Group Type

Default

Any groups can be created under this type

Join

Default

Any groups can be created under this type

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Default

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COMP9900



COMP9900 21T2

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Join

# Assign Scrum Master on WebCMS

WebCMS3COMP9900

COMP9900 21T2

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Activities

Wikis

COMP3900-H14A-MyExampleGroupDefault

COMP3900-H14A-MyExampleGroup

Blog

Edit

Leave

- Cornelly James
- Bruce Li
- Anders Smith
- Dominelly Stevenson★
- Donelly Bryson

Comments

Add a comment

There are no comments yet.

# Assign Scrum Master on WebCMS

COMP9900 21T2	<h2>Edit COMP3900-H14A-MyExampleGroup</h2>
Home	<h3>Group Info</h3>
Course Outline	<b>Name*</b>
Course Work ▾	<input type="text" value="COMP3900-H14A-MyExampleGroup"/>
Lectures	<b>Description</b>
Assessments	<input type="text" value="COMP3900-H14A-MyExampleGroup"/>
Projects	<b>Content</b>
Jira	<div>&lt;&gt; B I             </div> <div>Add group content</div>
Forums	<b>Private</b>
Timetable	<input checked="" type="checkbox"/>
Groups	<h3>Group Members</h3>
Staff ▾	<div>Add a user  </div>
Activities	<b>Current group members:</b>
Wikis	<ul style="list-style-type: none"><li>✕ Dominelly Stevenson (z123456) <input checked="" type="checkbox"/> Admin</li><li>✕ Bruce Li (z123457) <input type="checkbox"/> Admin</li><li>✕ Anders Smith (z123458) <input type="checkbox"/> Admin</li><li>✕ Cornelly James (z123459) <input type="checkbox"/> Admin</li><li>✕ Donelly Bryson (z123460) <input type="checkbox"/> Admin</li></ul>
Q and A	
★ Tutors ▾	
⚙️ Admin ▾	
Matthew Sladescu Lecturer in Charge	

Save

Scrum Preview (including on scrum roles)

User Stories

Interface and Flow Diagrams

Assessment Overview

Course Introduction