in the
Large

COMP1300

Envisioning and Engagement

Envisioning and engagement

- Co-design techniques
- Stakeholder Analysis
- Identifying Business Goals
- As-is vs. To-be
- Information gathering
- Ethics of engagement (surveys and interviews
- Burndown charts and Sprint plans

# Co Design: putting users at the heart of systems design as first class members of the team

Co design stage 1


1

Scoping

Stakeholder
Analysis
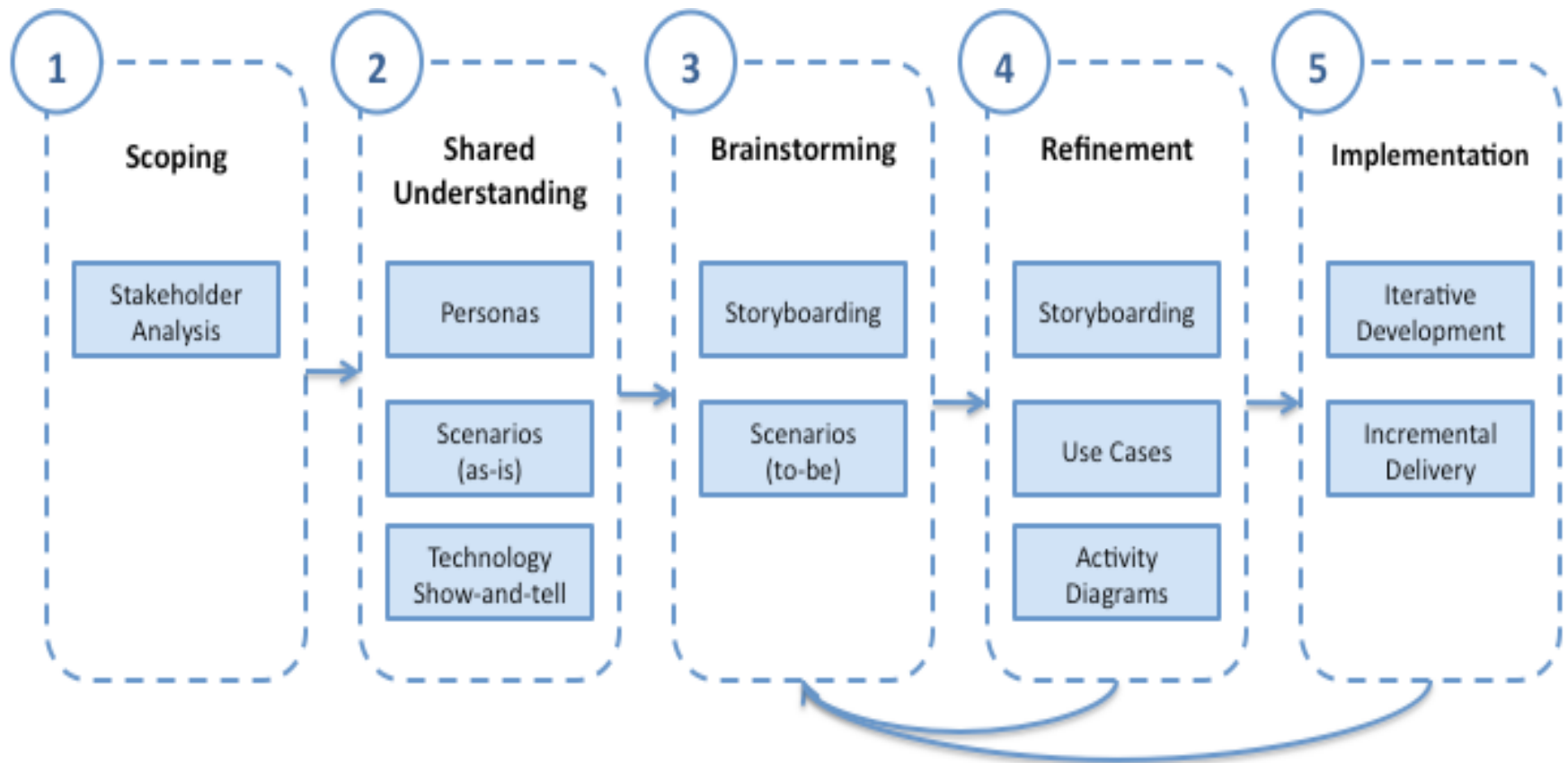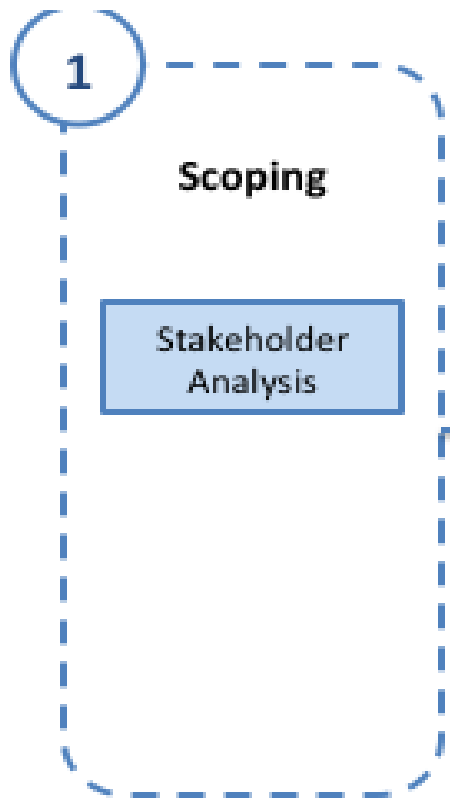
- defines the scope of activity
- identifies co-design goals.
- identifies, selects, and recruits co-design participants,
- identifies, articulates and shares common goals and purposes with co design participants,
- defines the co-design plan

Co Design stage 2: Shared Understanding

2

Shared Understanding

- Personas
- Scenarios (as-is)
- Technology Show-and-tell
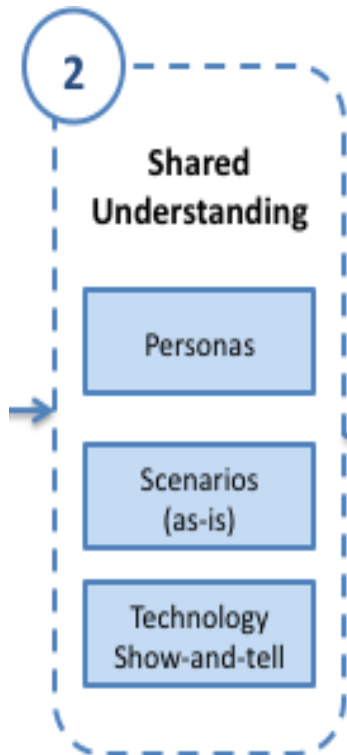
- **Personas and scenarios** a lightweight method for capturing and recording the requirements of a system from an end user's viewpoint

- A persona describes an end user in some detail; their background, job function, and situation in the organization

- Scenarios are descriptions of how a persona interacts with the system and other personas when using a system.

Co Design stage 3: Brainstorming - *To Be*
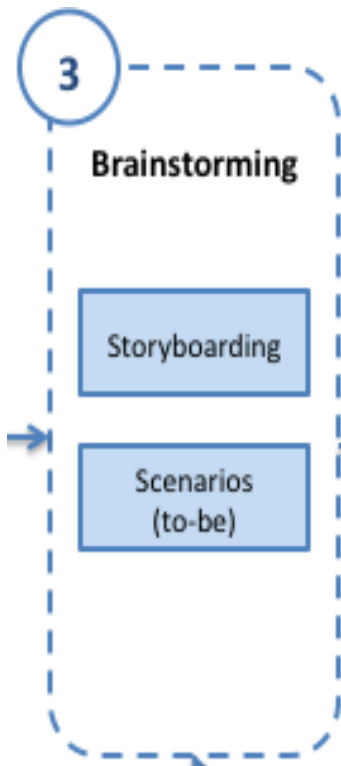
- *Brainstorming* **ideas for new applications and processes.**
  - relies on the shared understanding gained in stage 2
  - builds a number of initial design artefacts based on the common vocabulary
  - E.g new scenarios and models of potential innovations.
- *to-be* **Scenarios and modelling.**
  - A second set of 'to-be' scenarios capture ideas created by the group.
  - draw on the same personas used in the earlier stage.
  - 'to-be' scenarios describe how the personas might interact with potential applications/ processes to fulfil existing needs (or new innovations,)
  - To be models provide a formal description of potential systems and processes
  - Form a basis for debate and shared understanding about the potential for innovation

Stakeholder Analysis: Who are the users?

- Primary Stakeholders

  - People who actually use the system

- Secondary Stakeholders

  - People who do not directly interact with the system, but provide input to it, or receive output from it

- Tertiary stakeholders

  - People who do not directly interact with the system, but are affected by it

- Facilitating

  - People who are involved in the design, development and

Primary

Secondary
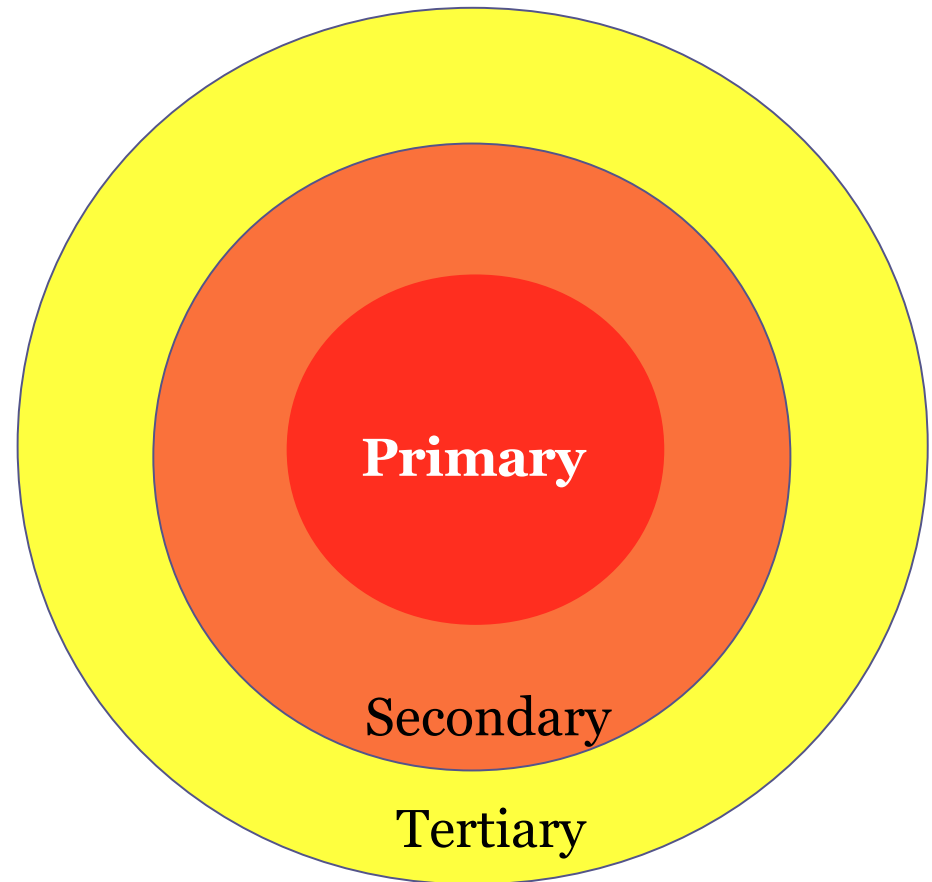
Tertiary

Activity: Stakeholder Analysis example

Who are the stakeholders for the checkout system of a large supermarket?

- Identify possible primary, secondary and tertiary stakeholders.

- What are their roles?

- (you can use post-its for brainstorming then build the table)

Stakeholder type	Stakeholder	Role/description

Planning and running a successful information gathering campaign

- Who will provide you with information?
  - Identify participants from your stakeholder analysis
- What information gathering techniques will give you the information you need?
  - Interview
  - Focus group
  - Questionnaires
- How will you record the data?
- Triangulation

Interviews

- Interviews can be structured, unstructured or semi-structured
  - Structured interviews;
    - Ask all participants the same predetermined questions
    - The questions need to be short and clearly worded
    - Typically closed questions

  - Unstructured interviews
    - Exploratory conversations around a topic
    - Open ended questions

How often do you update your website?

What do you think could be improved about using Wordpress for building a website?

Focus Groups

- Interviewing groups of people together
  - 3 to 10 members of a focus group are typical
  - Can help to identify conflicts of terminology, expectations or lack of a shared understanding
  - Can allow diverse or sensitive issues to be raised
  - Enables people to put forward their opinions in a supportive environment
  - The interviewer (facilitator) guides and prompts discussion and encourages quieter people to contribute
  - The facilitator plans a loose agenda to ensure the

Activity: Planning information gathering

Scenario: Several new e-reader devices for reading e-books, surfing the internet or watching movies have come on to the market. They are all slim and lightweight but there are different designs

 How can you find out how appealing these devices are to the over 65's?

1. What is the goal of the data gathering session
2. What ways could you record the data
3. Suggest a set of questions suitable for an unstructured interview seeking opinions about the different e-readers and their appeal to the over 65's?

Information gathering methods:
asking good questions

- Use the SSM CATWOE framework
  - Owner
  - scope
  - Inputs and outputs
  - Processes that transform inputs to outputs
  - Actors
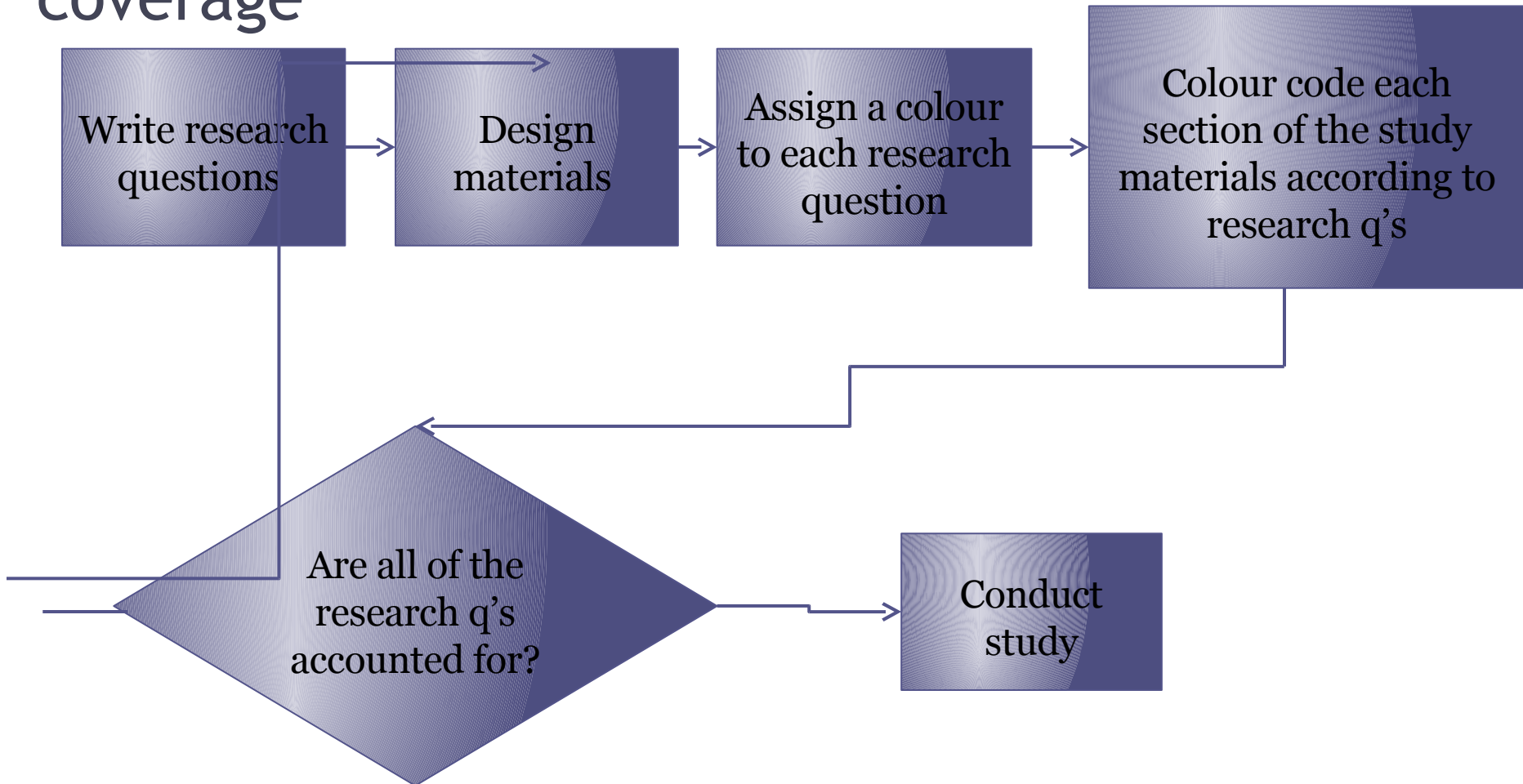 - Resources Authorities and emergent properties

Identifying Business Goals

- What is the purpose of the business's existence?

- What are the outputs?

- What are the emergent properties?

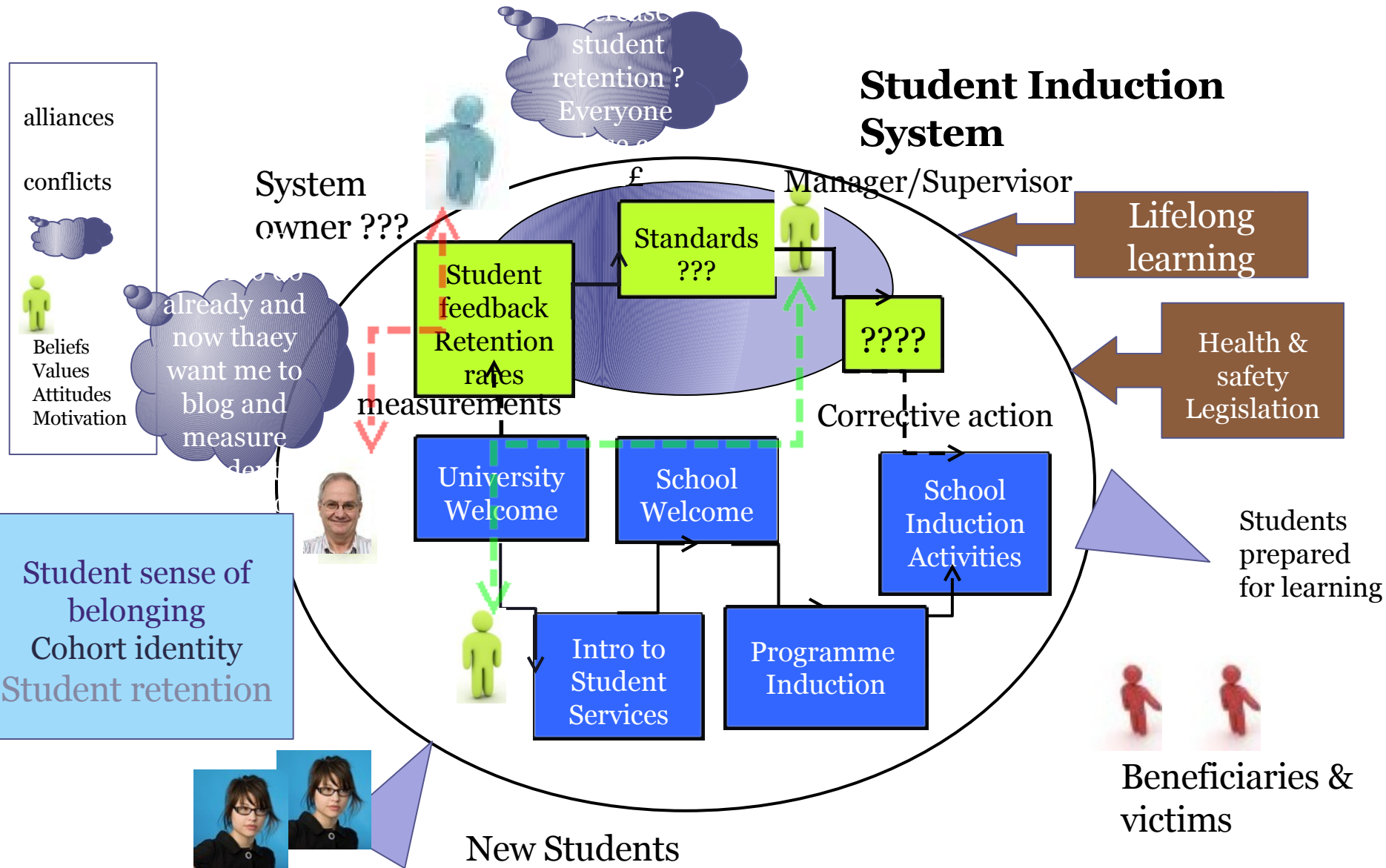- Different stakeholders may have different views

  - Which are the authoritative?
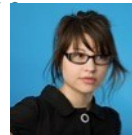
Using research questions: making sure your questions are relevant and you have coverage

Write research questions → Design materials → Assign a colour to each research question → Colour code each section of the study materials according to research q's

Are all of the research q's accounted for? → Conduct study

Soft Systems Diagram: alliances, conflicts, beliefs, values, attitudes, motivations

alliances

conflicts

Beliefs
Values
Attitudes
Motivation

Student sense of belonging
Cohort identity
Student retention

System owner ???

...crease student retention ? Everyone ...

...already and now thaey want me to blog and measure ...

measurements

Student Induction System

Manager/Supervisor

Standards ???

Student feedback Retention rates

????

Corrective action

University Welcome

School Welcome

School Induction Activities

Intro to Student Services

Programme Induction

Lifelong learning

Health & safety Legislation

Students prepared for learning

Beneficiaries & victims

New Students

Ethics of engagement

- Before the study
- During the study
- After the study
- Risk of harm
- Truthfulness/ openness/ communication
- Protection of data
- Privacy/ confidentiality
- Be careful to only ask for what you need
- Don't waste time
- Absolute right to withdraw

- Royal Academy of Engineering statement of ethical principles

http://www.raeng.org.uk/news/publications/list/repor
Statement_of_Ethical_Principles.pdf

Sprint plans

- Plan for how you will deliver each increment

- WHAT has to be done – sprint backlog

  ▫ Assess what MUST be done

  ▫ What SHOULD be done

  ▫ What COULD be done

  ▫ What would be NICE (but WON'T be done this time)
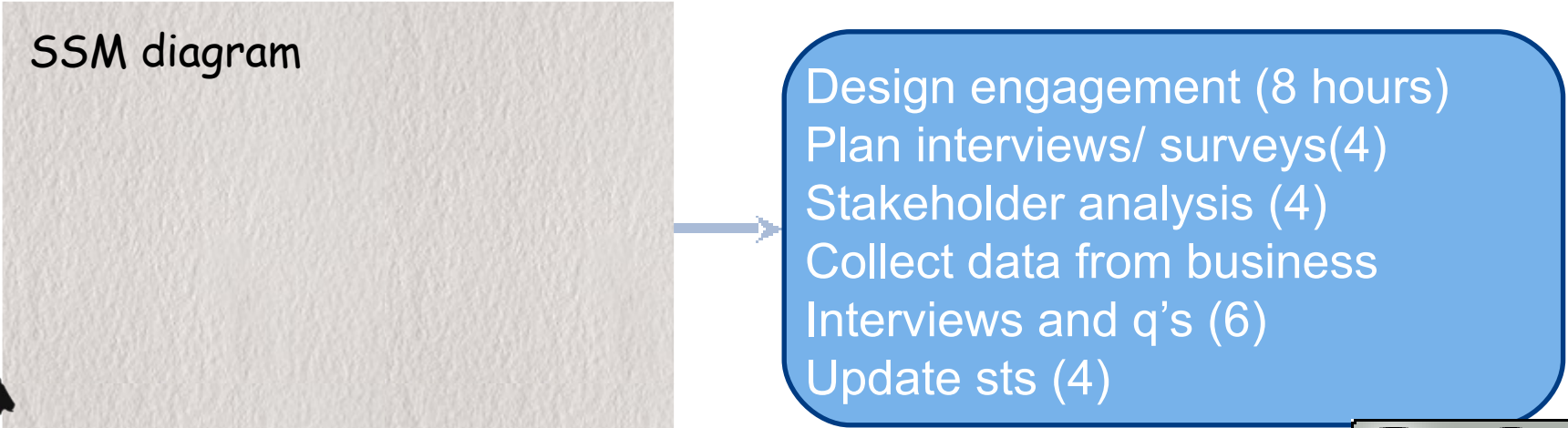
     ⬧ These are the features you can sacrifice if you run

Scrum in 100 words

- Scrum is an agile process that allows us to focus on delivering the highest business value in the shortest time.
- It allows us to rapidly and repeatedly inspect actual working deliverables (every two weeks to one month).
- The business sets the priorities. Teams self-organize to determine the best way to deliver the highest priority features.
- Every two weeks to a month anyone can see real working deliverables and decide to release it as is or continue to enhance it for another sprint.

Sprint planning

- The team collaboratively select the work to be done in the sprint

- Identify how much of the backlog will be done in this sprint

  - Create the Sprint backlog

  - Identify the lower level tasks that will be needed and estimate how long you think each will take

SSM diagram

Design engagement (8 hours)
Plan interviews/ surveys(4)
Stakeholder analysis (4)
Collect data from business
Interviews and q's (6)
Update sts (4)

Product backlog

Case Study Backlog

Design Engagemen	Plan interviews/ surveys	Stakeholder analysis	Collect data from business
As a <user> I want <goal> So that <benefit	As a <user> I want <goal> So that <benefit	As a <user> I want <goal> So that <benefit	As a <user> I want <goal> So that <benefit
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Prioritise the backlog

Product Backlog

As a <user>
I want <goal>
So that
<benefit

As a <user>
I want <goal>
So that
<benefit

As a <user>
I want <goal>
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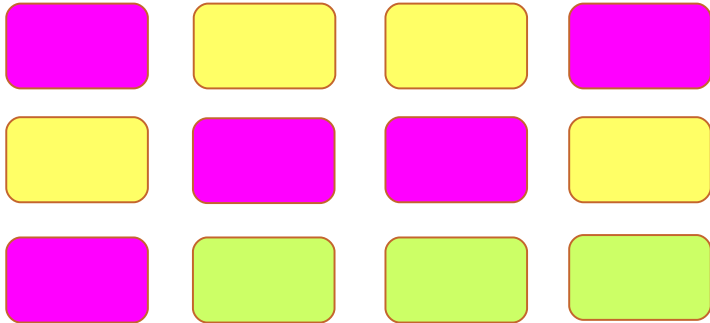As a <user>
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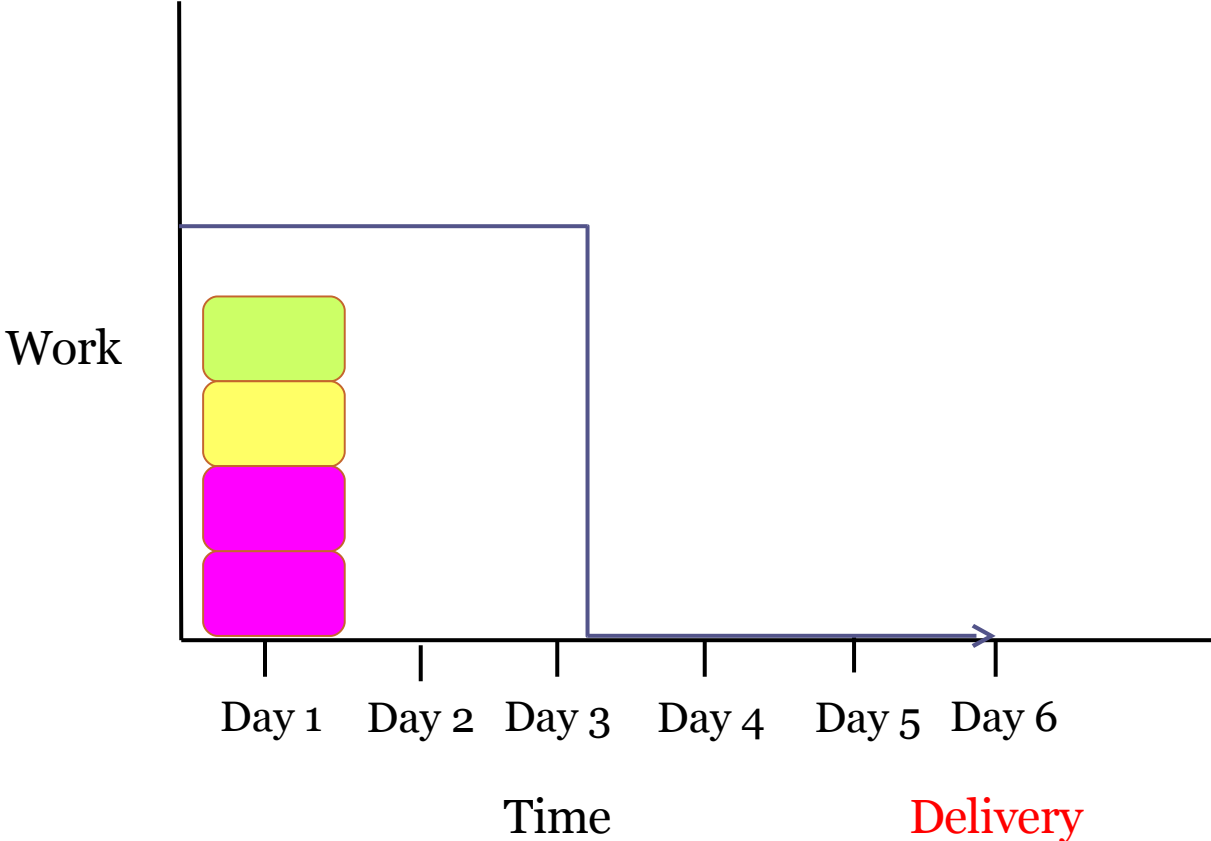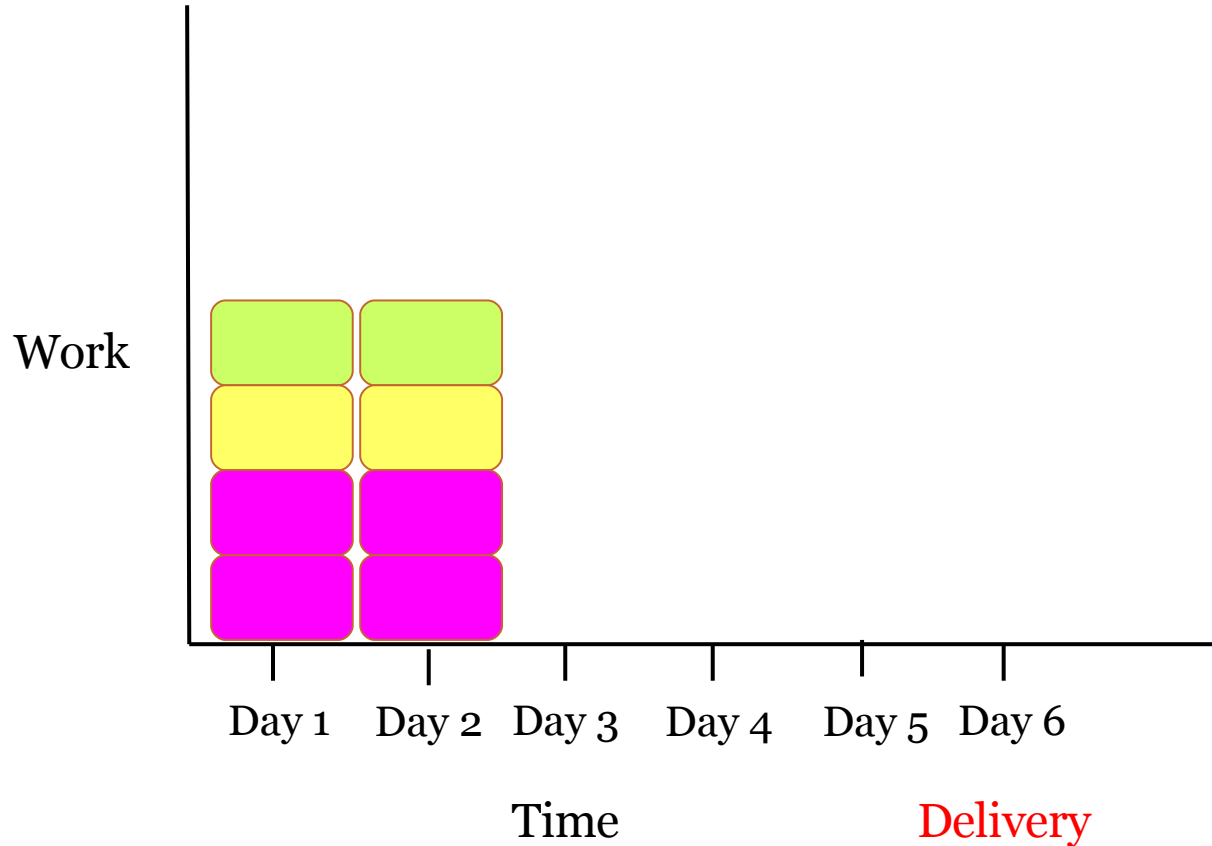As a <user>
I want <goal>
So that
<benefit

Plan the Sprint

Product Backlog

Sprint 1

As a <user>
I wan <goal>
So that
<benefit

As a <user>
I want
<goal>
So that
<benefit

As a <user>
I want
<goal>
So that
<benefit

As a <user>
I want
<goal>
So that
<benefit

Sprint 2

As a <user>
I wan <goal>
So that
<benefit

As a <user>
I wan <goal>
So that
<benefit

As a <user>
I want
<goal>
So that
<benefit

As a <user>
I want
<goal>
So that
<benefit

Sprint 3

As a <user>
I wan <goal>
So that
<benefit

As a <user>
I want
<goal>
So that
<benefit

As a <user>
I want
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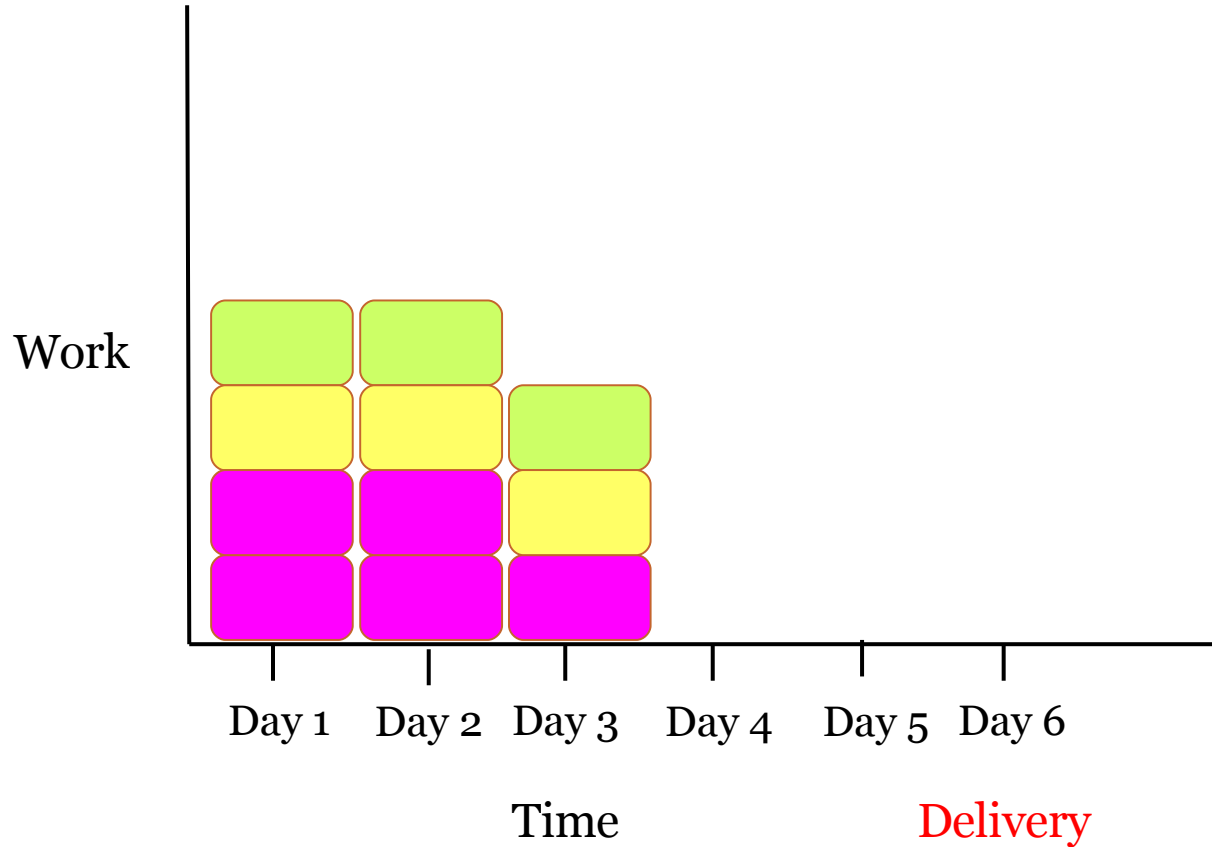As a <user>
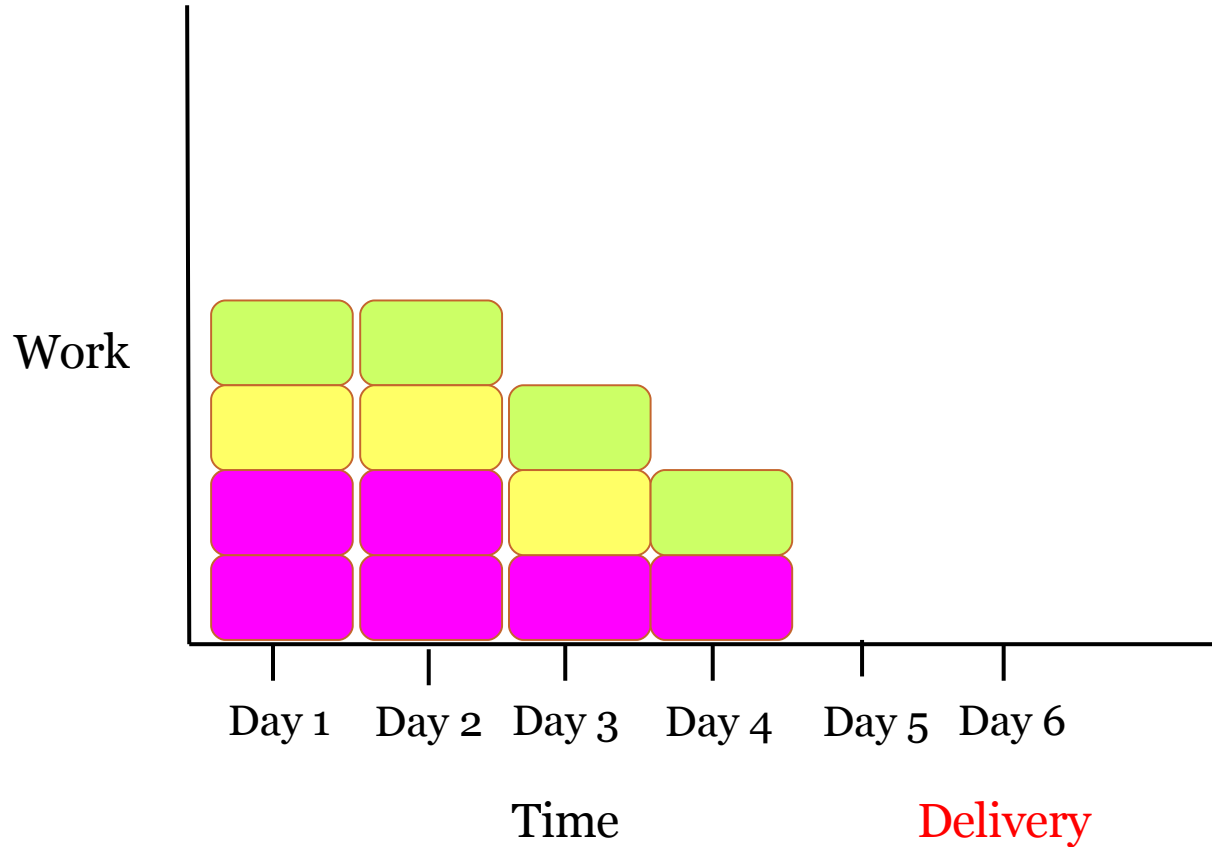I want
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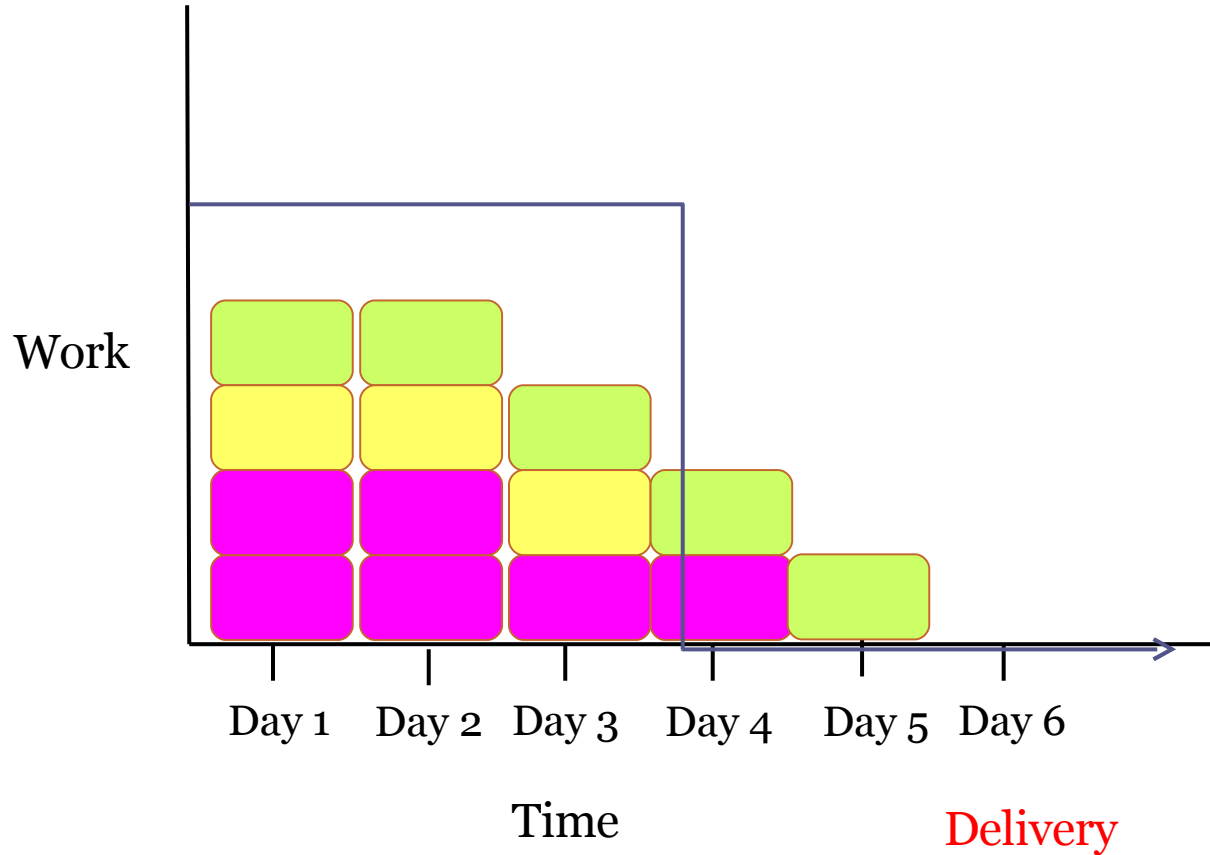<benefit

Sprint Burn Down chart

Sprint 1 – Day 2

Sprint 1 – Day 3

Sprint 1 – Day 4

Sprint 1 – Day 5

Work

Day 1   Day 2   Day 3   Day 4   Day 5   Day 6

Time   Delivery

A sprint backlog

Tasks	Mon	Tues	Wed	Thur	Fri
Code the user interface	8	4	8		
Code the middle tier	16	12	10	4	
Test the middle tier	8	16	16	11	8
Write online help	12				
Write the foo class	8	8	8	8	8
Add error logging			8	4	

Tasks	Mon	Tues	Wed	Thur	Fri
Code the user interface	8	4	8		
Code the middle tier	16	12	10	7	
Test the middle tier	8	16	16	11	8
Write online help	12				
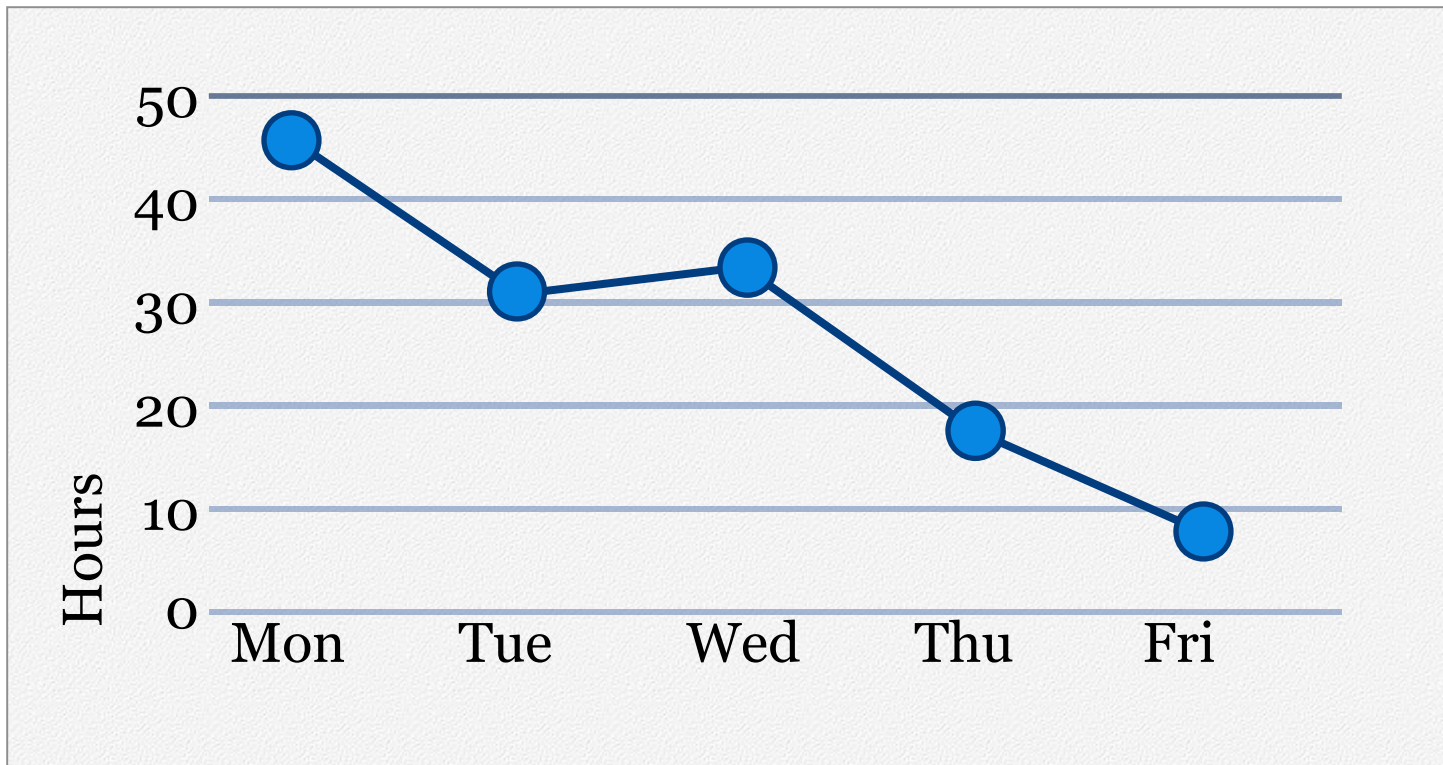
Use SCRUMs

- At least two per week (but preferably every day)

- 10-15 minutes

- The team leader is the scrum master who keeps the meeting on track and notes progress

- For each team member

  - What have I done since the last meeting

  - What will I do next

  - What I need help on

Sequential vs. overlapping development

Requirements	Design	Code	Test
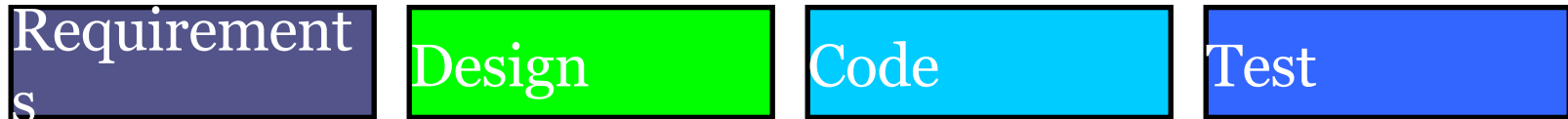
> Rather than doing all of one thing at a time...

> ...Scrum teams do a little of everything all the time

Source: "The New New Product Development Game" by Takeuchi and Nonaka. *Harvard Business Review,* January 1986.