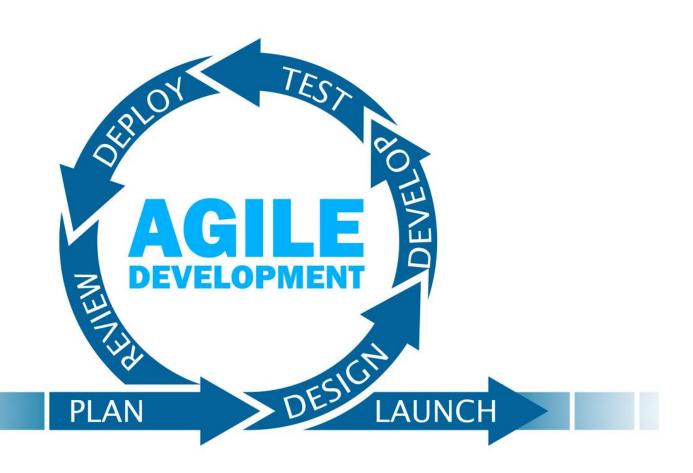


## Agile Development

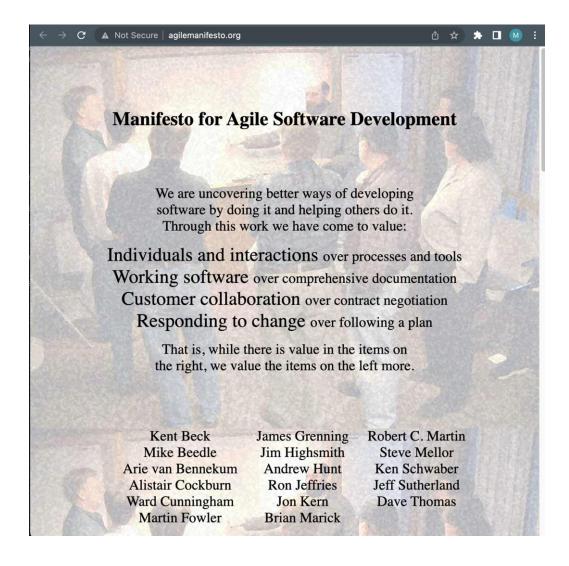


#### What is Agile?

Agile is a project management and product development approach that is centered around iterative progress.

It is successful because of its flexibility and customer collaboration.

#### Agile Manifesto



The Agile Manifesto (2001) outlines four core values:

- individuals and interactions over processes and tools;
- working software over comprehensive documentation;
- customer collaboration over contract negotiation;
- and responding to change over following a plan.

#### Agile Principles

There are 12 key principles that further explain the Agile Manifesto. The principles are made to guide teams to deliver higher quality products that align with customer needs.

http://agilemanifesto.org/principles.html



#### Agile Methodologies

There are different implementations of the Agile way of working:

- Scrum
- Kanban
- Lean
- XP (extreme programming)



## Activity: Agile Value Alignment

We're going to create an image together with the entire group, but here's the catch:

- Each subgroup (4 in total) will create a part of the picture.
  You cannot look at what the other team is having, but you can discuss with words.

The picture will be a unicorn in a forest. The canvas will consist of 4 A4 size landscape sheets.

Group 1: top left

Group 2: top right

Group 3: bottom left

Group 4: bottom right

# Agile Roles

In Agile, there are three primary roles:

- Product Owner,
- Scrum Master / Team lead
- Team Members / developers

## Agile Ceremonies

Depending on the exact implementation, there will be certain ceremonies.

#### For example for Scrum:

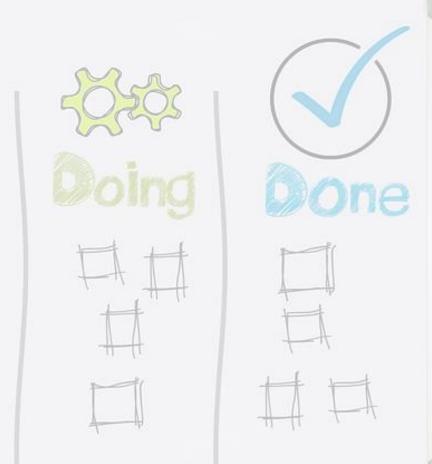
- Sprint planning
- Daily scrum
- Sprint review
- Sprint retrospective



Provide key information and documentation about the project.

#### **Examples:**

- Product backlog
- Kanban board
- Burndown charts





- Resistance to change
- Misaligned expectations
- Maintaining quality



#### **Delivering Value**



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What you think you need

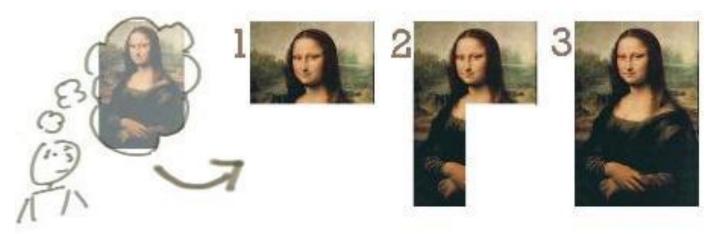
What you really need

What will give your users value right now

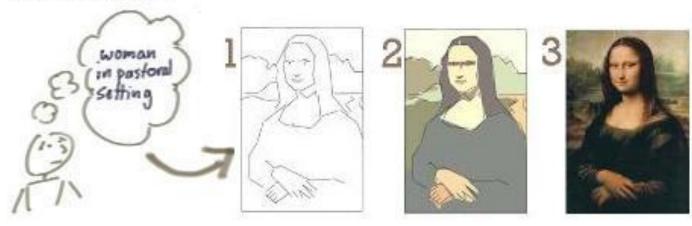
Scope Creek

# Iterative and Incremental Delivery

#### Incremental



#### Iterative



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# Iterative and Incremental

Deliver Value with Every Product Increment







# Iterative and Incremental: Product Development









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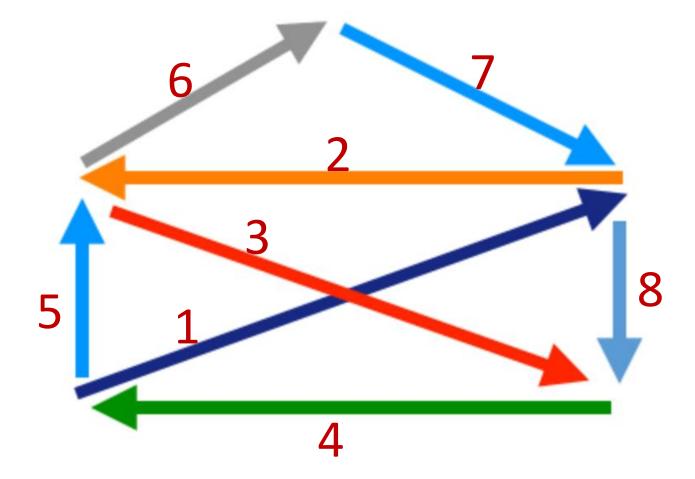
# Rainbow Houses

A thinking game about empirical process control

and

Communication within a team

Based on an exercise created by Nikolaus Spiel





#### The Game

- Teams of 5 or 6
- Each team member picks their own color (no duplication of colors among team members!)
  - Each team will need 6 colors total, so one player may have two colors if you have fewer than 6 players
- Each team will have a timekeeper
- Goal: Draw as many Rainbow Houses as possible in each iteration

#### Rules

- The first player draws the first line
- After each line the color must be changed
- In one house lines of the same color must not touch each other, and
- No copy paste allowed
- The next person must start to draw where the previous person has stopped.



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# Each Iteration

- 90 seconds preparation
  - Figure out your strategy!
  - (For Iterations 2 4): estimate how many houses you will draw this round
- 90 seconds of sprint execution
- 90 seconds sprint review / retrospective
  - What worked?
  - What didn't work?
  - Where can we improve?



# Activity: Rainbow Houses



#### Debrief

- What did you find difficult in this exercise?
- What did you learn about empirical process control?
- What did you learn about estimation?
- How did you coordinate during the iteration?

## **Product Strategy**

High-level plan that guides the direction of your product over time.

#### Defines:

- Product vision
- Goals
- Initiatives
- Route to achieve all this

## **Product Strategy in Agile Environments**

- Product development combined with agile principles.
- Main goal: To guide the strategic direction of the product over its lifecycle
- Agile principles can guide our product strategy to better meet customer needs, by:
  - Being customer-centric
  - Iterative development, being able to adapt to feedback
  - Adapt the strategy as more is learnt about customer needs and market

# Vision and Strategy

Clear vision is key for Agile product strategy

Vision sets the direction

Strategy focuses on how to achieve that vision

#### User Personas

Fictional representations of the ideal customers of the product.

Help to understand the users' needs

Product strategy aims to align with the needs of the User Personas

# Activity: Persona Creation

\*Pick product idea\*

Split up in groups of 3 to 4 to create the User Personas for the product idea.

#### **User Stories**

- Simple descriptions of a feature told from the perspective of the user. "As a user, I'd like to...., so that...."
- Fundamental component in Agile to translate user needs into actionable development tasks.
- Choice of implementation is up to the developer, giving the developer freedom and ability to express creativity

#### **Product Backlog**

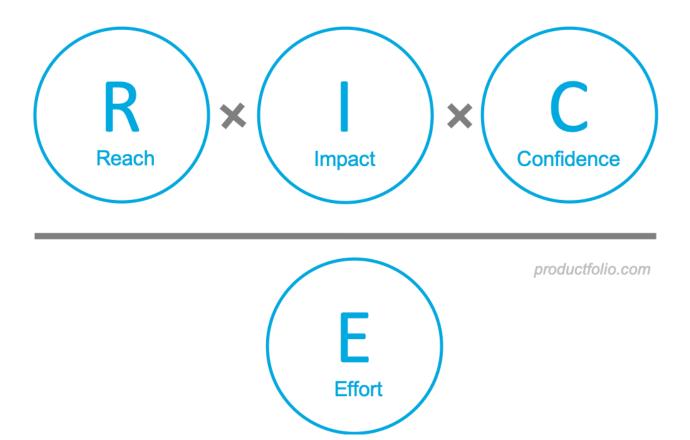


- Prioritized list of all potential enhancements, changes, and fixes that need to happen to the product
- Not a static list, continually updated and reprioritized

#### Agile Prioritization Techniques

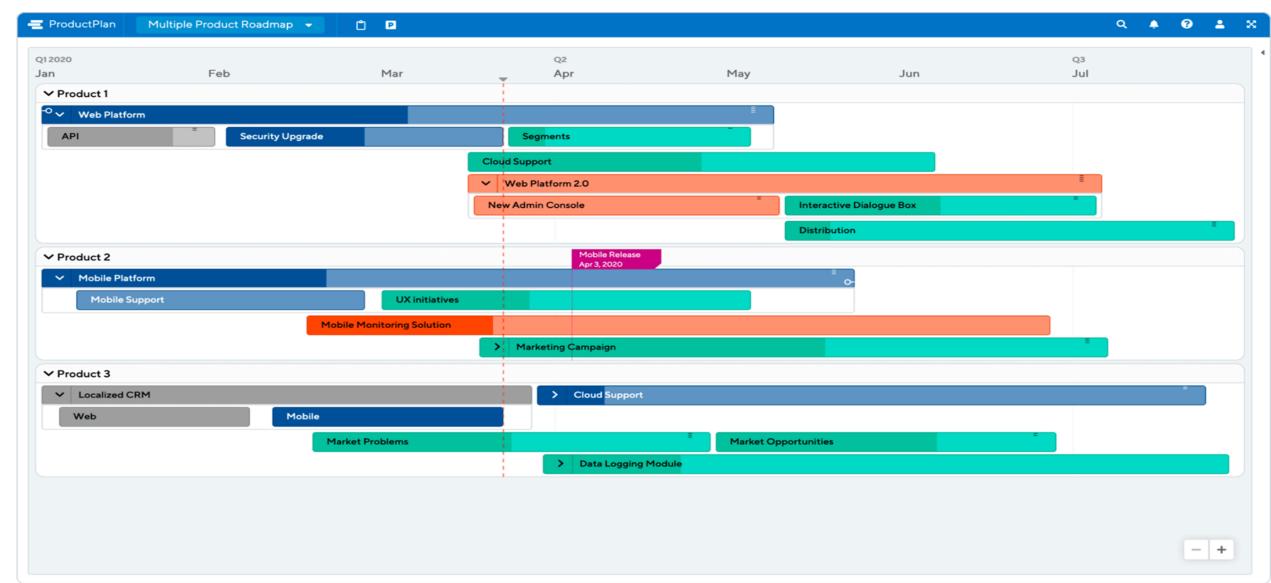
#### Different techniques out there:

- MoSCoW method
- RICE framework
- Value vs complexity matrix



https://productfolio.com/rice-scoring/

## Roadmapping



#### MVP and Iterations

- Minimum Viable Product (MVP) a version of the product with just enough features to be usable by early customers.
- Iterations on the product based on feedback, continuously enhancing it.

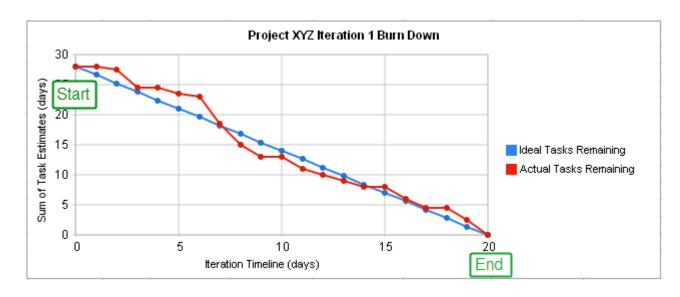
#### Agile Metrics

Various metrics to track our progress and performance.

Insights to adapt our strategy as needed.

#### **Examples:**

- Velocity
- Sprint Burndown
- Cumulative Flow



https://en.wikipedia.org/wiki/Burndown chart

#### Activity: Agile Prioritization



- In this activity we'll imagine getting ready for an important job interview 11AM.
- List all the things anyone in the group would do before this interview
- Then, imagine you overslept and wake up at 10.30AM and only have 15 minutes to get ready: which activities have to go and which ones stay? Why?
- Show the activities with and without the time pressure

# Developers

