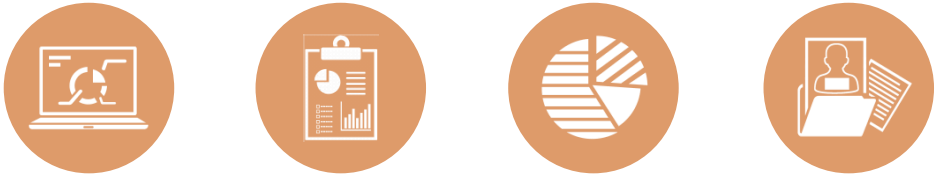
PMI®—Agile Certified Practitioner (PMI-ACP)®

Agile Analysis and Design



Objectives

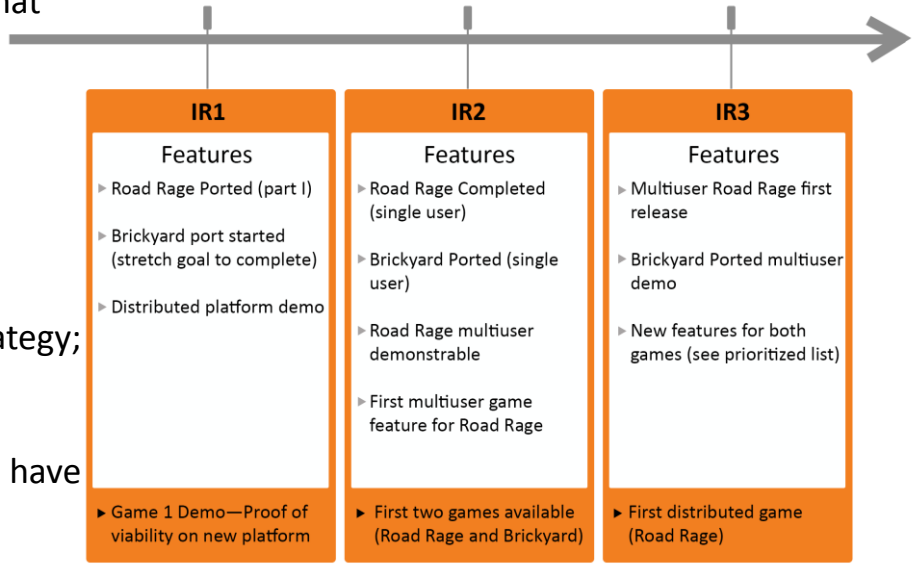
After completing this lesson, you will be able to:

- Explain Product and Iteration/Sprint backlogs
- Prioritize backlogs and determine Minimal Marketable Features
- Create Agile Personas and Wireframes
- Develop an Agile Charter
- Identify best practices for Agile Modeling

Agile Product Roadmap

A product roadmap is a planned approach that helps with strategic project planning and communication of that plan with respect to important product milestones. A Product roadmap:

- forms an integral part of any product strategy;
- provides the framework to plan changes;
- manages the effect those changes would have on the product; and
- represents the long term product vision/goal of the product.



Product backlog always lists items adding value for the customer. It is maintained by the product manager/owner and is the major input for release, wave, and iteration planning.

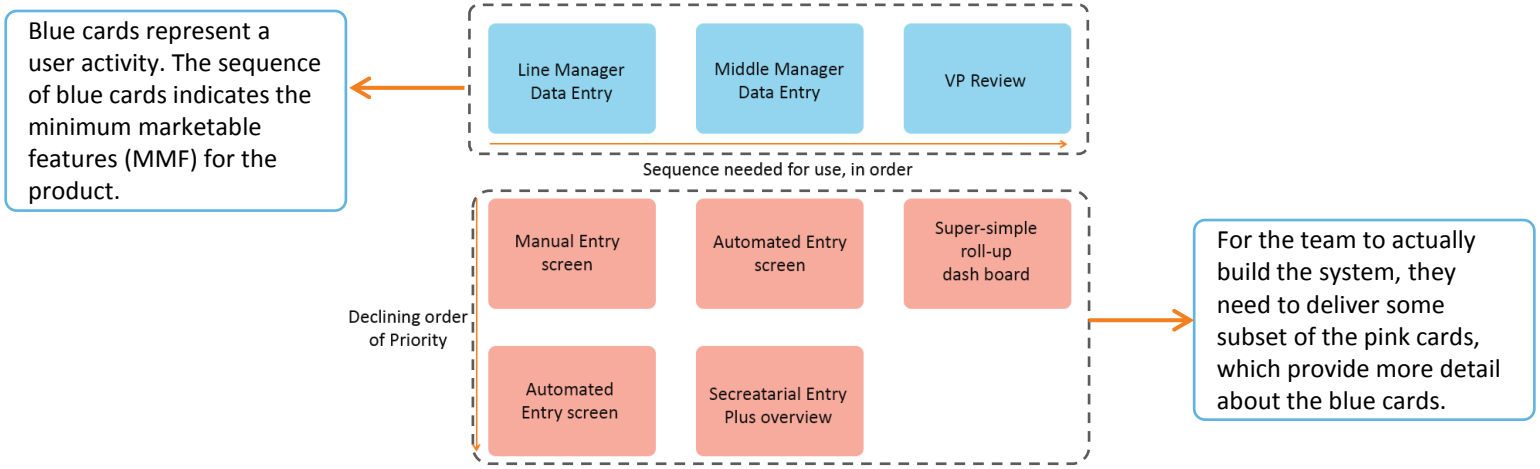
It includes:

- functional requirements;
- non-functional requirements; and
- product enhancement suggestions by various stakeholders.

The objective of creating a product backlog:
To expand the product vision, through an evolutionary requirements definition process. Items for the closest couple of months are usually quite detailed, while items that will be worked on some 6-12 months can be defined broadly and imprecisely.

A story map is an arrangement of the story cards which represents:

- the sequence in which the stories will be needed by the business on the horizontal axis; and
- the priority of the stories on the vertical axis.



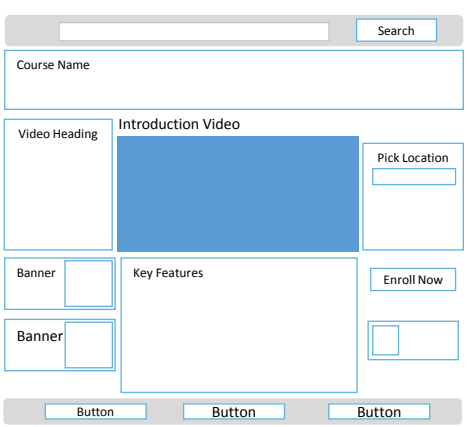
A Wireframe is a low fidelity, non-graphical prototype/artifact. The Wireframe should be simple with no colors, graphics or other layout features.

- It shows the skeleton of a screen, representing its structure, and basic layout.
- It contains and localizes contents, features, navigation tools, and interactions available to the user.

Agile Wireframes are:

- black and white and are accompanied by some annotations to describe the behavior of the elements, their relationships and their importance.
- often put in context within a storyboard and are refined frequently.
- used as a communication tool that serves as an element of conversation and confirmation of 'agile' user stories.

User stories combined with Wireframes are effective in capturing requirement from business. Simplilearn Solutions Private Limited website, initially designed as a Wireframe, was populated with videos and articles. The graphics below show the various versions of the website.



Website with Wireframe Design

Operational Website with videos and articles

An Agile Charter is typically documented on a whiteboard. A chartering session helps a team:

- understand the parameters of team work and its context within the project;
- prepare them to make well-informed decisions going forward;
- identify the value the project will deliver to the business; and
- develop trust and confidence that is needed in the project.

An Agile Charter answers the following:

- Why are we building this product?
- How will we know if it is successful?
- Who is the project community?

Three components of the Agile Project Charter are as follows:

Vision

Defines the "Why" of the project, higher purpose, or the reason for the project's existence

Mission

Defines the "What" of the project and states what will be done in the project to achieve its higher purpose

Success Criteria

Management tests that describe effects outside of the solution itself

Agile Persona is a central element of Alan Cooper's interaction design. A persona is an imaginary representation of a user role and a natural extension to user roles. Generally, avoid picking personas who are real users.

Add details to each persona:

- Likes and dislikes
- When, where, why
- Model and make of car
- Job
- Goals

Example of an Agile Persona:

Jason is a software developer who lives in Manhattan. He has an apartment in SoHo and enjoys walking his Chihuahua around the neighborhood chatting with people he runs into. He uses an Apple Air for his programming and often spends his day working in the Urban Grind coffee shop enjoying their fresh ground cappuccinos. Jason is passionate about Agile techniques and is an active member of the local Agile Leadership Network.

Agile Personas—Real Life Example

Jiscs Digimap Services, to enhance their product, wanted to come up with a list of personas to increase usability and user experience. After interviewing different people, five distinct personas based on different user behaviours were distilled. This activity allowed the team to create a list of features, which each of the persona would want to have. Based on the features envisioned, they were then prioritized and developed.

Create a list of tasks for each persona

Focus on the core audiences and their goals

Avoid potential distractions from issues which are of little benefit to users

Agile Personas—Real Life Example (contd.)

The five distinct personas distilled from the interviews are shown below:

	Explorer Evie	Basic Bob	Detailed Dawn	Layered Larry	Work-around Walter
Quote	*"I am not exactly Sure what I need."* 	*"I need to annotate a map to put in my report."* 	*"I'm creating a 3D view of my building design and its environment."* 	*"I know the type of data I need and how to visualize it in GIS"* 	*"I use a map of my project area from Digimap to create data"* 
Headline	Exploring the data to see what is available	Creating a basic annotated map	Need a detailed, large scale map	Layering data to perform spatial analysis	Using a workaround to achieve his goal
Degree	BSc Sustainability and Environmental Management	MSc Zoology	PhD Architecture and Development	MSc Civil Engineering	BSc Architecture
Summary	• Has an end goal for project in mind • Is gathering data, not sure how she will use it yet • Some limited knowledge of GIS Software	• Takes a map to a location to write on • Recreates the map digitally on his return • Uses PowerPoint to add annotation the map	• Knows exactly what she needs from her data • Imports data into CAD packages • Also uses Digimap when teaching undergrad students	• Has a working knowledge of spatial data formats • Understands digital map data types • Uses GIS to layer data to run Spatial analysis	• Is an AutoCAD user • Uses Digimap to create maps which he then converts to vectors • Limited knowledge of vector data formats
Goals	• See what data is available • Download the most suitable data for research needs • Create and print a map of the area she is interested in to use in her field work	• Create and map the print of the area he is interested in for his field work • Download a map of the same area, which he them imports into PowerPoint to annotate	• Download a detailed map (1:1000 or 1:2000) of a small area, which she will then import into AutoCAD • Take screenshots of the download facility, to incorporate into learning materials for her students	• Download DTM, raster and boundary data for project area	• Create a map of project area • Access vector data for import to AutoCAD

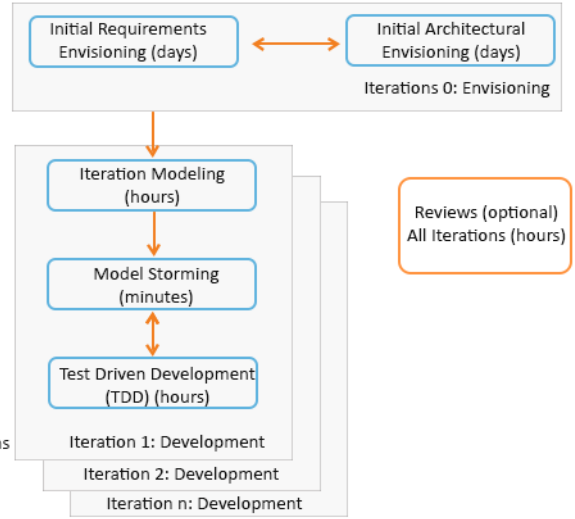
Agile Modeling is a collection of values, principles, and practices for modeling software that can be applied on a software development project in an effective and lightweight manner.

- Identify the high-level scope
- Identify initial "requirements stack"
- Identify an architectural vision

- Modeling is part of iteration planning effort
- Need to model enough to give good estimates
- Need to plan the work for the iteration

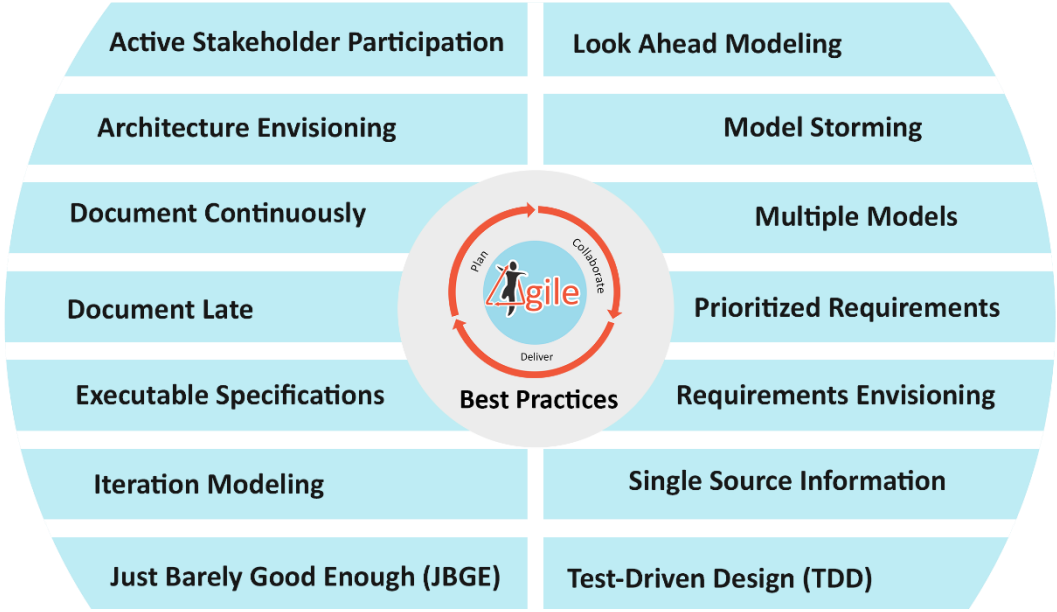
- Work through specific issues on a JIT manner
- Stakeholders actively participate
- Requirements evolve throughout project
- Model just enough for now, you can always come back later

- Develop working software via a test—first approach
- Details captured in the form of executable specifications



Best Practices of Agile Modeling

There are several best practices followed in Agile Modeling:



According to the 2011 CHAOS report from the Standish Group, Agile projects are often more successful than non-Agile projects.

The building blocks in the success of Agile process are:

- Capturing requirements through user stories
- Use of Agile Personas and Wireframe
- Creating product roadmaps
- Story mapping

The details of the published CHAOS report are:

CHAOS Report, 2011 - Standish Group

"Agile process is the universal remedy for software development project failure. Software applications developed through the Agile process have three times the success rate of the traditional Waterfall method and a much lower percentage of time and cost overruns."

QUIZ 1	A story map is an arrangement of the story cards. The vertical axis will show_____.

a. stories needed by the business

b. priority of the story

c. all the stories

d. manual entry of the story

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b. priority of the story

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Answer: b.

Explanation: The vertical axis shows the priority of the stories and the horizontal axis shows the stories needed by the business.

QUIZ 2

Which of the following is maintained by the product manager and is the major input for release, wave, and iteration planning?

a. Iteration release

b. Story map

c. Product backlog

d. Story cards

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b. Story map

c. Product backlog

d. Story cards

Answer: c.

Explanation: Product backlog expands the product vision, through an evolutionary requirements definition process, into a product feature list, or backlog. It is maintained by the product manager and is the major input for release, wave, and iteration planning.

QUIZ 3	Which of the following is a low fidelity prototype that shows a skeleton of a screen representing its structure and basic layout?

a. User story

b. Chartering

c. Modeling

d. Wireframes

QUIZ 3	Which of the following is a low fidelity prototype that shows a skeleton of a screen representing its structure and basic layout?

a. User story

b. Chartering

c. Modeling

d. Wireframes

Answer: d.

Explanation: Wireframes is a low fidelity prototype that shows a skeleton of a screen representing its structure and basic layout.

QUIZ 4	How many product backlogs are there for four teams working on a major release?

a. 1

b. 2

c. 3

d. 4

QUIZ 4	How many product backlogs are there for four teams working on a major release?

a. 1

b. 2

c. 3

d. 4

Answer: a.

Explanation: There is only one product backlog regardless of the number of teams.

QUIZ 5

What is not a feature of an Agile Charter?

a. Written on a whiteboard

b. Written on a single piece of paper

c. Should explain the Why, What, and Success Criteria of the project

d. Is usually based on a Charter template from the organization's PMO

QUIZ 5	What is not a feature of an Agile Charter?

a. Written on a whiteboard

b. Written on a single piece of paper

c. Should explain the Why, What, and Success Criteria of the project

d. Is usually based on a Charter template from the organization's PMO

Answer: d.

Explanation: The Agile Charter is intended to be lightweight and is not intended to be based on a standard template.

QUIZ 6	What does JBGE in Agile Modelling stand for?

a. Job Based Governance and Engineering

b. Just Barely Good Enough

c. Java Bytecoder Generic Enhancement

d. None of the above

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a. Job Based Governance and Engineering

b. Just Barely Good Enough

c. Java Bytecoder Generic Enhancement

d. None of the above

Answer: b.

Explanation: Just Barely Good Enough for the situation at hand and no more.

QUIZ 7	Where does the Product Backlog for an existing product come from?

a. Customers

b. Developers

c. Customer support staff

d. All of the above

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d. All of the above

Answer: d.

Explanation: Customers, developers, product managers, and customer support staff can all provide ideas for features in the product backlog.

Here is a quick recap of what was covered in this lesson:

- The Product Roadmap determines the vision and release structure for the product. The Product Backlog supports it.
- Agile Story Maps determine the depth of features a product will contain.
- Lightweight Agile Wireframes are used to represent the layout and design of a software product.
- Agile Chartering is lightweight and uses a whiteboard or single piece of paper for the project vision.
- Agile Personas can be used to describe fictional users of the system.
- Various Agile Modeling techniques provide a collection of values, principles, and practices for modeling software that can be applied on a software development project in an effective and lightweight manner.

THANK YOU