

Sub-Rotina 02: Requirements

Levantamento de Requisitos

SCRUM FUNDAMENTALS

Definition of Done

A Sample Definition of Done

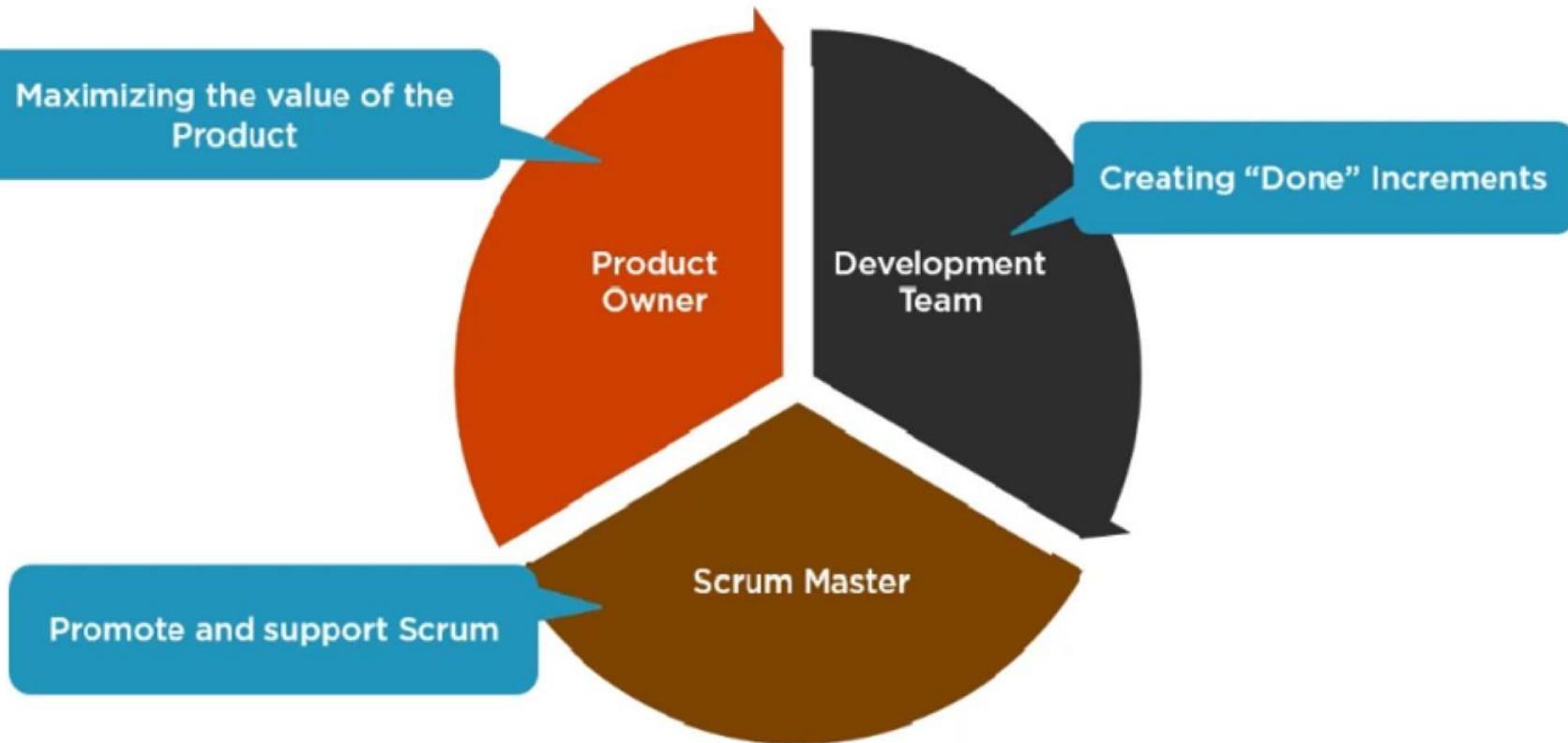
- Peer Reviewed
- Web page served within 2 seconds
- Accepted by Product Owner
- Tested

Sprint Goal

A Sample Sprint Goals

- Provide credit card processing
- Enable payment by PayPal
- Provide Review Basket functionality
- Deliver Home page menu system

Roles



Artifacts

Product Backlog

- Holds the requirements for the product
- Managed by the Product Owner

Sprint Backlog

- Holds all work for the Sprint Goal
- Managed by the Development Team

Increment

- Working addition to the product
- Potentially releasable

Events

Sprint Planning

- From: Product Backlog
- To: Sprint Goal, Sprint Backlog

Daily Scrum

- From: Daily Progress, Sprint Backlog
- To: Updated Daily Plan

Sprint Review

- From: Sprint, Increment
- To: Updated Product Backlog

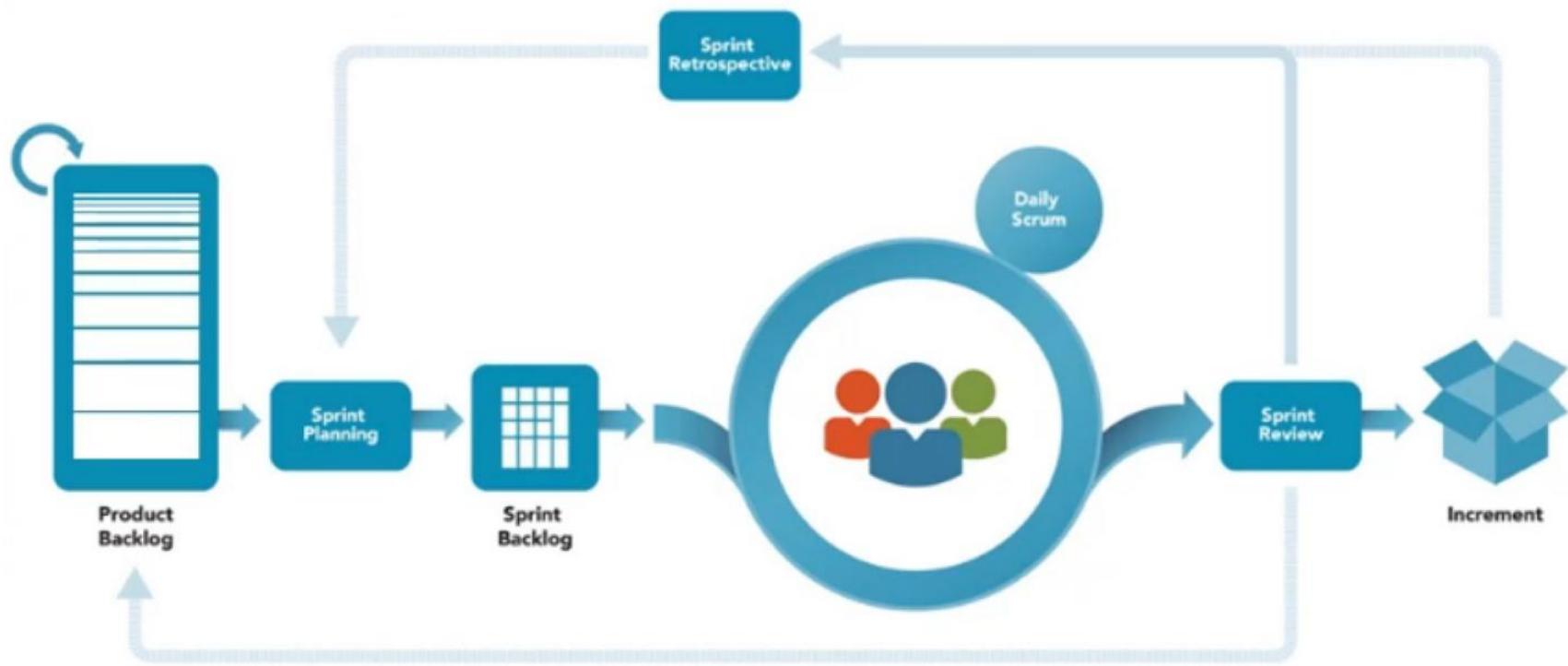
Sprint Retrospective

- From: Past Sprint
- Improvements for next sprint

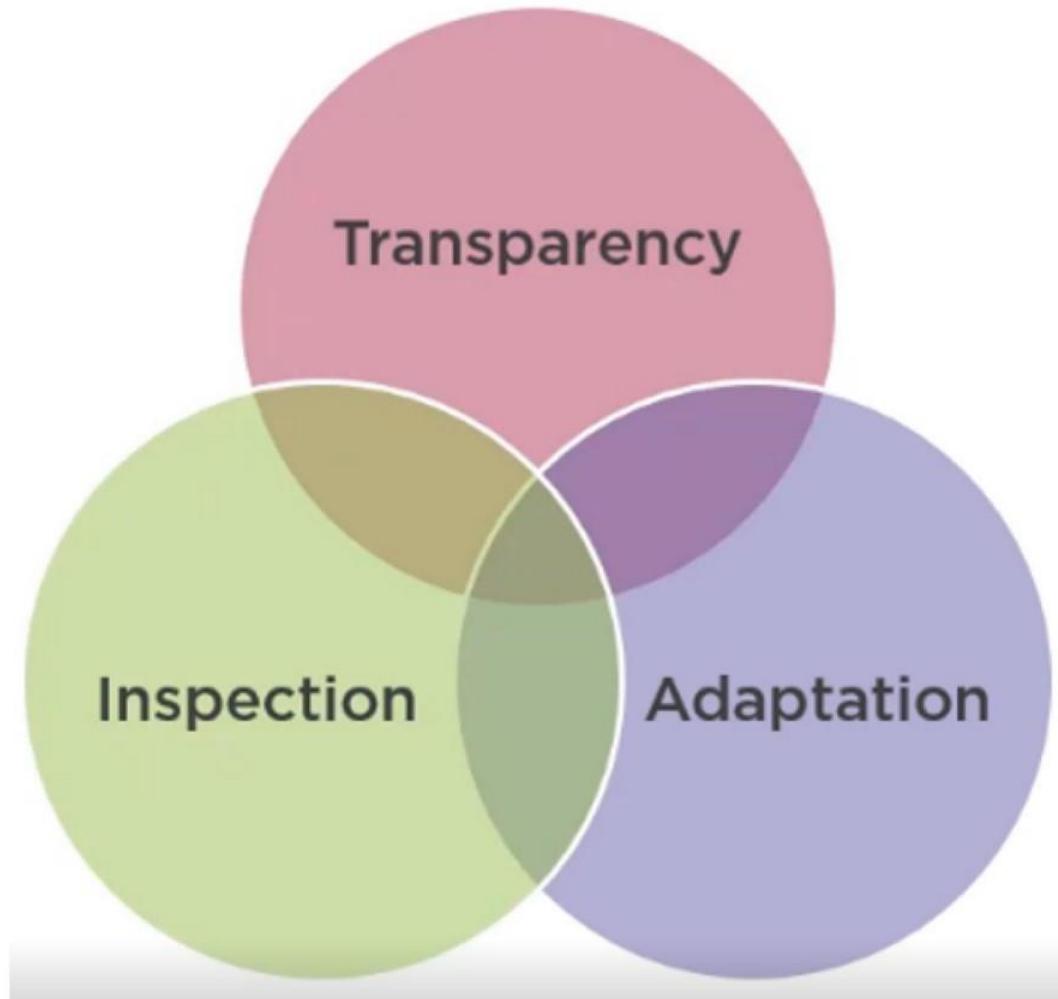
Sprint

- Container Event
- One month, or less, in duration

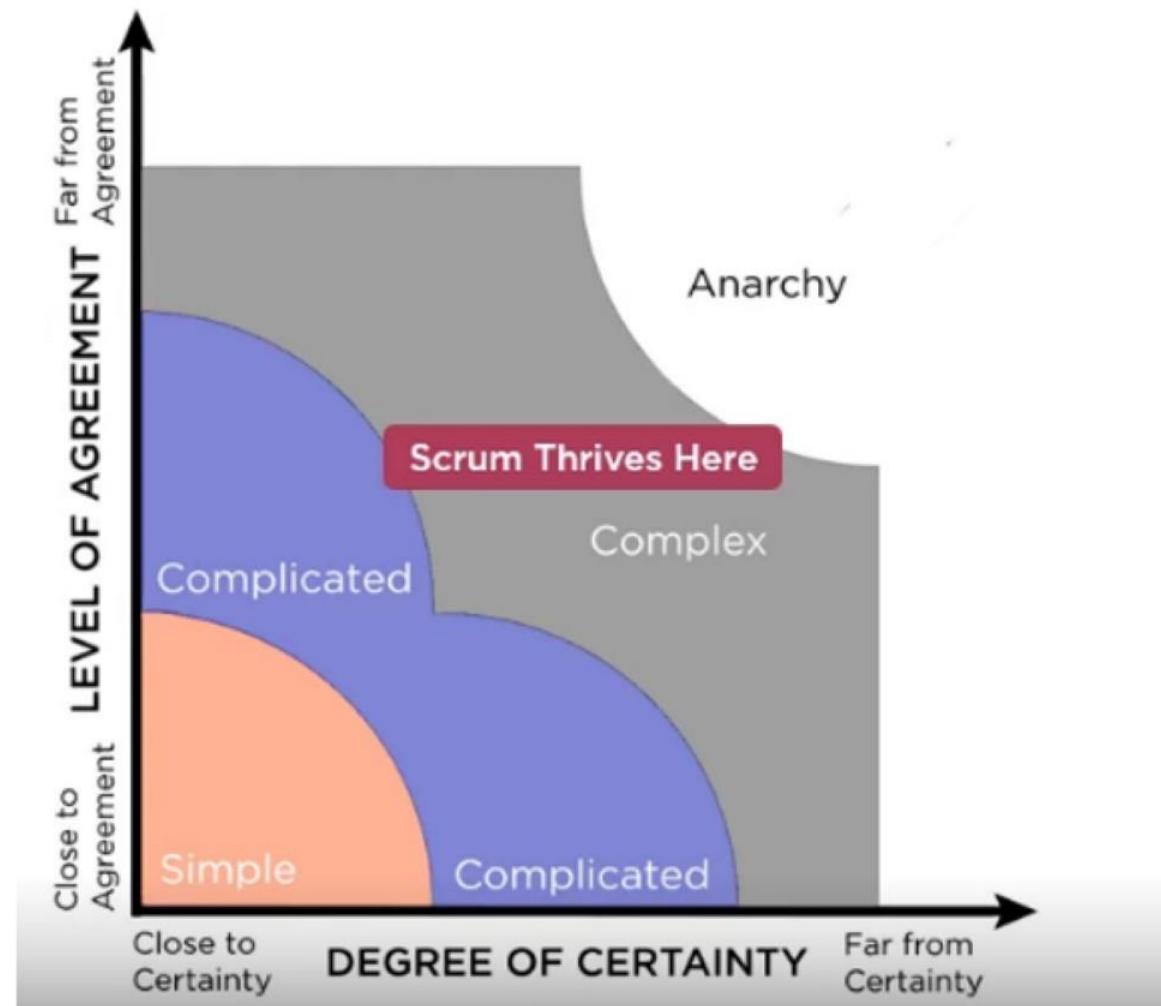
Scrum Framework



Empirical Process



When Should We Use Scrum?



PRODUCT OWNER

Product Ownership

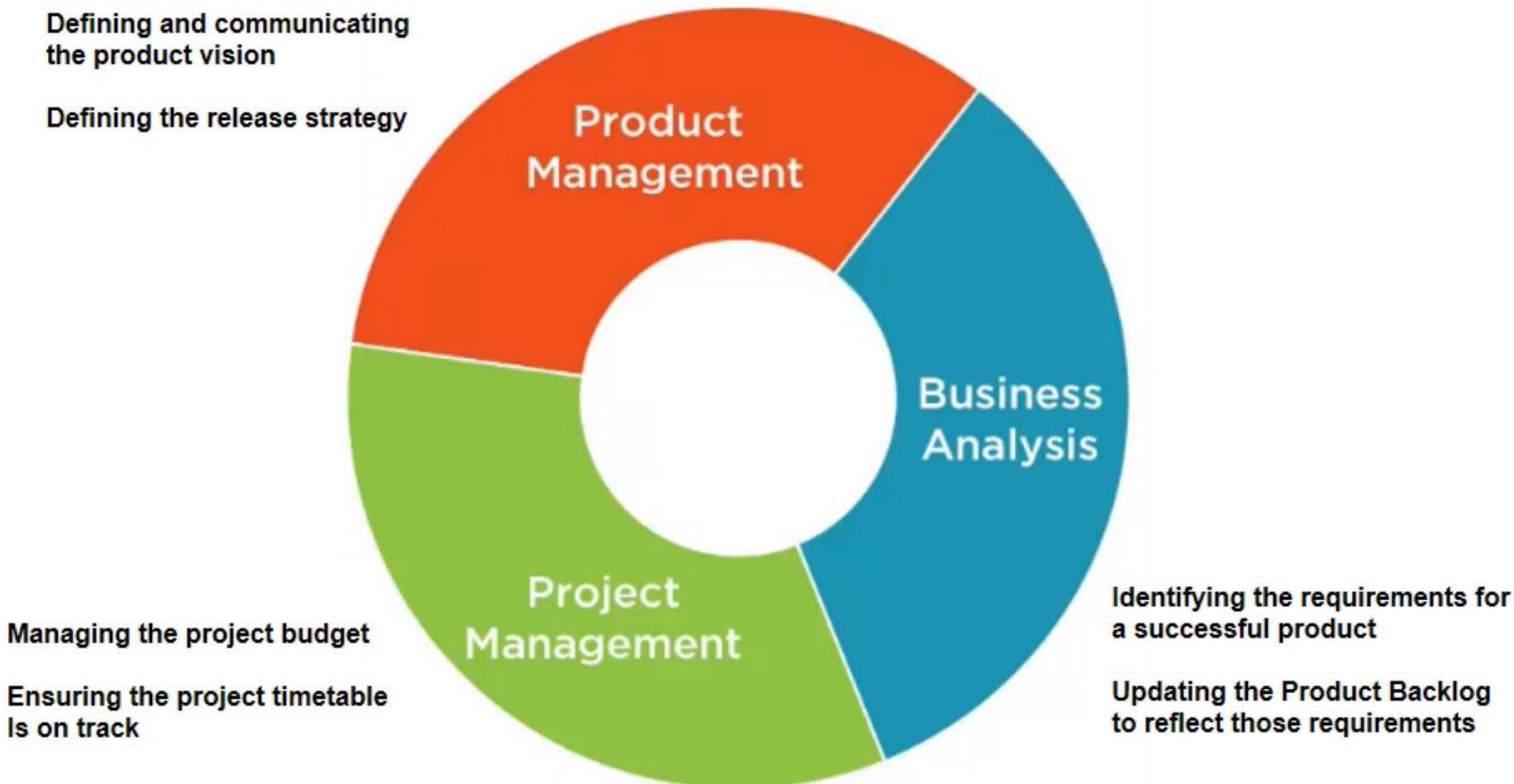
The Product Owner's primary responsibility is to **maximize the value** of the product.

Product Backlog

- A list of all items necessary for the successful delivery of the product
- The Product Owner is accountable for the creation of this list
- Any member of the Scrum Team may add items to the list
- The Product Owner is responsible for the ordering of the list



Product Ownership



Leadership

Inside the team

Guiding the team in the creation and reaching of objectives

Outside the team

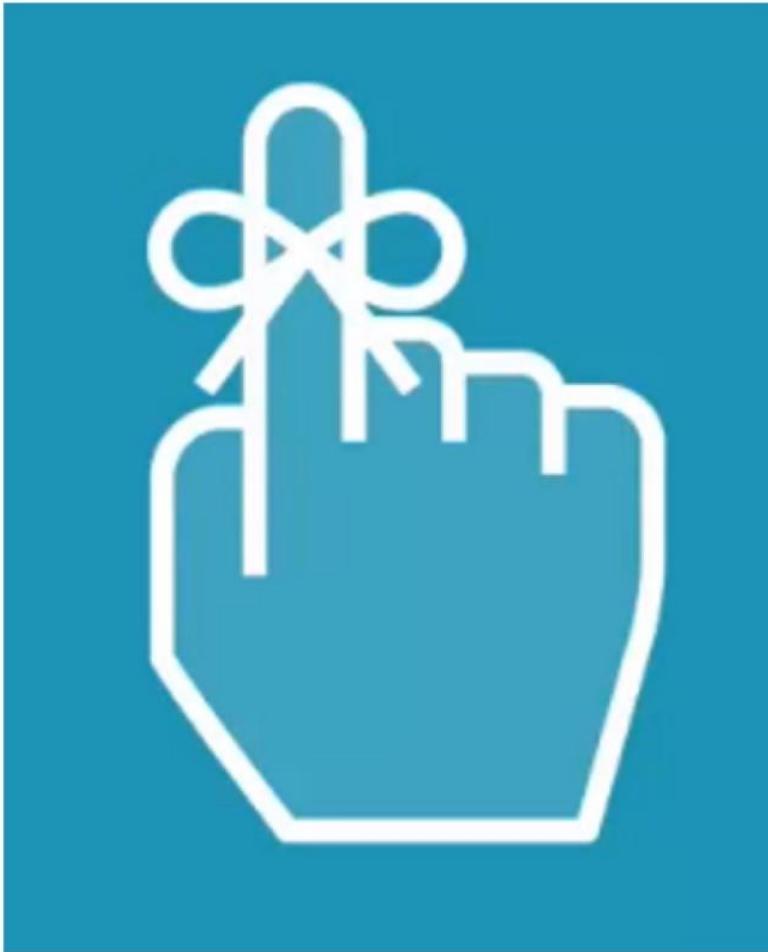
Acting as the champion for your product and your team to your organization

PRODUCT VISION

Product Vision

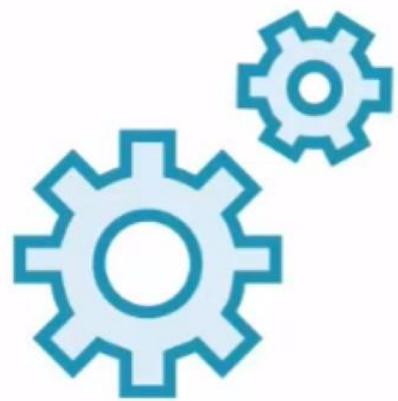
Everyone participates in creating the product vision so everyone understands the product's goals

Scrum Teams



- Scrum Teams are Self-Organizing and free to choose their own approach

What Product Vision Communicate?



What
the product will
do?



Who
the product is
for?



Why
the product will
do it?

The Traits of a Product Vision

Shared

The entire team
understands
the vision

Succinct

Stated concisely
and quickly
understood

Emergent

Grows and evolves as
more is learned about
the product

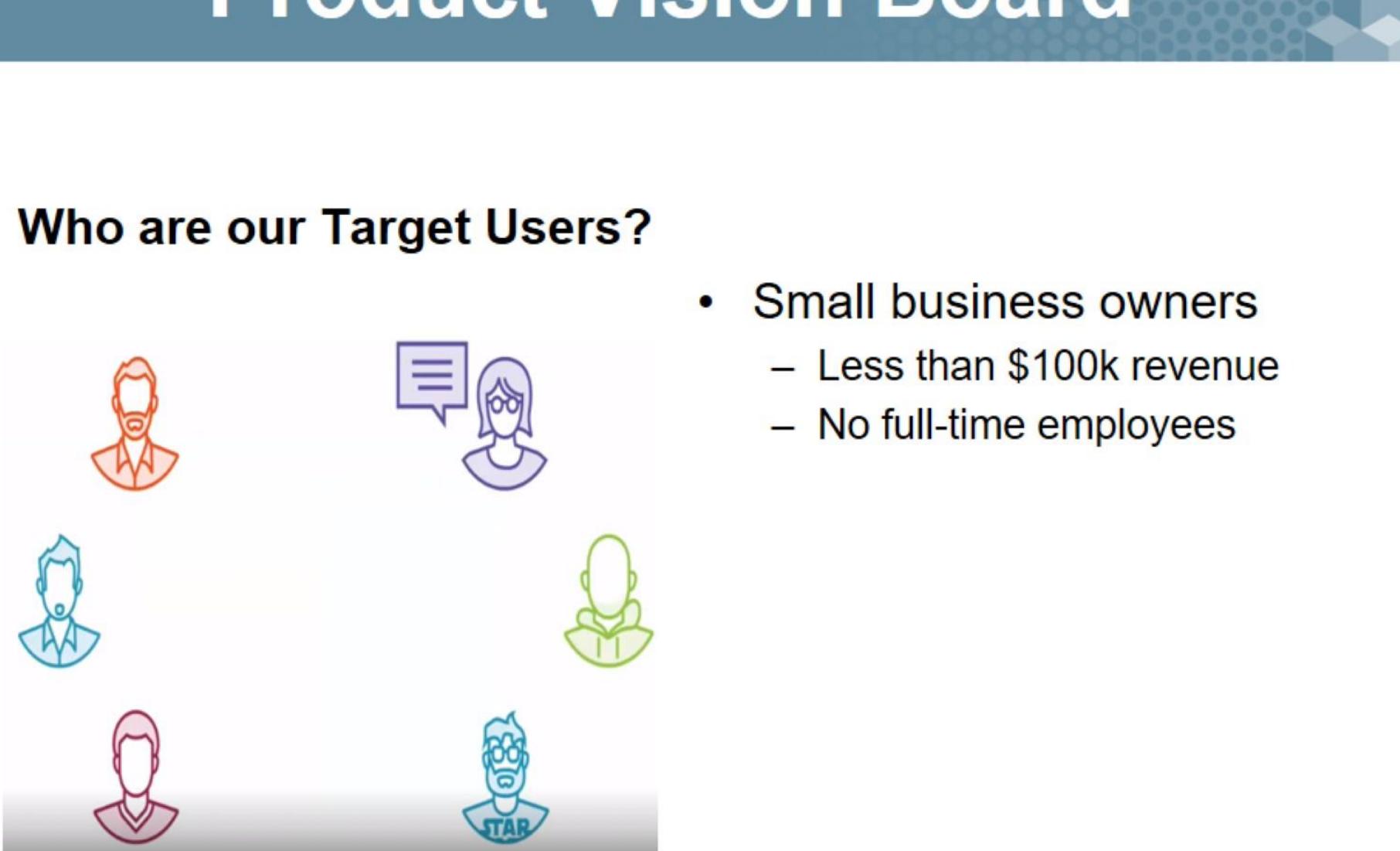
Product Vision Board

 VISION What is your motivation for creating the product? Which positive change should it bring about?	 TARGET GROUP Which market or market segment does the product address? Who are the target customers and users?	 NEEDS What problem does the product solve? Which benefit does it provide?	 PRODUCT What product is it? What makes it stand out? Is it feasible to develop the product?	 BUSINESS GOALS How is the product going to benefit the company? What are the business goals?
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Product Vision Board

Who are our Target Users?

- Small business owners
 - Less than \$100k revenue
 - No full-time employees



Product Vision Board

What are the Needs of Our Target Users?

- Understand profit
- Forecast tax liability
- Spend more efficiently



Product Vision Board

What are the Capabilities of Our Product?

- Informative visualizations
- Automated financial importing
- Automatic expense categorization



Product Vision Board

What are the Business Goals of Our Product?

- Increase Profitability
- Build brand awareness



Product Vision Board

What is our Product Vision Statement?

- To create simple accounting software to help small business owners be successful



USER STORIES

Thinking in Stories

User Stories

Common to
most agile
methodologies

Popular with
new teams

Large points
of struggle

What Is a Story ?

- Brief - Designed to encourage interaction
- High level – Allows you to defer details



What Is Not a Story ?

- Detailed Requirements
 - Defers design to the last responsible moment
- Set in Stone
 - Designed to be flexible



User Story



- A story is a placeholder for this conversation

The Story Format



As a salesperson

I want to create a
quarterly forecast

So that I shall meet my
sales goals

Introducing Azure Devops

The screenshot shows the Azure DevOps interface for the ECommerce project. The left sidebar includes links for Overview, Boards, Backlogs, Work items, Sprints, Queries, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays the ECommerce Team backlog, showing a list of 10 Epics. The backlog table has columns for Order, Work Item Type, and Title. The first Epic is selected, showing its details: Notifications, Promotions, Logistics, Inventory, Sales, Customer, Finance, Checkout, Payment Gateway, and Architecture. To the right of the backlog is a 'Planning' panel titled 'ECommerce Team Backlog' which indicates the current sprint from 12/2/2019 to 12/13/2019, spanning 10 working days. A message states 'No work scheduled yet'. A 'New Sprint' button is also present.

Order	Work Item Type	Title
1	Epic	> Notifications
2	Epic	> Promotions
3	Epic	> Logistics
4	Epic	> Inventory
5	Epic	> Sales
6	Epic	> Customer
7	Epic	> Finance
8	Epic	> Checkout
9	Epic	> Payment Gateway
10	Epic	> Architecture

Planning
Drag and drop work items to include them in a sprint.

ECommerce Team Backlog

Sprint 1 Current 12/2/2019 - 12/13/2019
10 working days

No work scheduled yet

+ New Sprint

Scenario

The Audio Redeemer



- Free Your Music From the Confines of Discs

Requirements

- Users can insert any CD into the Kiosk
- Users will plug their device into the kiosk
- We can periodically empty the kiosk and pickup the CDs for recycling
- We will charge a convenience fee for the process of ripping their music to their device
- This fee will be paid by credit card
- We can pull reports from the kiosk to see how it's doing

What are Roles?



- Represent groups of users
 - Rather than individual users
- Derived from the characteristics of the group
 - Based on the group's interest in the system

Roles for the System



Customers

Rips their CDs to their devices

Service People

Performs periodic maintenance
on the kiosk

Owners

Reports on the kiosk to
Manage the business

What Makes a Good Story?

Requirement – *We can periodically empty the kiosk and pickup the CDs for recycling.*

User Story Format

*As a serviceperson,
I want to empty the CD
So they may be recycled.*

Can we make it better?

INVEST



- Independent
- Negotiable
- Valuable
- Estimate-able
- Small
- Testable

INVEST

“As a serviceperson
I want to empty the CDs
So they may be recycled”

- Independent
- Negotiable
- Valuable
- Estimate-able
- Small
- Testable

Demonstration

- **Creating a User Story in Azure DevOps**

Epic

- **Users can insert CD into the kiosk. If the user likes we'll keep their CD and recycle it for them.**
- **Users will plug their device into the kiosk.**

Epic



As a customer,
I want to rip music to my device
So I can listen to it on the go.

Epic

“As a customer,
I want to rip music to my device
So I can listen to it on the go”

- Insert a CD
- Plug in a device
- Select the Songs
- Pay by credit card
- Rip the music to the device
- Prompt for CD recycling

Epic - Breaking Down



As a customer,
I want to insert a CD into the kiosk, so I can rip its
contents to my device.



As a customer,
I want to plug my device into the kiosk, so I can
load it with the contents of my CD.



As a customer,
I want to select the songs I'd like to rip, so I can
only rip the music I want.

Epic - Breaking Down



As an owner, I want the customer to pay for this service by credit card, so I can generate revenue from this service.



As a customer,
I want the music to be ripped from my CD to my device, so I can enjoy music on the go.



As an owner, I want to prompt user to recycle their CD, so I can generate incremental revenue from reselling used CDs.

Qualities of Epics

Captures a complete workflow towards a goal

Not deliverable until all stories are complete

Can cater to multiple users

Demonstration

- **Creating a User Story in Azure DevOps**

Theme

- **We can pull reports from the kiosk to see how it's doing.**
 - Usage reports
 - Financial reports
 - Diagnostic reports

Theme



As a service person

I want to view a report of the peak times of day so I can schedule service calls with minimal interruption



As an owner

I want to view a report of the types of music being ripped so I can find secondary buyers who will give us the best prices for used CDs



As an owner, I want to view a report of the types of devices being ripped to so I can offer upsells to the customer specific to those devices.

Qualities of Themes

Stories are related, or all serve a similar goal

Do not need to encapsulate a workflow

Can be delivered independently of one another

Demonstration

- **Creating a User Story in Azure DevOps**

What Are Personas?

Persona

“A fictional character that represents a user of the application.”

Roles Versus Personas

Roles



Personas



- Represent groups of users
- Represent individual users
- Creates a backstory for a role
- Differentiates between similar roles

Roles Versus Personas



Local
Salesperson



Regional
Salesperson



New Business
Salesperson



Account Growth
Salesperson

Which Roles?



- Frequently used roles
 - Not all roles will become personas
- Relationship mapping
 - Who are the key users of the application

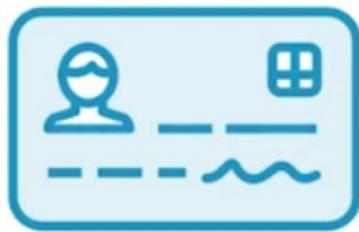
Relationship Mapping

Identify new users

Highlights
interactions
between users

Shows influence

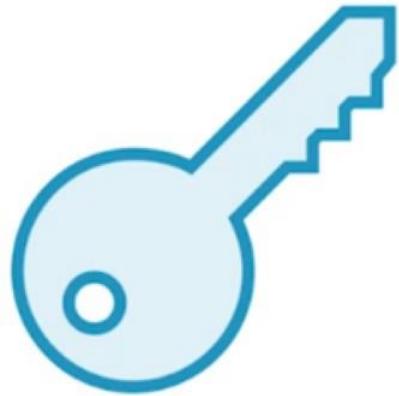
Creating Personas



Name



Photo



Role



Description

Persona Template

 PICTURE & NAME	 DETAILS	 GOAL
What does the persona look like? What is its name? Choose a realistic and believable picture and name.	What are the persona's relevant characteristics and behaviours? For instance, demographics, such as age, gender, occupation, and income; psychographics, including lifestyle, social class, and personality; and behavioural attributes like usage patterns, attitudes, and brand loyalty. Only list relevant details.	What problem does the persona want to solve or which benefit does the character seek? Why would the persona want to use or buy the product?

Persona Template

PICTURE & NAME	DETAILS	GOAL
 Suzy 	<p>What does the persona look like? What is its name? Choose a realistic and believable picture and name.</p> <p>What are the persona's relevant characteristics and behaviours? For instance, demographics, such as age, gender, occupation, and income; psychographics, including lifestyle, social class, and personality; and behavioural attributes like usage patterns, attitudes, and brand loyalty. Only list relevant details.</p> <p>Role: Customer</p> <p>Suzy wants to rip her CDs so she no longer has to carry them, and a separate device, to enjoy her music.</p>	 What problem does the persona want to solve or which benefit does the character seek? Why would the persona want to use or buy the product?

Getting the Most from Personas

Make them visible

Tell “stories from the field”

Refer to them by name

Keep them current

Rewriting User Story



As Suzy,
I want to rip music to my
device So I can listen to
it on the go.

Why We Split Stories?

Tough to estimate

Work is not
distributed well

Bigger misses

Advantages of Small Stories

More flexibility in release planning

Easier negotiation with product owner

Can save development work

How Big Is Too Big?



- When does the team become uncomfortable?
- Teams will have less confidence as stories grow
- Where does the team become less accurate?

Splitting Stories



Splitting Stories

← → ⌛ ⚙ ⚡

Email address

Password

Confirm password

First name

Last name

Phone

Street Address

City State

Zip Country

Email address

Password



SUBMIT

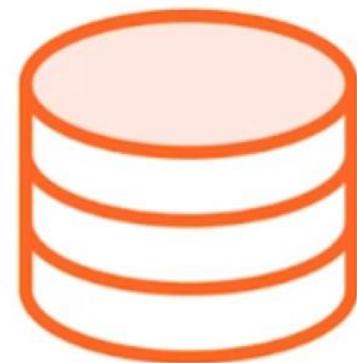
Splitting the Story Horizontally



User Interface



Server Side



Database Layer

Disadvantages of Splitting Horizontally

Horizontal slices provide no value

Difficult to test

Promotes silos

Splitting the Story Vertically

Email address	<input type="text"/>
Password	<input type="password"/>
Confirm password	<input type="password"/>

First name	<input type="text"/>
Last name	<input type="text"/>
Phone	<input type="text"/>
Street Address	<input type="text"/>
City	<input type="text"/> State <input type="text"/>
Zip	<input type="text"/> Country <input type="text"/>

Email address	<input type="text"/>
Password	<input type="password"/>
	
SUBMIT	

Basic Profile Details

Additional Profile Details

Social Network Integration

Advantages of Splitting Vertically

Delivers smaller
pieces of
functionality

Encourages
well-rounded
developers

Stories are
more testable

Disadvantages of Splitting Vertically



- Can feel unfamiliar to many teams
- Especially teams from siloed backgrounds
- Pushes people out of their comfort zone
- Can result in an initial drop in productivity

What Gets a Story to Done?

Meeting the
customer's expectations

Meeting the
team's expectations

What the Customer Wants



- Does what's expected
- Does not crash
- Easy to use

What the Team Wants



- High quality code
- Unit tested
- Peer reviewed

Acceptance Criteria



- User stories are high level
- Allows stories to remain flexible
- Acceptance criteria provides more detail
- Fills in the gaps left by user stories

Acceptance Criteria Format

Given...

When...

Then...

Acceptance Criteria



As a customer
I want to rip the music from
my CD to my device
So I can enjoy my music on
the go.

Outstanding Questions



- What format should we rip to?
- Do we add the music to the device's library?
- How long can the process take?

Answers

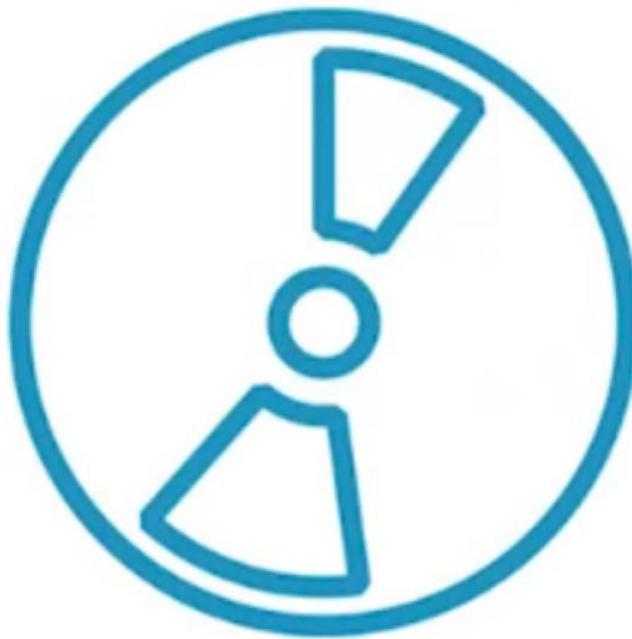


**What format should
the ripped music
be in ?**



**We will rip the
music to MP3**

Acceptance Criteria



Given the CD has been inserted into the kiosk
When the contents of the CD are ripped
Then the resulting format will be MP3

Where Do We Store?



**On the back of the
card**



**In the description
field**

Creating Acceptance Criteria

Writing criteria
is the first step
to working
on the story

Agree on
criteria before
coding begins

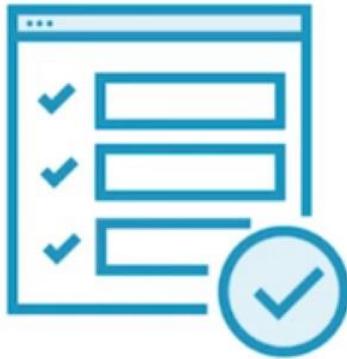
Use criteria as
the basis for
test cases

What Makes Great Criteria



- Specific
 - Establish what makes the story successful
- Measurable
 - Set benchmarks early
- Realistic
 - Identify and capture constraints

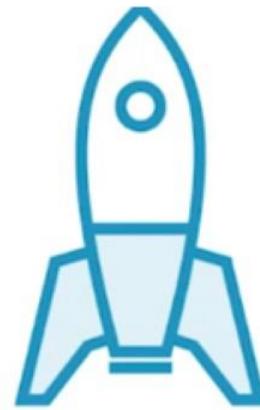
Done Criteria for the Team



Test Coverage



Peer Reviewed



Deployed



Accepted

PRODUCT BACKLOG

Define the Product Backlog

Ordered list

Single source

Never complete

Dynamic

Product Backlog Refinement

Act of adding detail, estimates and order

Product Owner and Development Team collaborate

Items are reviewed and revised

Scrum Team decides how and when done

Consumes $\leq 10\%$ of capacity of Development Team

Product Backlog Items can be updated anytime

Planning Horizons

Sprint

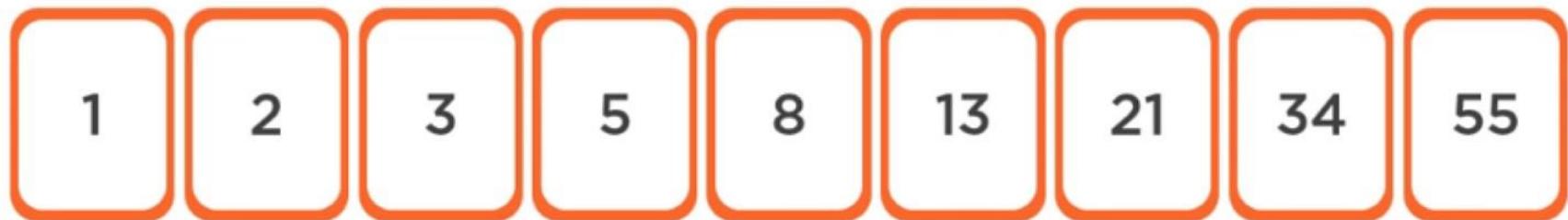
Product Release

Product
Completion

Estimation

**The purpose of
estimating is to help us
to plan.**

Relative Estimating



Fibonacci Sequence

Estimates not absolute

Range of uncertainty

Relative Estimation

1

8

55

Relative to What?

Complexity

Effort

Demonstration

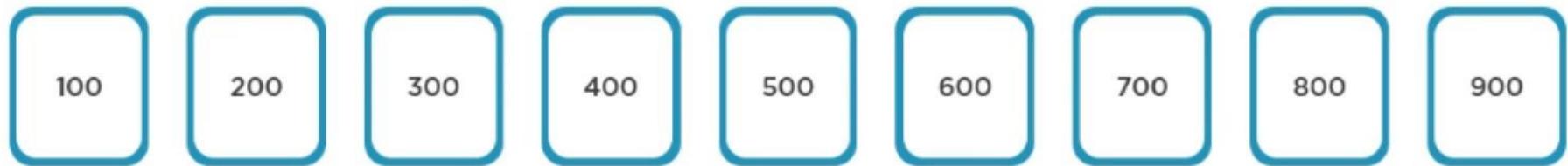
- **Estimating Individual Items**

Business Value and Order

The Product Owner is solely responsible for maximizing the value of the product resulting from work of the Development Team and optimizing the value of the work the Development Team performs

Scrum Guide.

Relative Valuation



Ordering the Product Backlog

Return On Investment

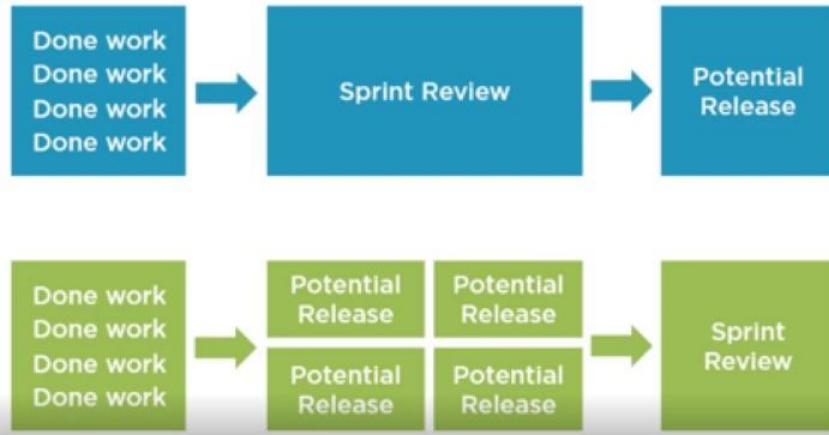


As an account user
I want a report of overdue
invoices
So that I can chase
payment

Estimation: 5
Business Value: 400
ROI: 80

Release Management

Release and Done



- Sprint-based delivery
- Continuous Delivery

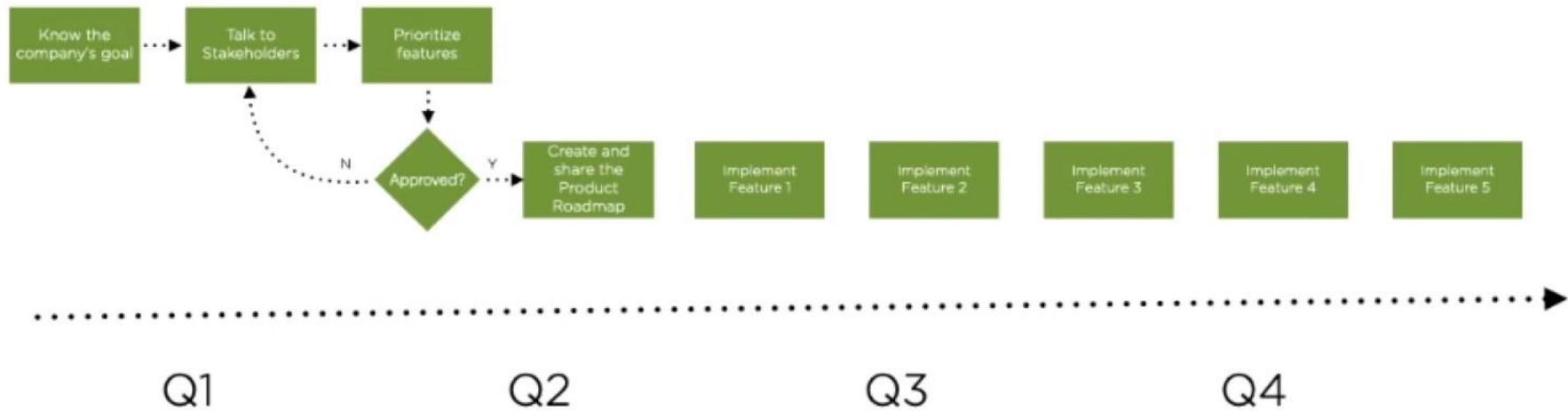
PRODUCT ROADMAP

What is a Product Roadmap?

“A product roadmap is a high-level visual summary that maps out the vision and direction of your product offering over time. A product roadmap communicates the why and what behind what you’re building.”

ProductPlan

What is a Product Roadmap?



Goals of a Product Roadmap?

- **Convey product and company strategy alignment**
- **Show an overview of the how to reach your goal**
- **Get alignment on features and prioritization**
- **Communicate the plan**



End Sub-Rotina 02: Requirements