

Low Tech High Impact Sprint Planning

The fast track from stories to acceptance criteria

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Overview



What we will cover

- ☒ BDD and Sprint Planning
- ☒ Acceptance Criteria and the Definition of Done
- ☒ Writing acceptance criteria in Gherkin
- ☒ Acceptance criteria with Feature Mapping

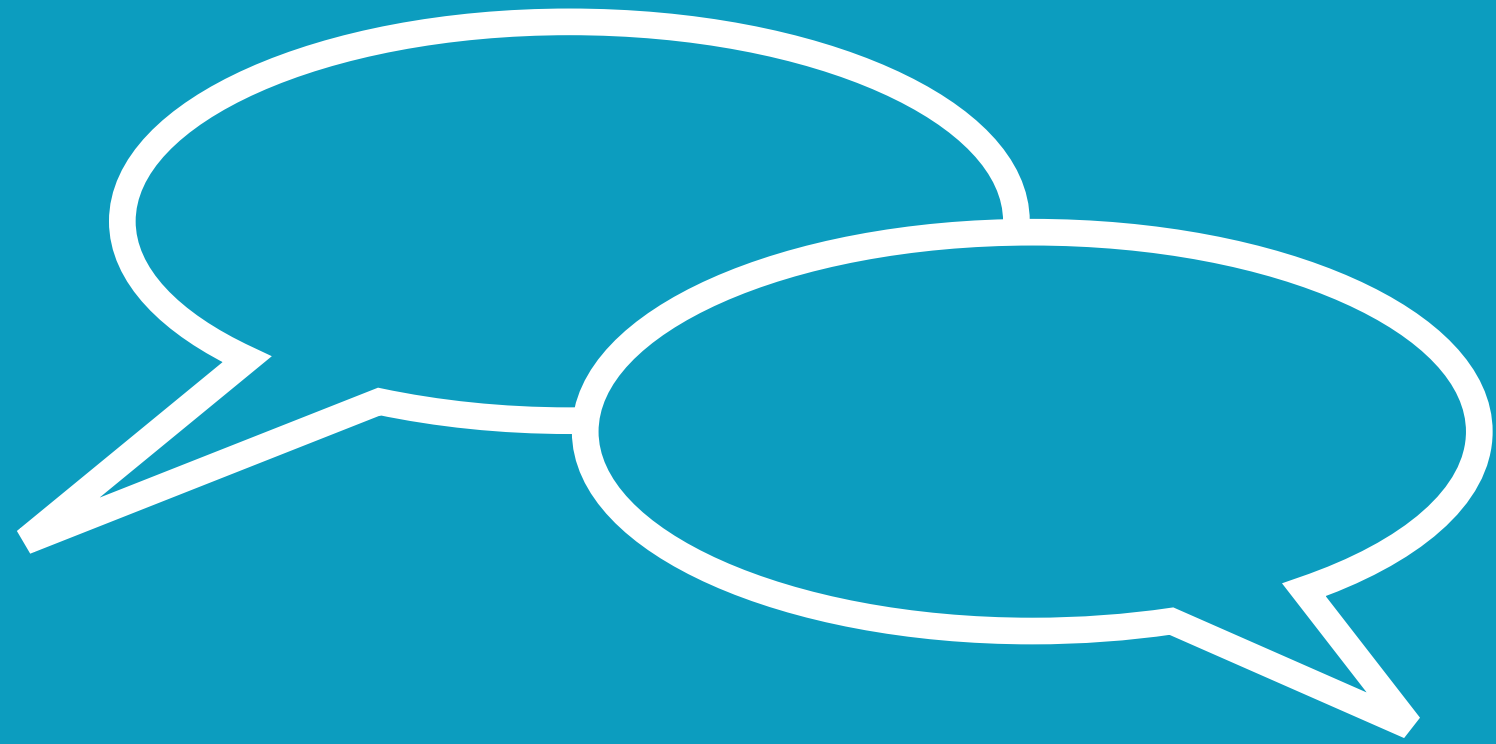
Overview



Before we start...

Download the Cheatsheet

<http://bit.ly/feature-mapping-cheatsheet>

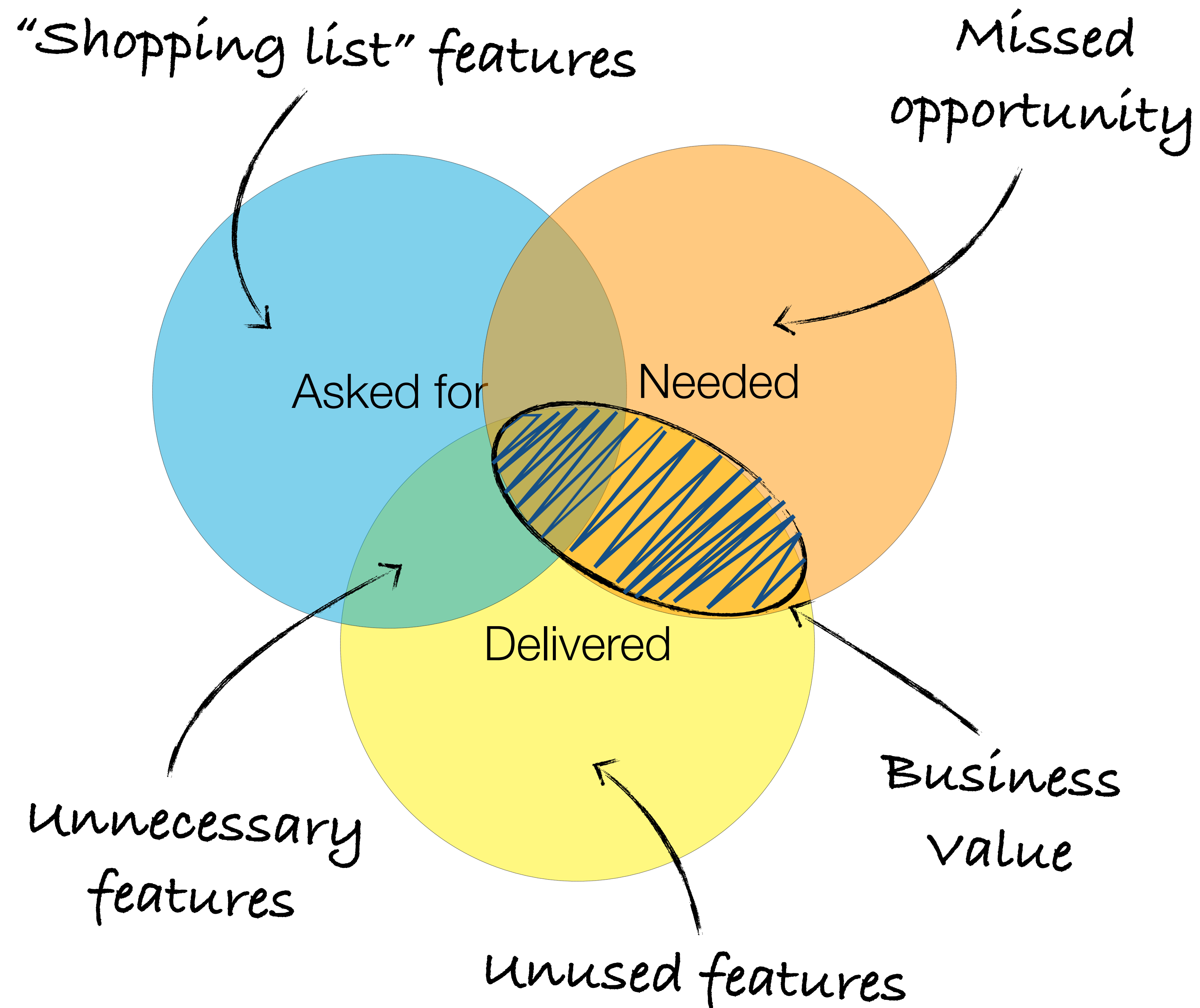


BDD and Sprint Planning

in a nutshell



The problem with software



I asked for

A login form

I need

a way for users to securely
access their accounts

for users to be sure their
personal data is safe

Deliverable Options

An application-specific
authentication system

Enterprise Single Sign On

Sign on with Google, Facebook,
Twitter...

I asked for

A VAT dropdown
list

I need

to charge the correct VAT
rates for my customers

to keep track of VAT in
compliance with EU rules

Deliverable Options

Detect VAT option from customer
profile

Ask more user-friendly VAT-
related questions

Register company in the Channel
Islands

I asked for

A keyword search

I need



Deliverable Options



I asked for

A keyword search

I need

to find a specific article

to discover products I might
be interested in buying

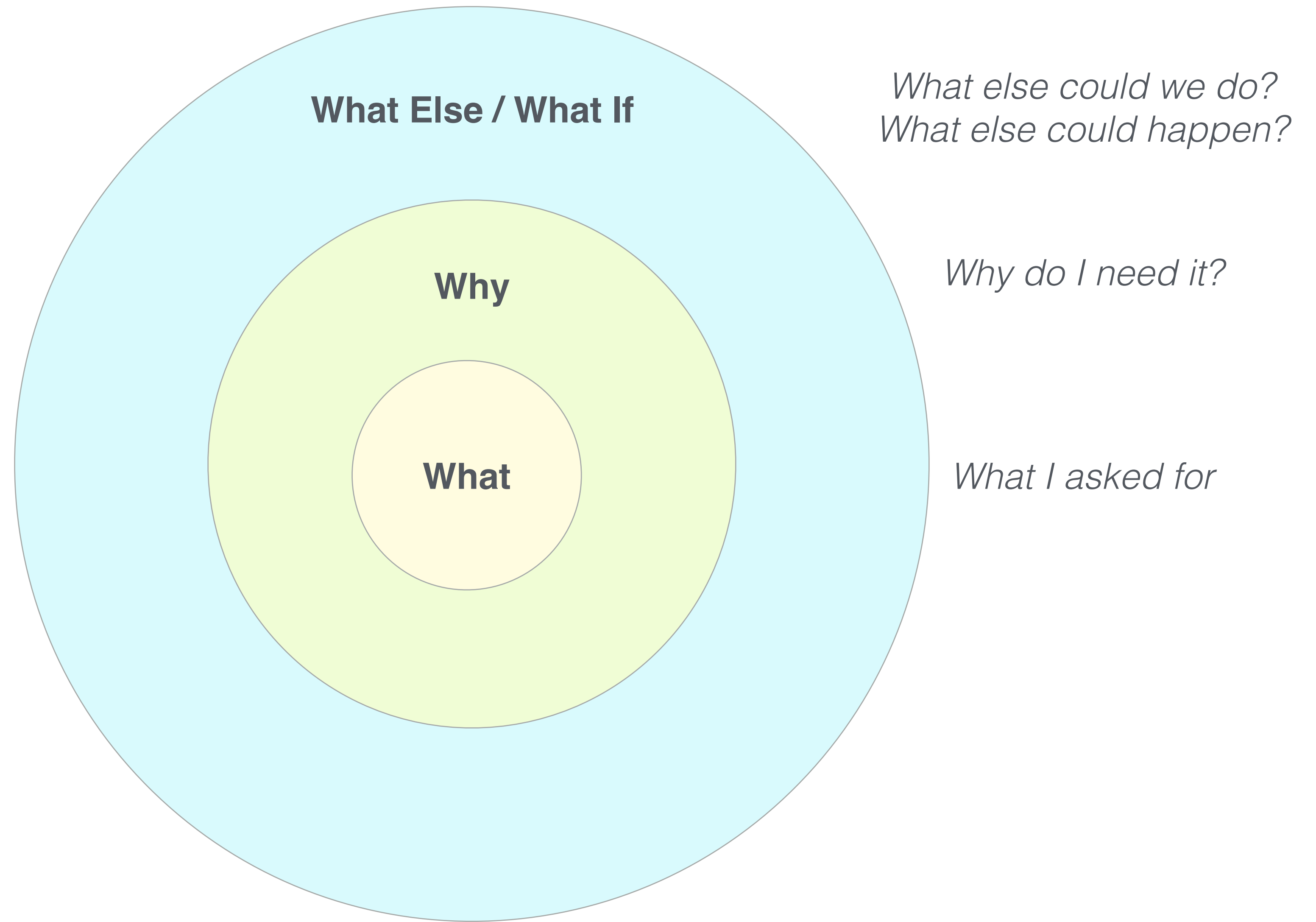
Deliverable Options

Full-text search

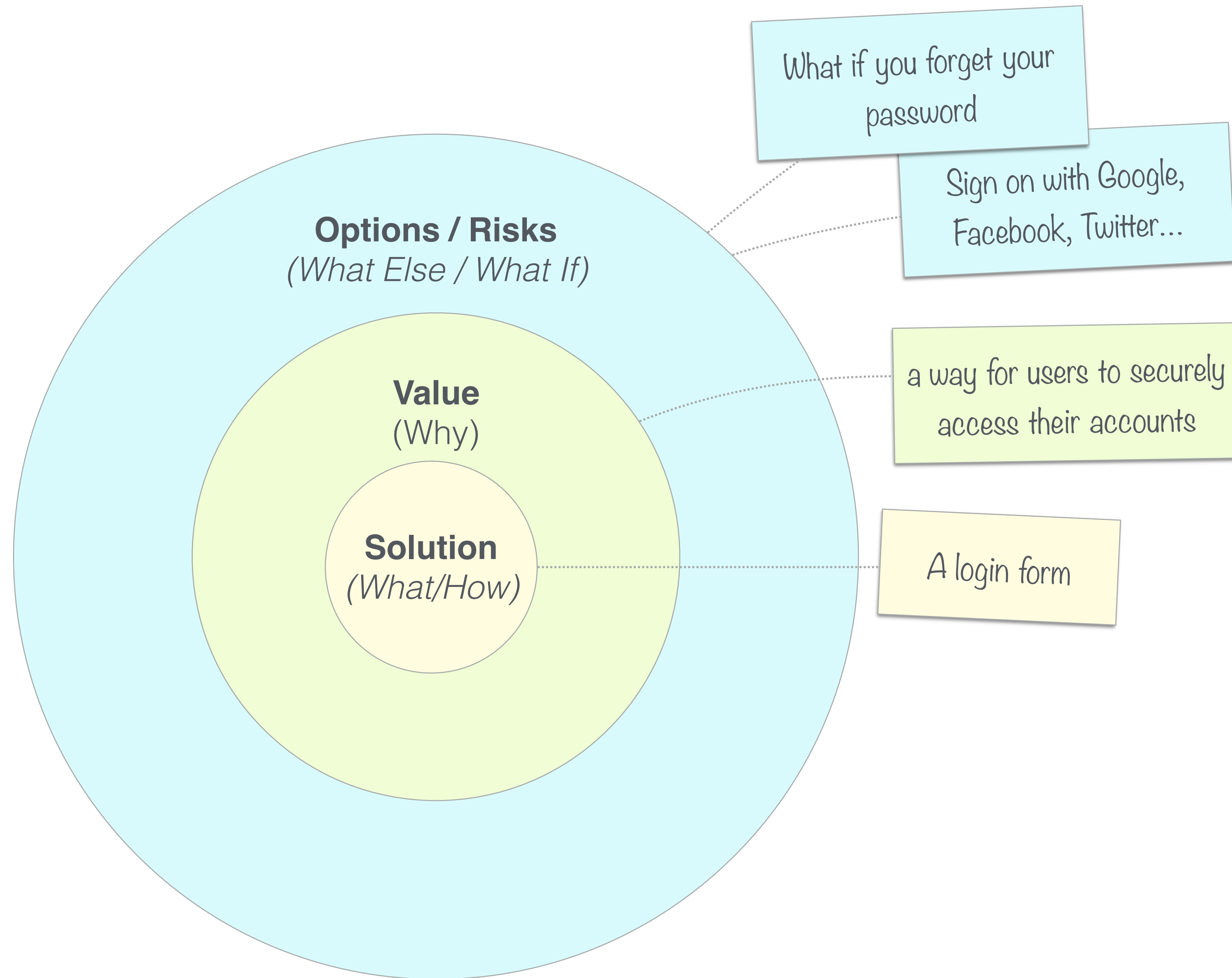
Show related products

Search for related terms

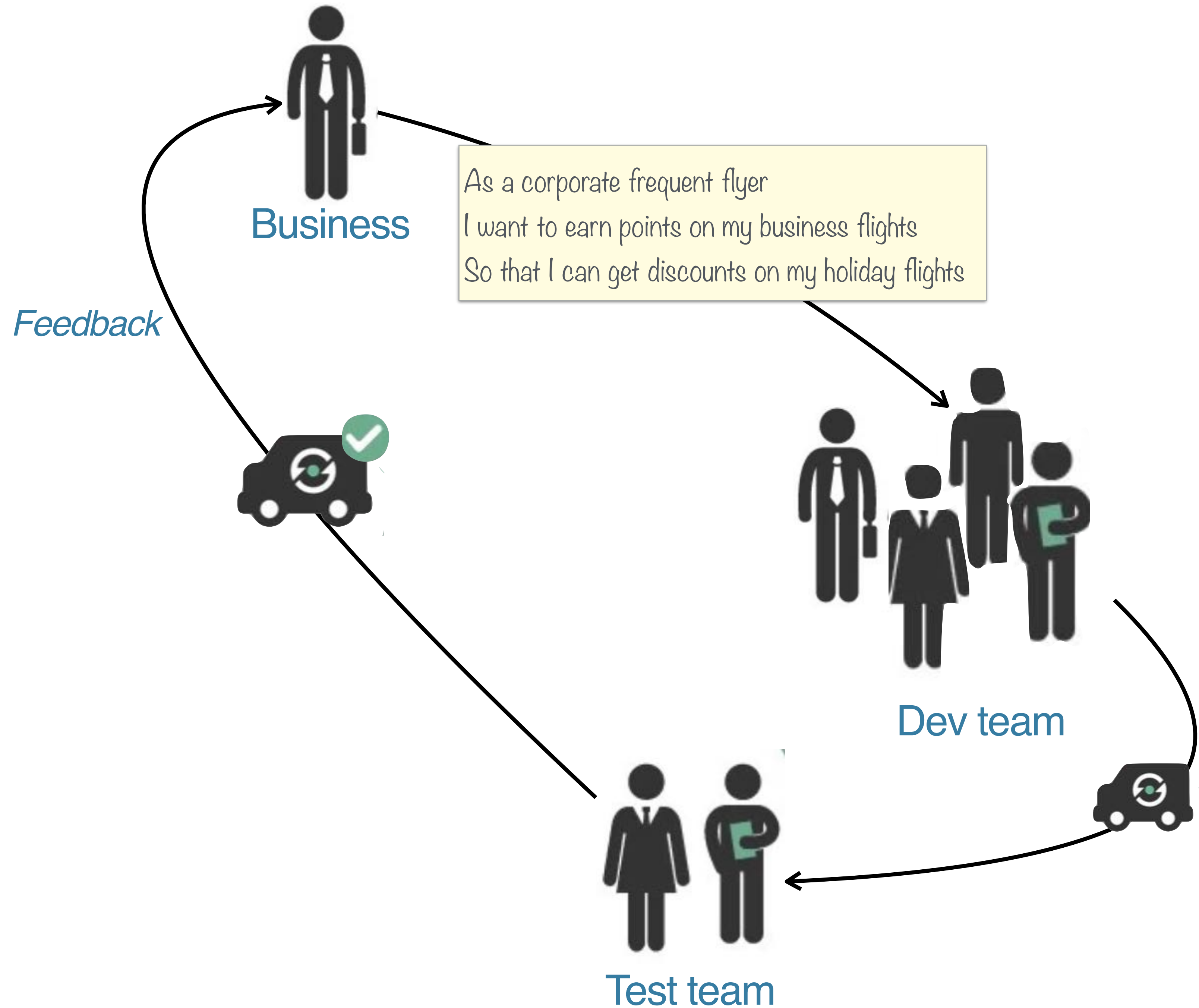
Three levels of thinking



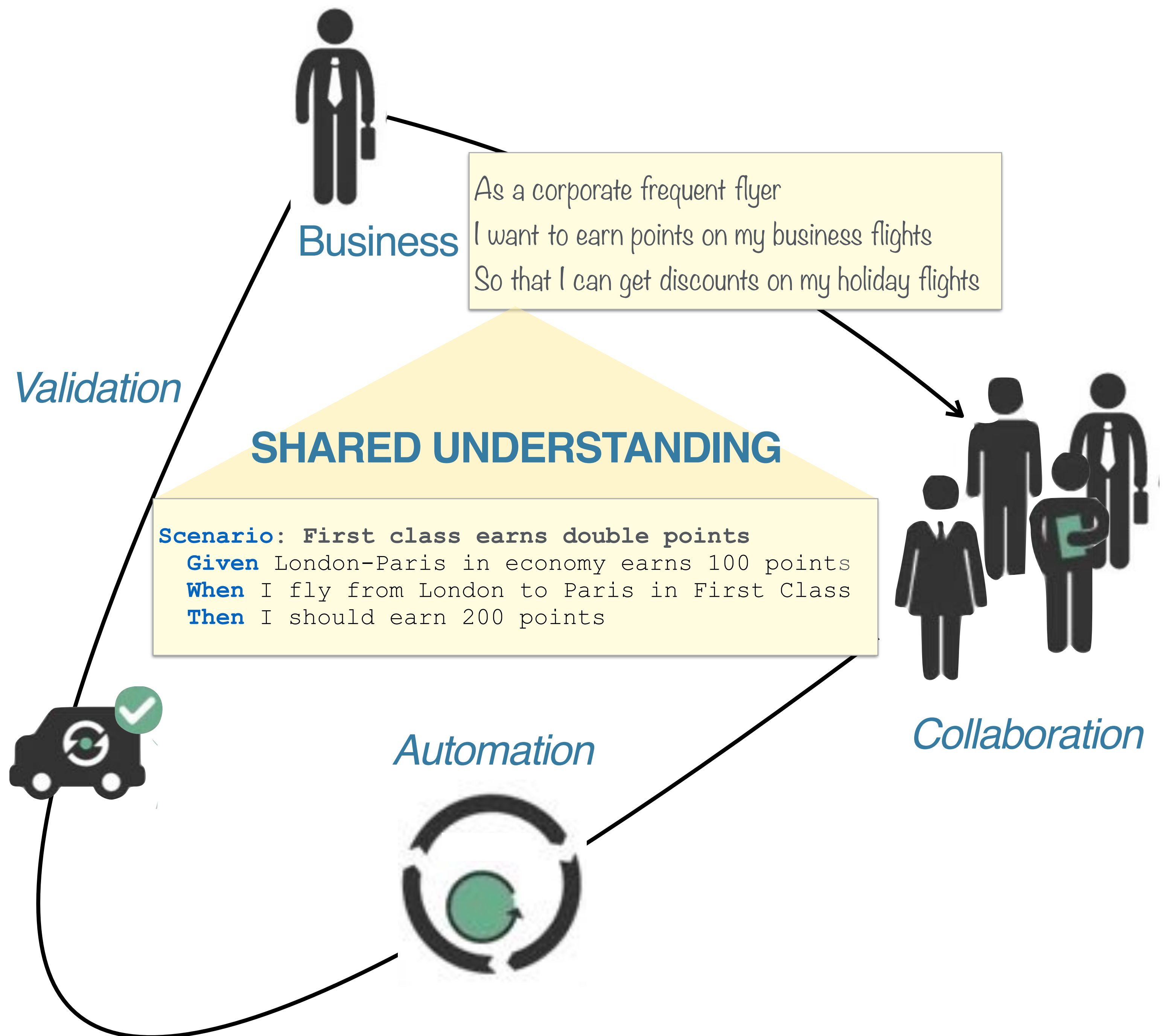
Three levels of thinking



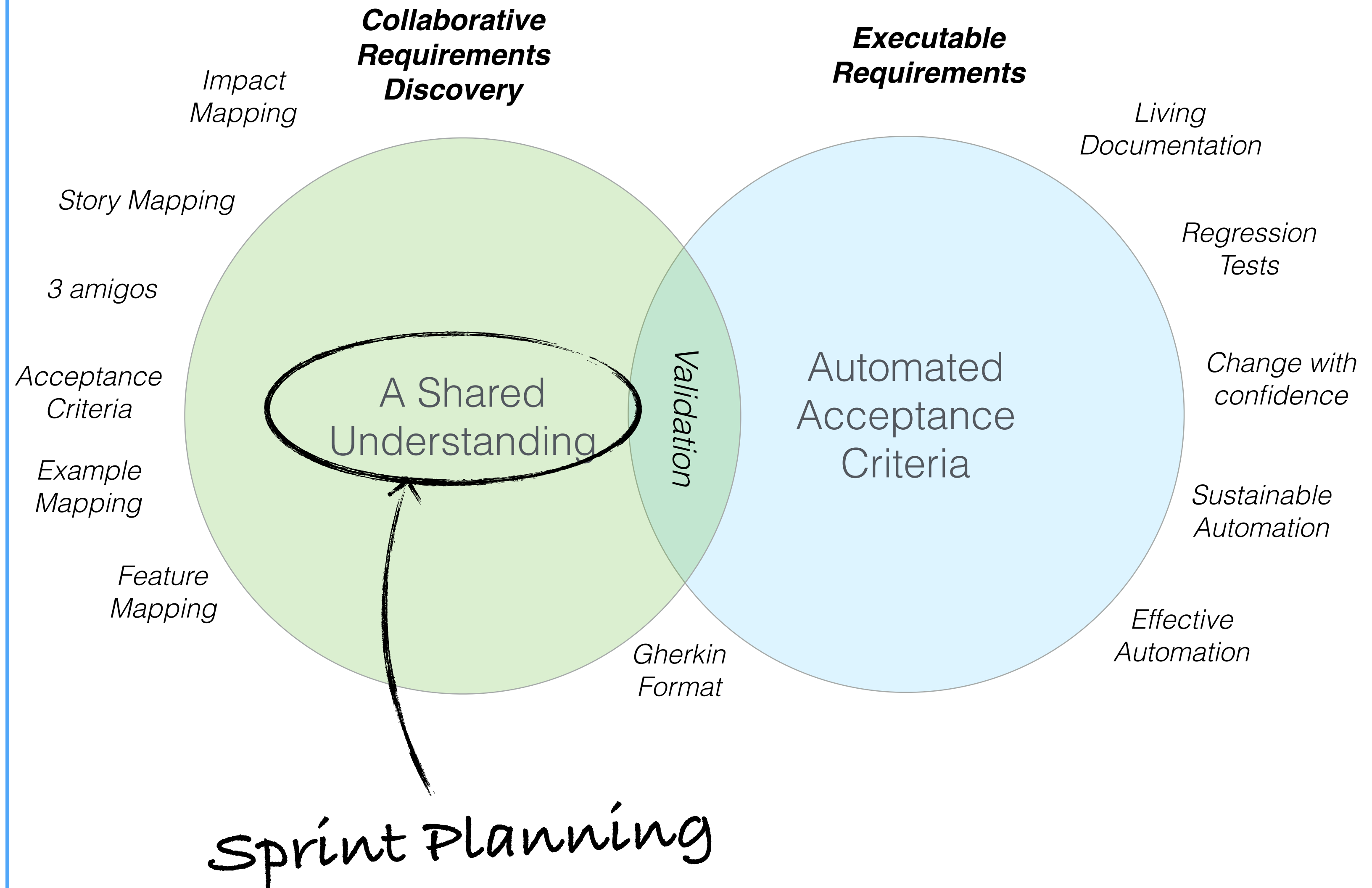
The Traditional Way



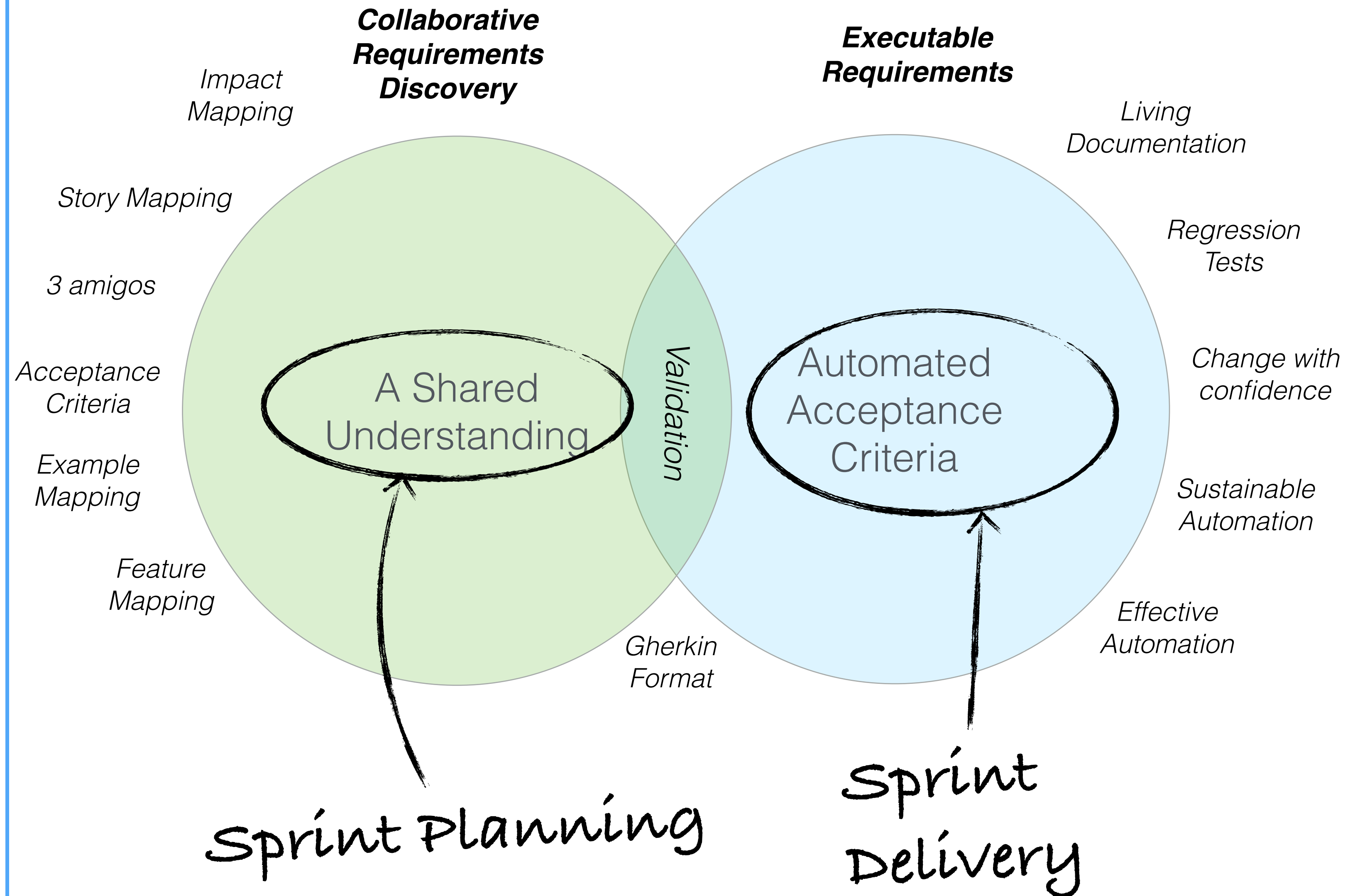
The BDD Way

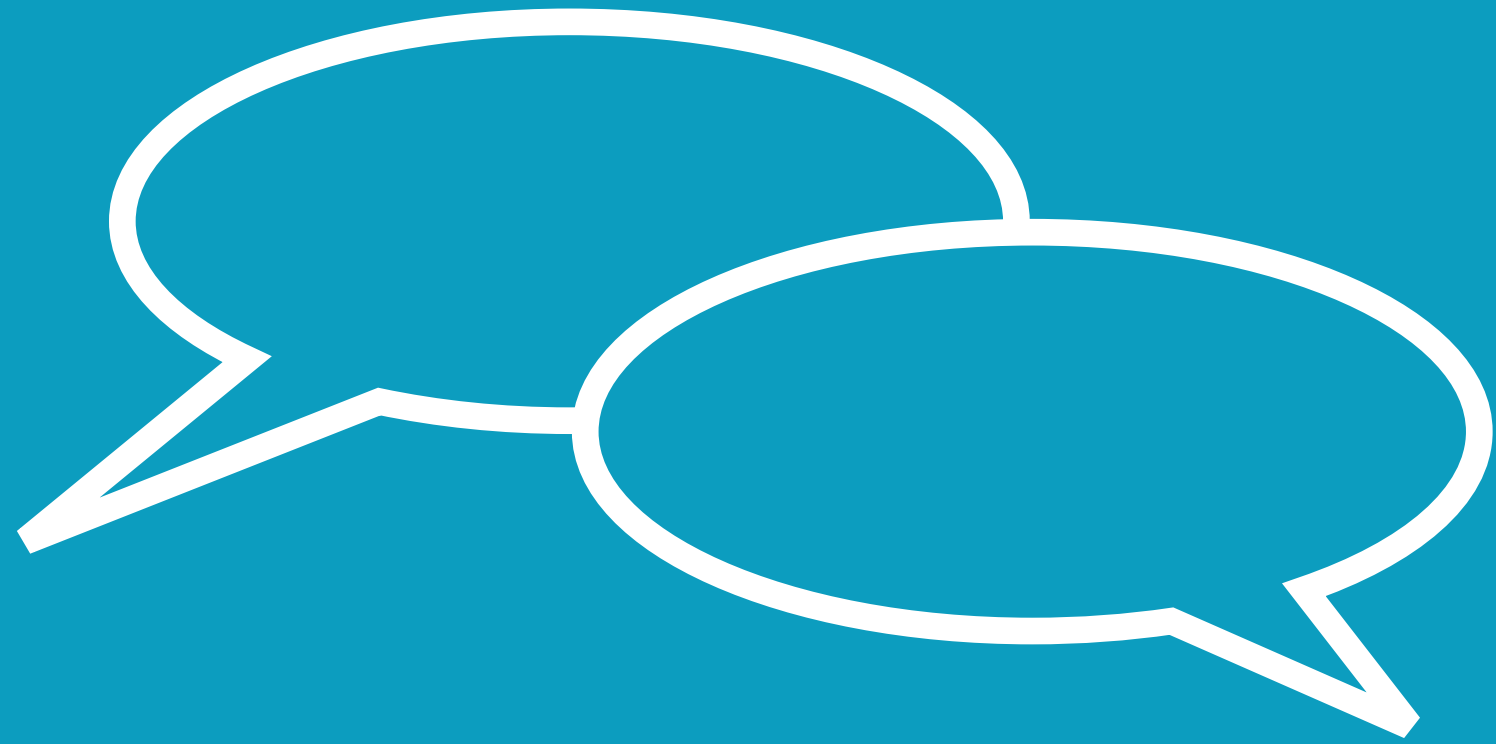


Shared Understanding and Automated Validation



Shared Understanding and Automated Validation





Acceptance Criteria and the definition of done



Acceptance Criteria

- ✓ Define the Definition of Done
- ✓ Functional and non-functional requirements
- ✓ Expressed in business language
- ✓ Describe expected outcomes, not inputs
- ✓ Describe intent, not solution (what, not how)
- ✓ Easily testable
- ✓ Single responsibility

Acceptance Criteria should be simple

- ✓ Simple phrases

- *“A teacher can return an essay for correction when the average mark is under 7”*

- ✓ Can be non-functional

- *“A teacher should be able to open and record the marks of an essay in less than 30 seconds on average with a load of 1000 simultaneous users”*

Examples are
concrete
scenarios that
illustrate rules

- ✓ “The one where...”
 - *“The one where the student submits a bad essay”*
- ✓ Given/When/Then
 - *“Given Stu submits an essay with an average mark of 4
When Tess records the marks
Then she has the option of returning the essay to Stu”*



Writing Acceptance Criteria in Gherkin



Gherkin

The Lingua Franca of BDD



Collaboration

Feature: Earning Frequent Flyer points through flights

Scenario: Economy flights earn points by distance

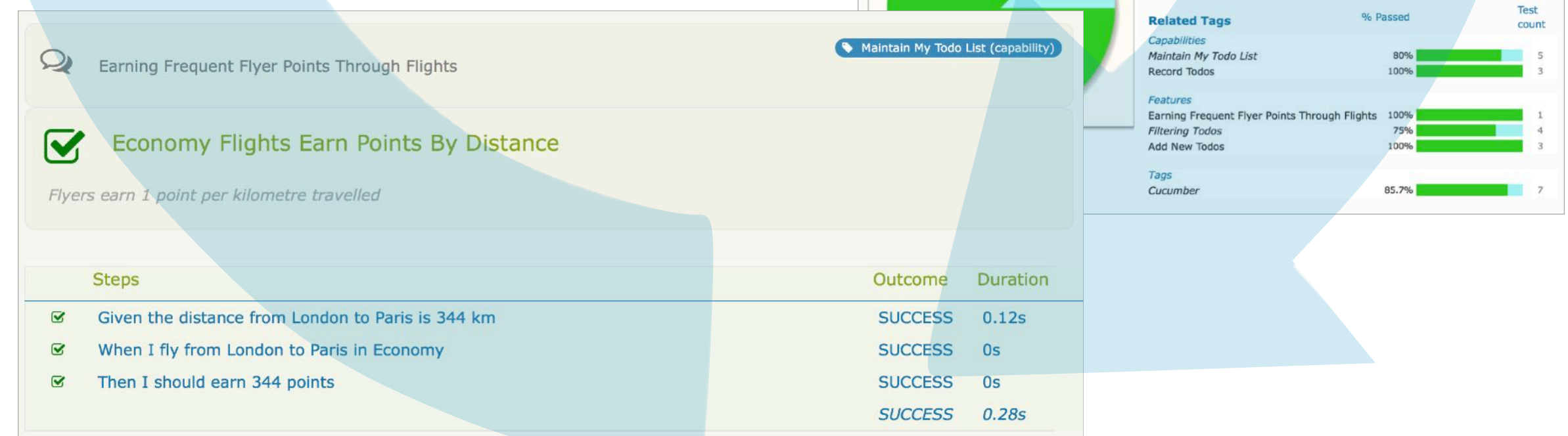
Flyers earn 1 point per kilometre travelled

Given the distance from London to Paris is 344 km

When I fly from London to Paris in Economy

Then I should earn 344 points

Automation



Preconditions

Action to illustrate

Expected outcome

Scenario: Economy flights earn points by distance

Given the distance from London to Paris is 344 km

When I fly from London to Paris in Economy

Then I should earn 344 points

Scenario Outline: Economy flights earn points by distance

Given the distance from <departure> to <dest> is <distance> km
When I fly from <departure> to <destination> in <class> class
Then I should earn <points> points

Examples:

	departure		dest		distance		class		points	
	Paris		London		344		economy		344	
	Paris		London		344		first		688	

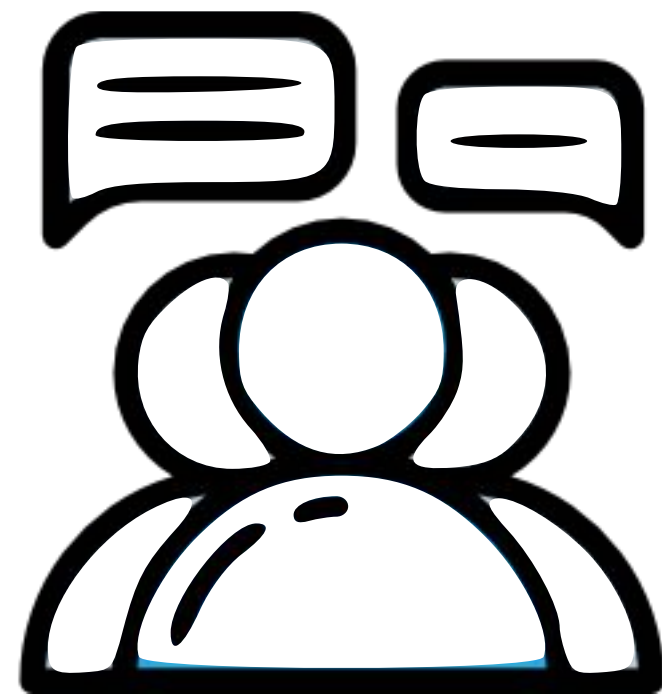
A table of examples



Let's give it a try!



Workshop Time!

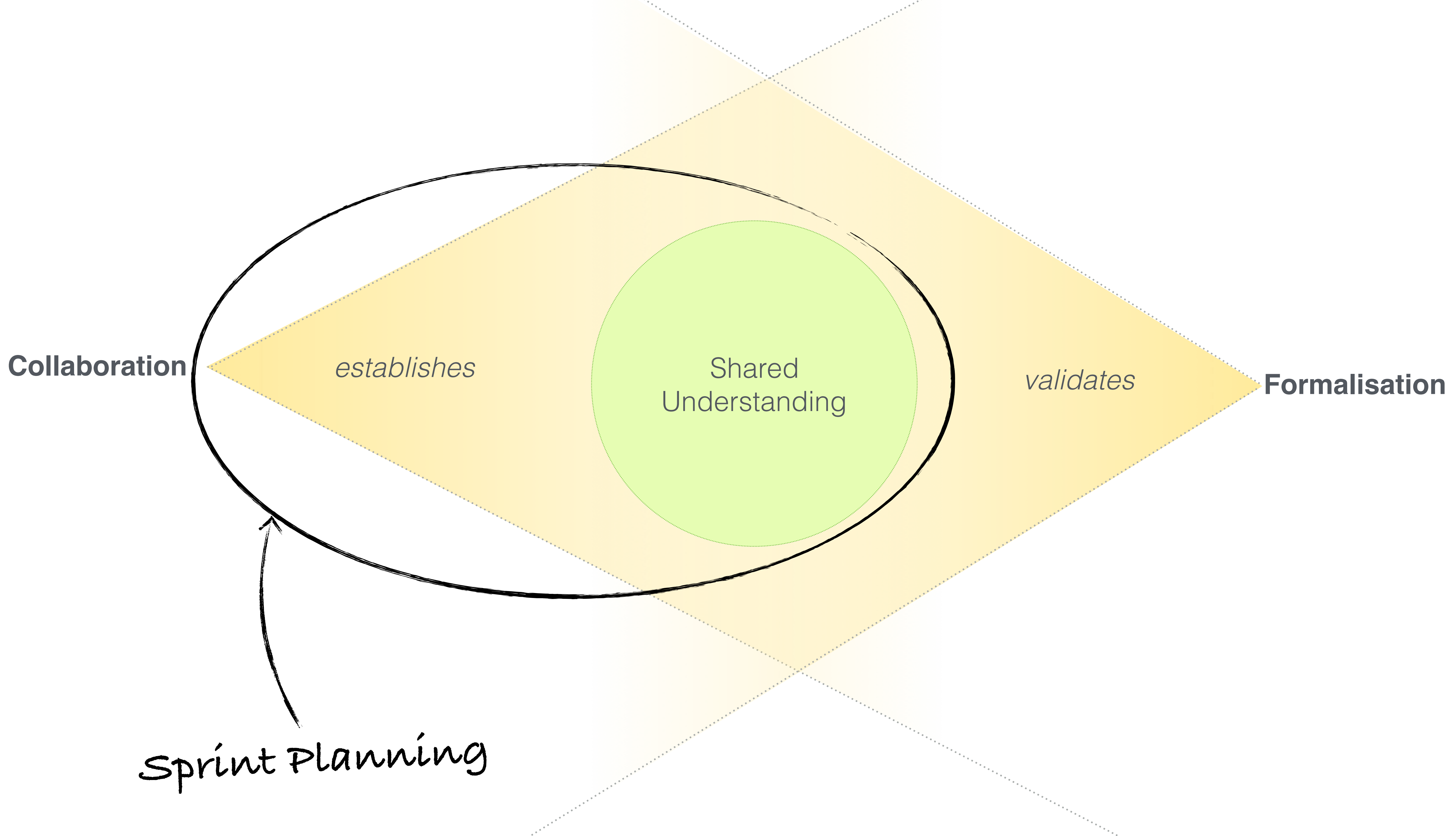


As a regular business traveller
I want to earn privileges when I fly
So that I can take my family on holiday more often

Retrospective

- How much functionality did you cover?
- How would you judge the quality of the scenarios you wrote?
- How well did it help you understand the problem domain?
- How many surprises did you find?

In the last exercise....
Did you spend more time
collaborating or formalising?



Collaboration

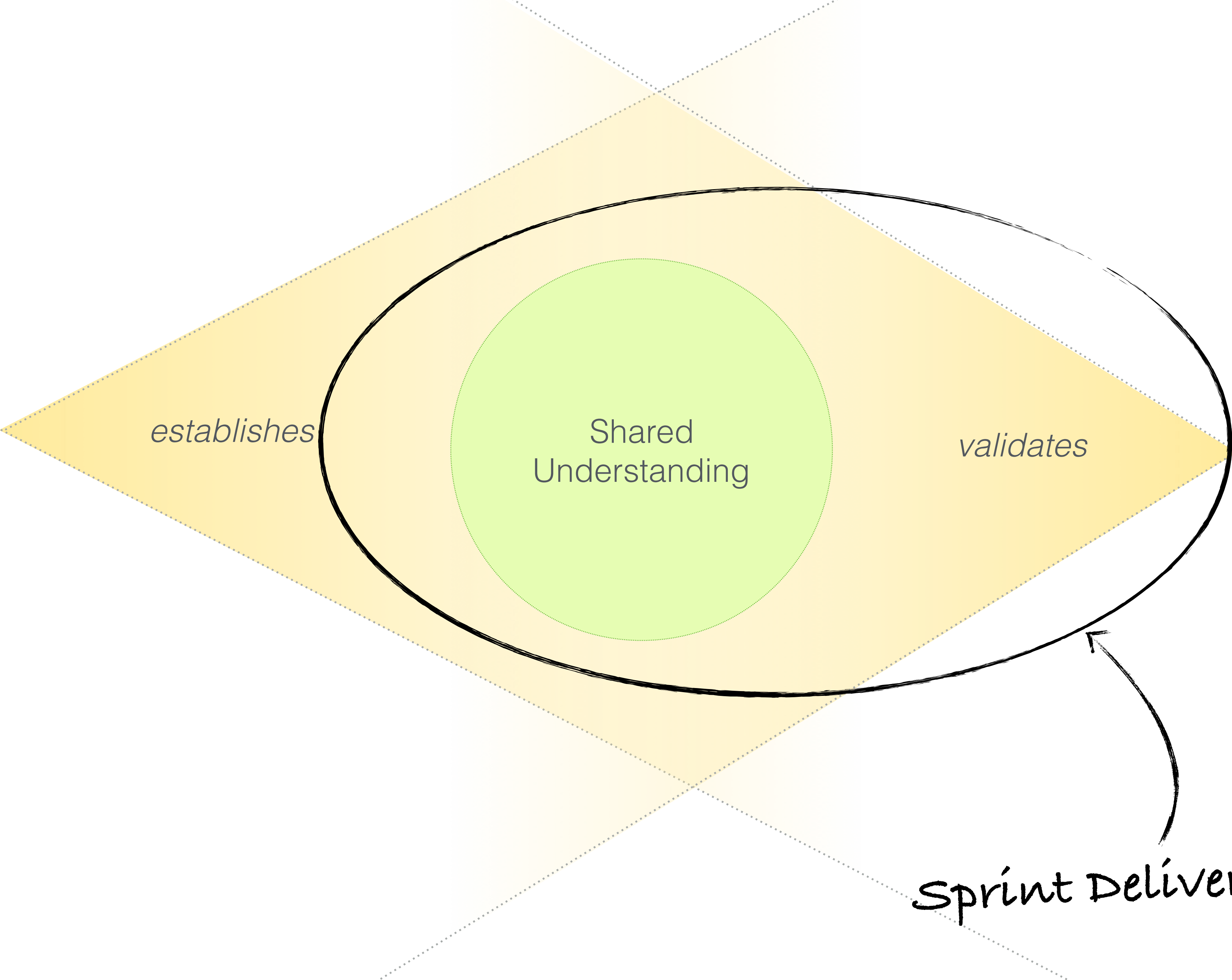
establishes

Shared
Understanding

validates

Formalisation

Sprint Delivery





Now for something different
Step Away From The Gherkin



Understanding a requirement

As a Frequent Flyer member
I want to see where I can travel with my current point balance
So that I can plan my next holiday

As a Frequent Flyer member
I want to see where I can travel with my current point balance
So that I can plan my next holiday

"The flights available depend on the number of points"

"Rule"

"The one where a member has 10000 points"

"Example"

"Jackie has 10000 points, and lives in London."

"Steps"

"She chooses to view her flight options."

"She can choose from flights to Edinburgh, Paris and Amsterdam"

As a Frequent Flyer member
I want to see where I can travel with my current point balance
So that I can plan my next holiday

"The flights available depend on the number of points"

"Rule"

What if she lives somewhere else?

"The one where a member has 10000 points"

"Example"

What if she wants to fly from another city?

"Jackie has 10000 points, and lives in London."

"Steps"

"She chooses to view her flight options."

What if she wants to book a flight for someone else?

"She can choose from flights to Edinburgh, Paris and Amsterdam"

Are these economy flights?

What if she wants to fly business?

Why these destinations?

Why these destinations?

*“The flights available depend on the number of points”
(1 km distance for every 10 points)*

New or clarified rules

points	Edinburgh	Paris	Amsterdam
1000	No	No	No
5000	Yes	No	No
10000	Yes	Yes	Yes

New or clarified examples

Questions lead
to learning

Feature Mapping

Four Principles

Rules **explain** Examples

Examples **illustrate** Rules

Steps **explore** Examples

Questions **challenge** everything

And Four Steps

List the rules you know

Ask for examples

Explore the steps that make up each example

Question, challenge, expand

Leave no assumption unchallenged

“If you do not know how to ask the right question, you discover nothing.”

- W. Edwards Deming

Basic Feature Mapping

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

Let's give it a go!

Step 1) Find a rule

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

A rule

The available
destinations depend on
the number of points

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

A rule

The available
destinations depend on
the number of points

Step 2) “Give me an example”

An Example

Member has enough
points for several
destinations

Fred has 10000 points

Fred views his possible
destinations

Fred can choose from
Edinburgh, Barcelona
and Amsterdam

Steps or Tasks

General Steps or Tasks

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

Step 3) “Generalise the steps”

The available destinations depend on the number of points

A frequent flyer member has a certain number of points

He wants to know where he can travel

He can chose from his available destinations

An Example

Member has enough points for several destinations

Fred has 10000 points

Fred views his possible destinations

Fred can choose from Edinburgh, Barcelona and Amsterdam

Steps or Tasks

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

The available
destinations depend on
the number of points

A frequent flyer member
has a certain number of
points

He wants to know where
he can travel

He can chose from his
available destinations

Member has enough
points for several
destinations

Fred has 10000 points

Fred views his possible
destinations

Fred can choose from
Edinburgh, Barcelona
and Amsterdam

Member doesn't have
enough points

Joe has just joined the
programme and has no
points

Joe views his possible
destinations

Joe can't go anywhere

Step 4) "Explore!"

What if Fred had fewer points?

More Advanced Feature Mapping

We call these steps
'consequences'

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

The available
destinations depend on
the number of points

A frequent flyer member
has a certain number of
points

He wants to know where
he can travel

=> He can chose from
his available
destinations

Member has enough
points for several
destinations

Fred has 10000 points

Fred views his possible
destinations

=> Fred can choose from
Edinburgh, Barcelona
and Amsterdam

Member doesn't have
enough points

Joe has just joined the
programme and has no
points

Joe views his possible
destinations

=> Joe can't go
anywhere

A General
Consequence

A Specific
Consequence

Another rule

A Feature Map can have many rules

The available destinations can change according to the requested class

The available destinations depend on the number of points

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

A frequent flyer member
has a certain number of
points

He wants to know where
he can travel

=> He can chose from
his available
destinations

Member has enough
points for several
destinations

Fred has 10000 points

Fred views his possible
destinations

=> Fred can choose from
Edinburgh, Barcelona
and Amsterdam

Member doesn't have
enough points

Joe has just joined the
programme and has no
points

Joe views his possible
destinations

=> Joe can't go
anywhere

Member wants to fly in
style

Fred has 10000 points

Happy to fly in Economy

=> Edinburgh, Barcelona
and Amsterdam

Example for
this rule

Alternate flows



It can describe variations on similar scenarios

And it can record uncertainty

Questions

Can he buy a ticket for someone else?

Can he give his points to someone else?

What if he wants to fly out of a different city?

As a Frequent Flyer member
I want to see where I can travel
with my current point balance
So that I can plan my next holiday

The available destinations can change according to the requested class

The available destinations depend on the number of points

A frequent flyer member has a certain number of points

He wants to know where he can travel

=> He can choose from his available destinations

Member has enough points for several destinations

Fred has 10000 points

Fred views his possible destinations

=> Fred can choose from Edinburgh, Barcelona and Amsterdam

Member doesn't have enough points

Joe has just joined the programme and has no points

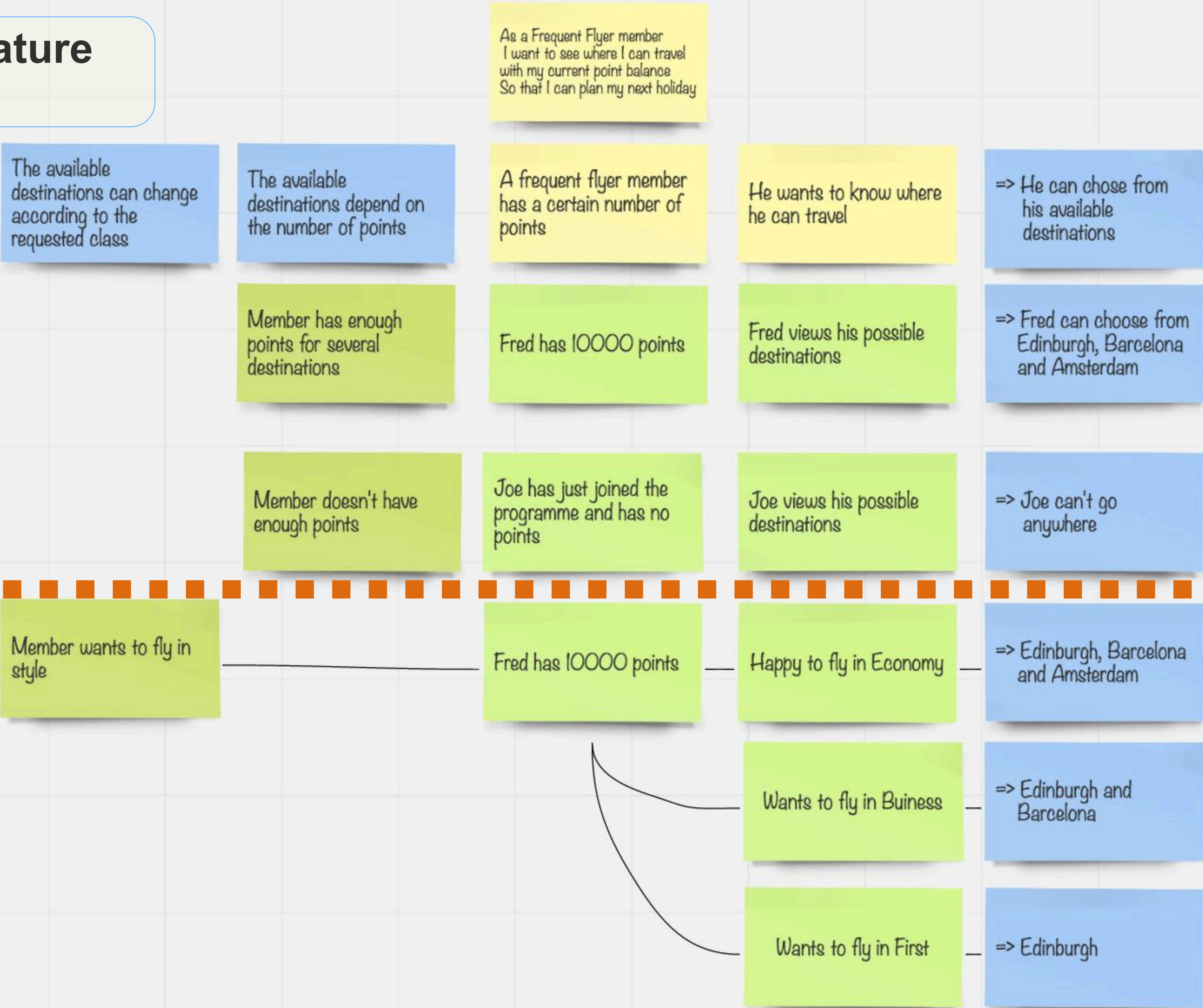
Joe views his possible destinations

=> Joe can't go anywhere

Splitting Feature Maps

“Points per destination” story

“Different travel classes” story

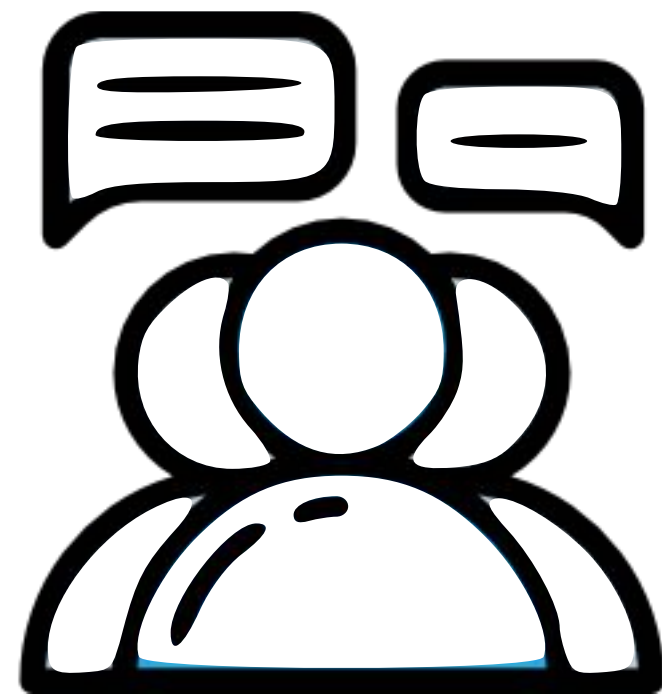




Let's give it a try!



Workshop Time!



Class the following as stories, rules, tasks, steps or questions

Register on the Frequent
Flyer Programme

Provide
personal
details

Enter details:

Name: Fred Flyer
Age: 25

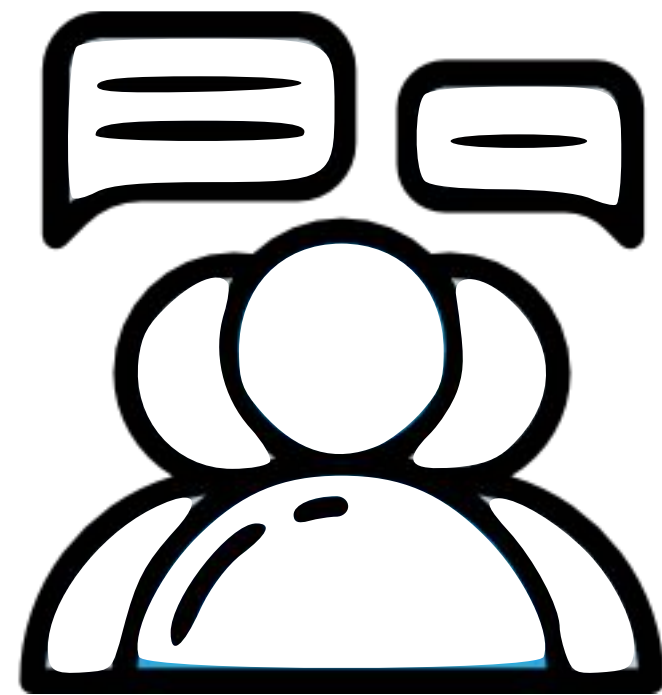
Must be 16
or over to
register

How will they
know if the
application
was
accepted?

Application
should be
accepted or
rejected

=> Fred
should have
Bronze
status

Workshop Time!



Class the following as stories, rules, tasks, steps or questions

Register on the Frequent
Flyer Programme

Provide
personal
details

Name: Fred Flyer
Age: 25

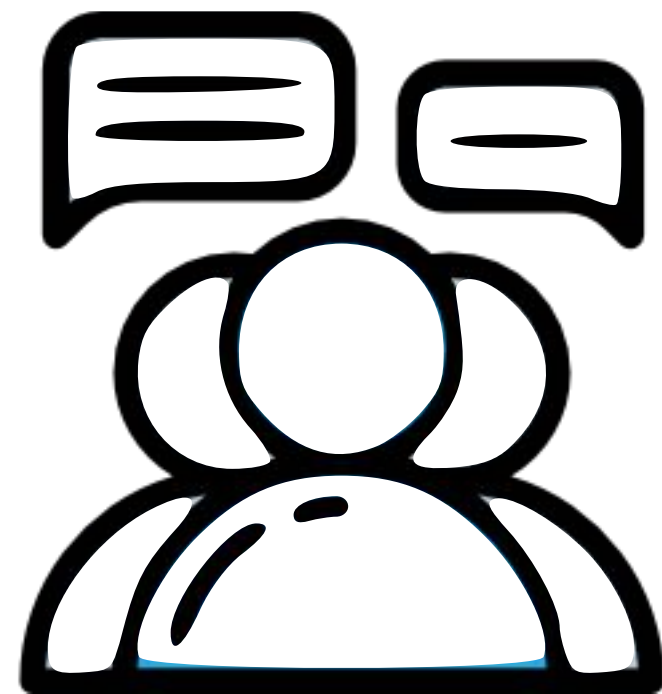
Must be 16
or over to
register

How will they
know if the
application
was
accepted?

=>
Application
should be
accepted or
rejected

=> Fred
should have
Bronze
status

Workshop Time!



Organise the following cards into a sequence of high level tasks

Register on the Frequent
Flyer Programme

=>
Application
should be
accepted or
rejected

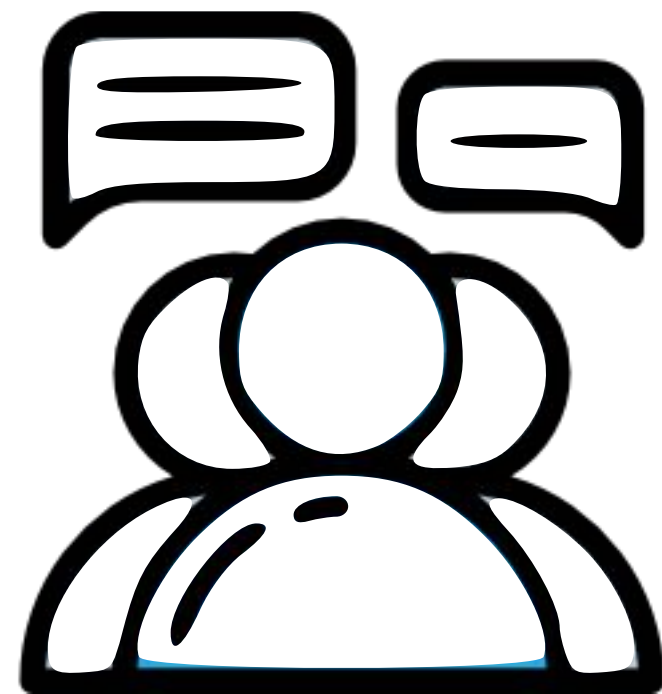
=>
Frequent Flyer
status should
be updated

Provide
flight history

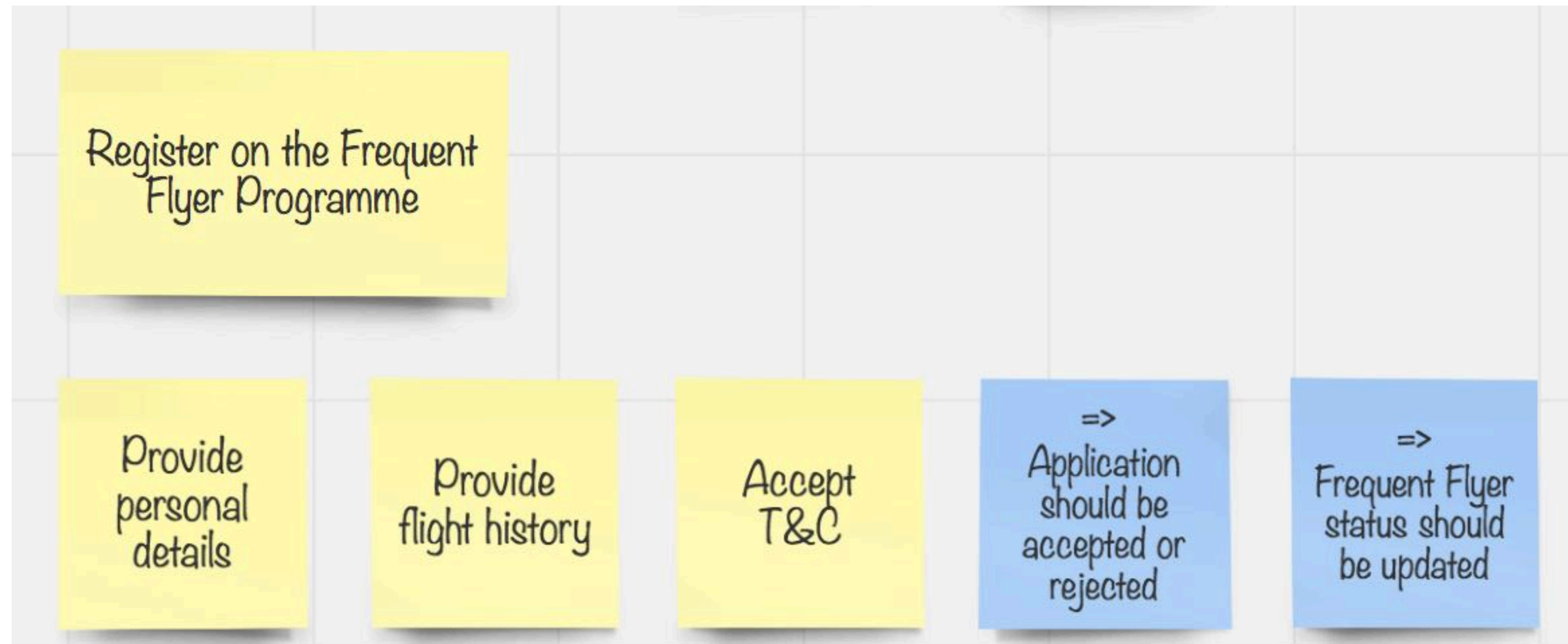
Accept
T&C

Provide
personal
details

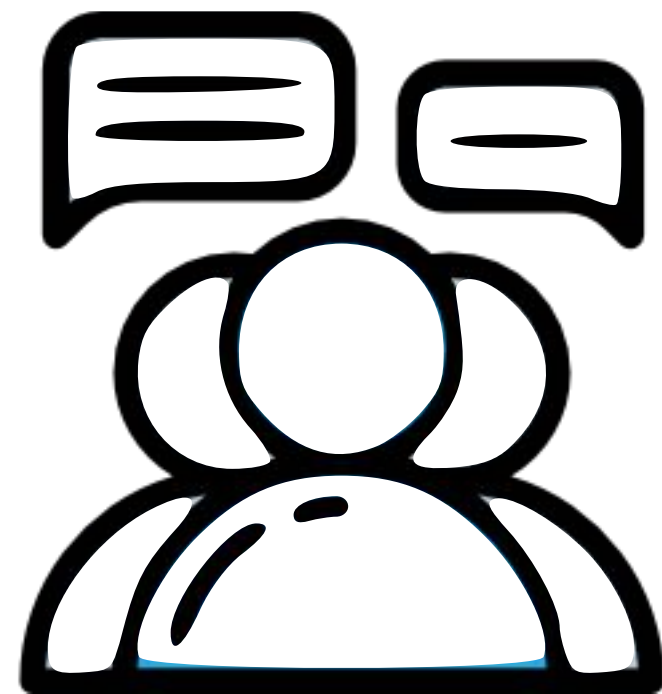
Workshop Time!



Organise the following cards into a sequence of high level tasks



Workshop Time!



Organise the following cards into a sequence of detailed tasks

Register on the Frequent
Flyer Programme

Accept
T&C

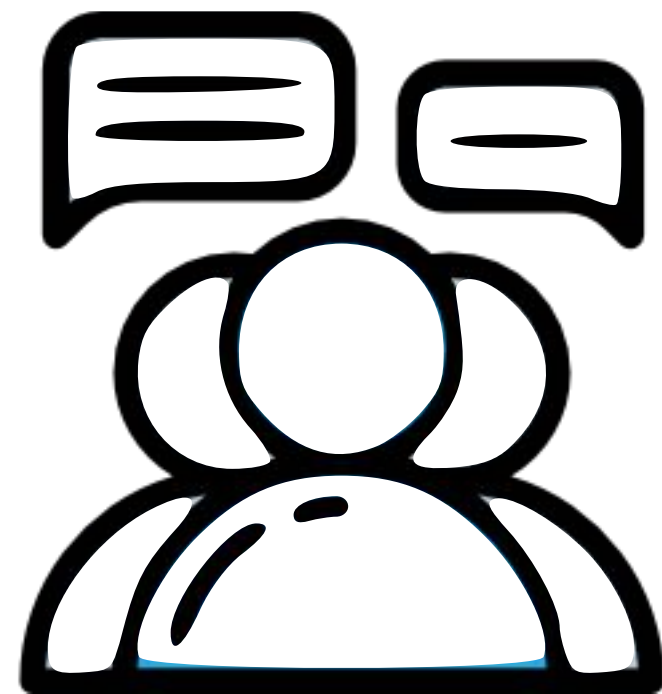
Fred
registers
online after
a flight

No flights
this month

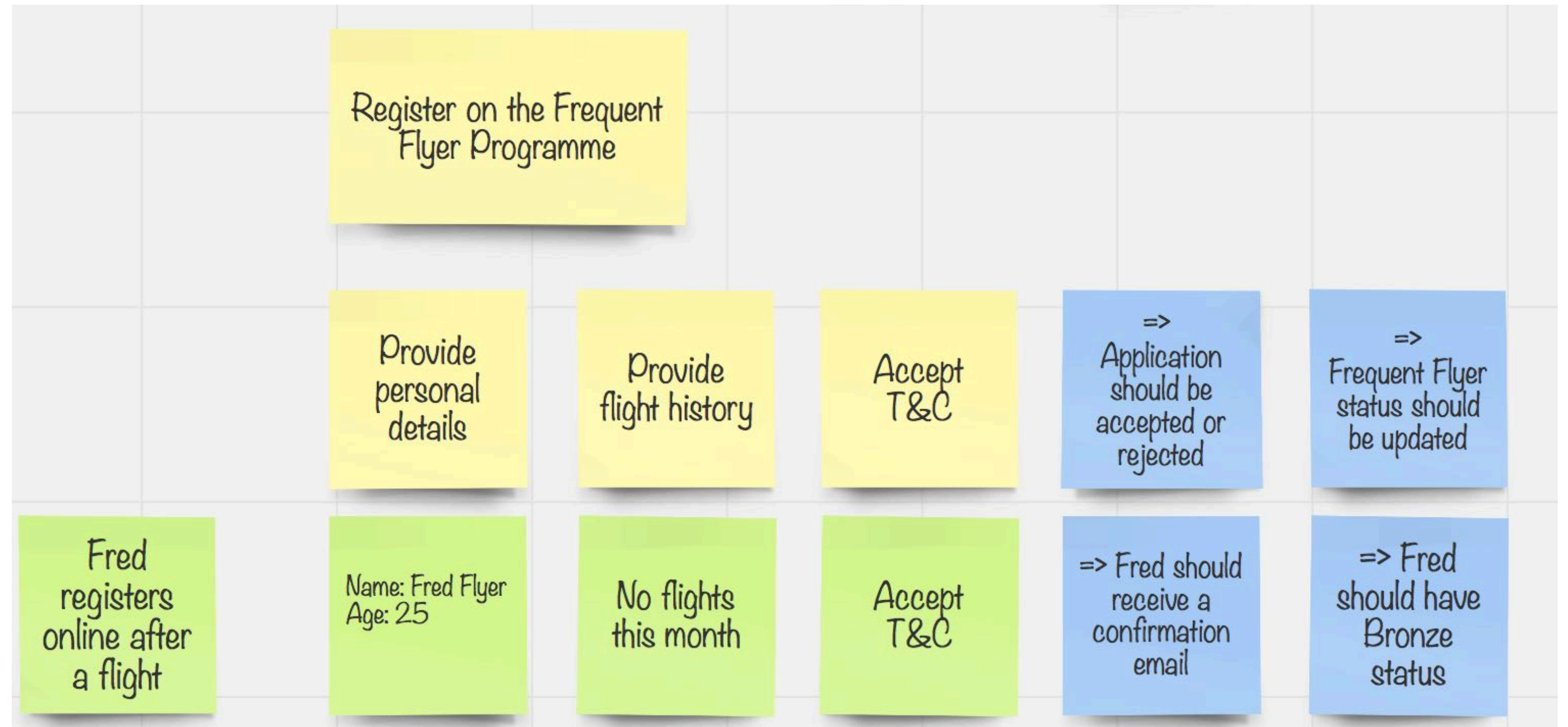
=> Fred should
receive a
confirmation
email

=> Fred
should have
Bronze
status

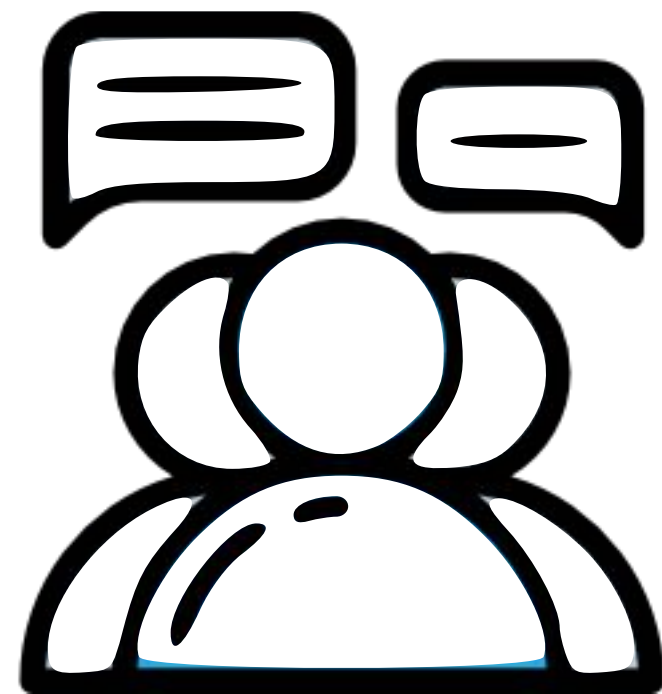
Workshop Time!



Organise the following cards into a sequence of detailed tasks



Workshop Time!



As a regular business traveller
I want to earn privileges when I fly
So that I can take my family on holiday more often

Now build your own Feature Map!

Key Take Aways

Feature Mapping

A requirements discovery practice that is...

Collaborative

Iterative

Exploratory

Feature Mapping

Breadth

Depth

Context

Feature Mapping

More precise than
free-form
acceptance criteria

Faster than Gherkin

Easy to automate

Thank You!

John Ferguson Smart

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