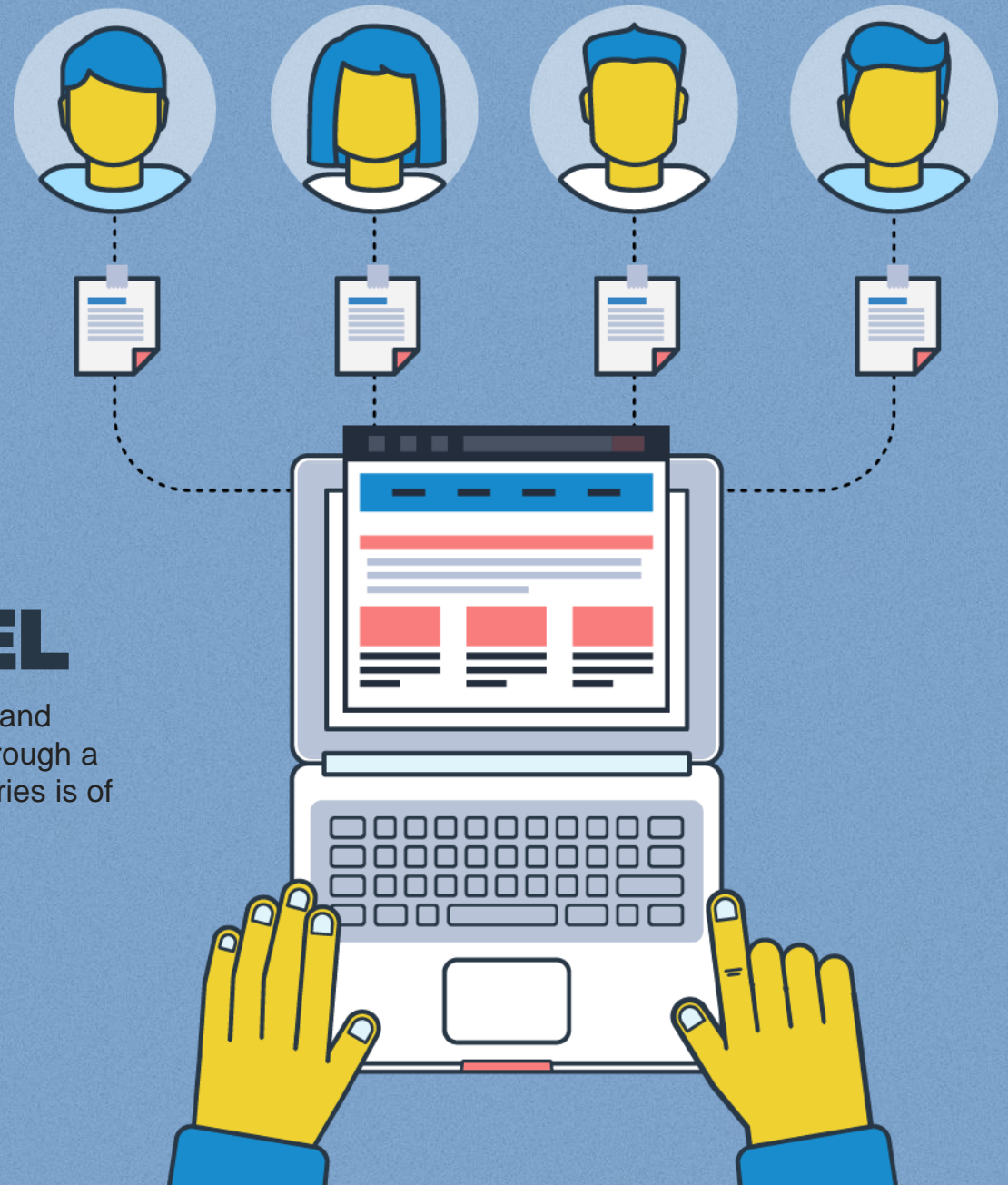


HOW TO WRITE USER STORIES THE INVEST MODEL

Agile practices foster incremental, iterative development and delivery. Each increment of development is requested through a User Story. Understanding and writing effective User Stories is of great importance to everyone on the team.

BEGIN



WHAT IS A USER STORY?

User Stories are simple, brief, and concise statements used to describe customer needs from a particular user's perspective.



As you know, a User Story has three primary components, the 3 Cs.



CARD



CONVERSATION



CONFIRMATION

In this topic, we will take a look at the components and characteristics of a good User Story.

THE CARD

Each User Story should be demonstrable, deliver value to the end-user, and contain three parts.

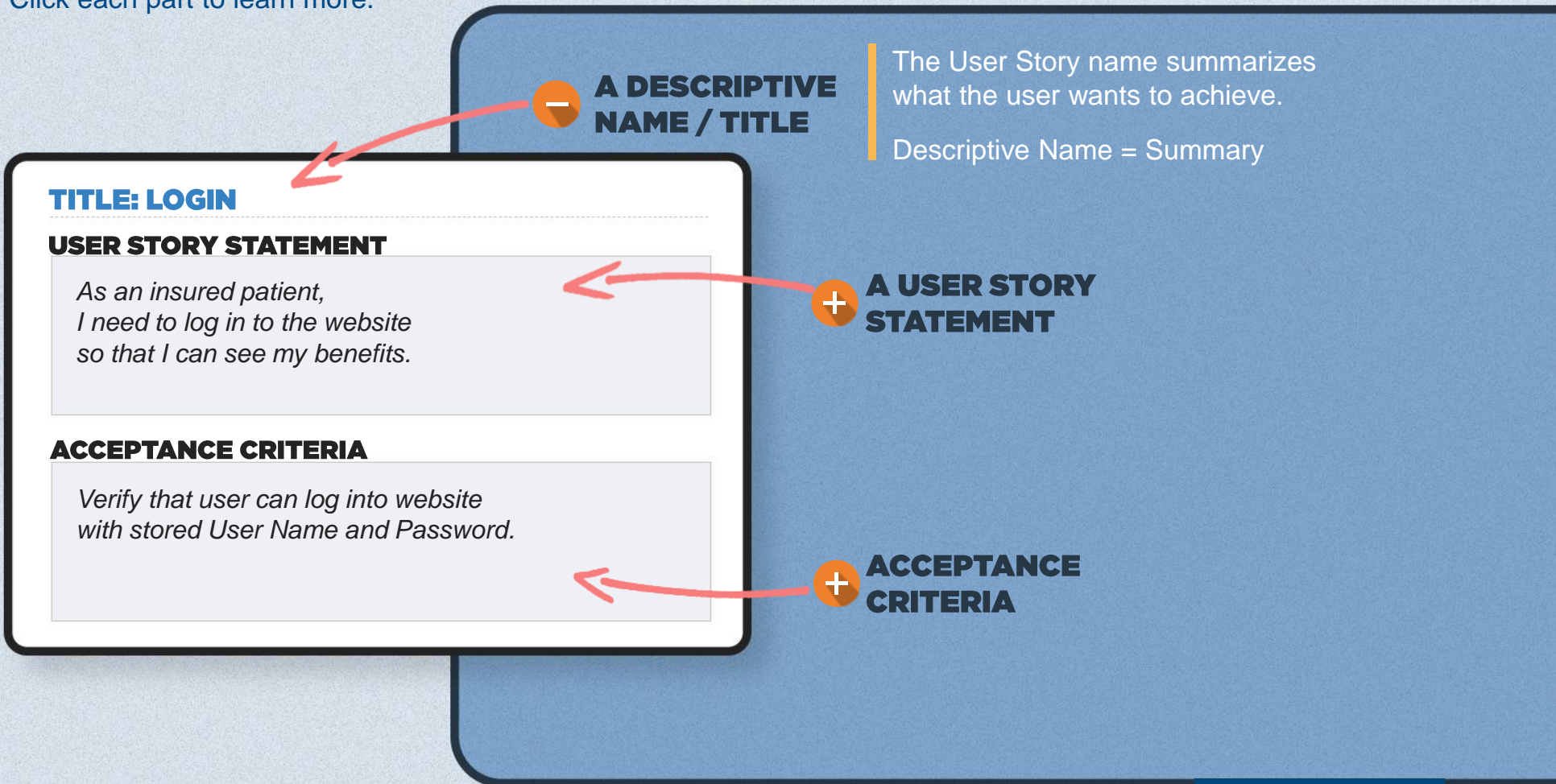
Click each part to learn more.



THE CARD

Each User Story should be demonstrable, deliver value to the end-user, and contain three parts.

Click each part to learn more.



- A DESCRIPTIVE NAME / TITLE

The User Story name summarizes what the user wants to achieve.

Descriptive Name = Summary

TITLE: LOGIN

USER STORY STATEMENT

As an insured patient, I need to log in to the website so that I can see my benefits.

+ A USER STORY STATEMENT

ACCEPTANCE CRITERIA

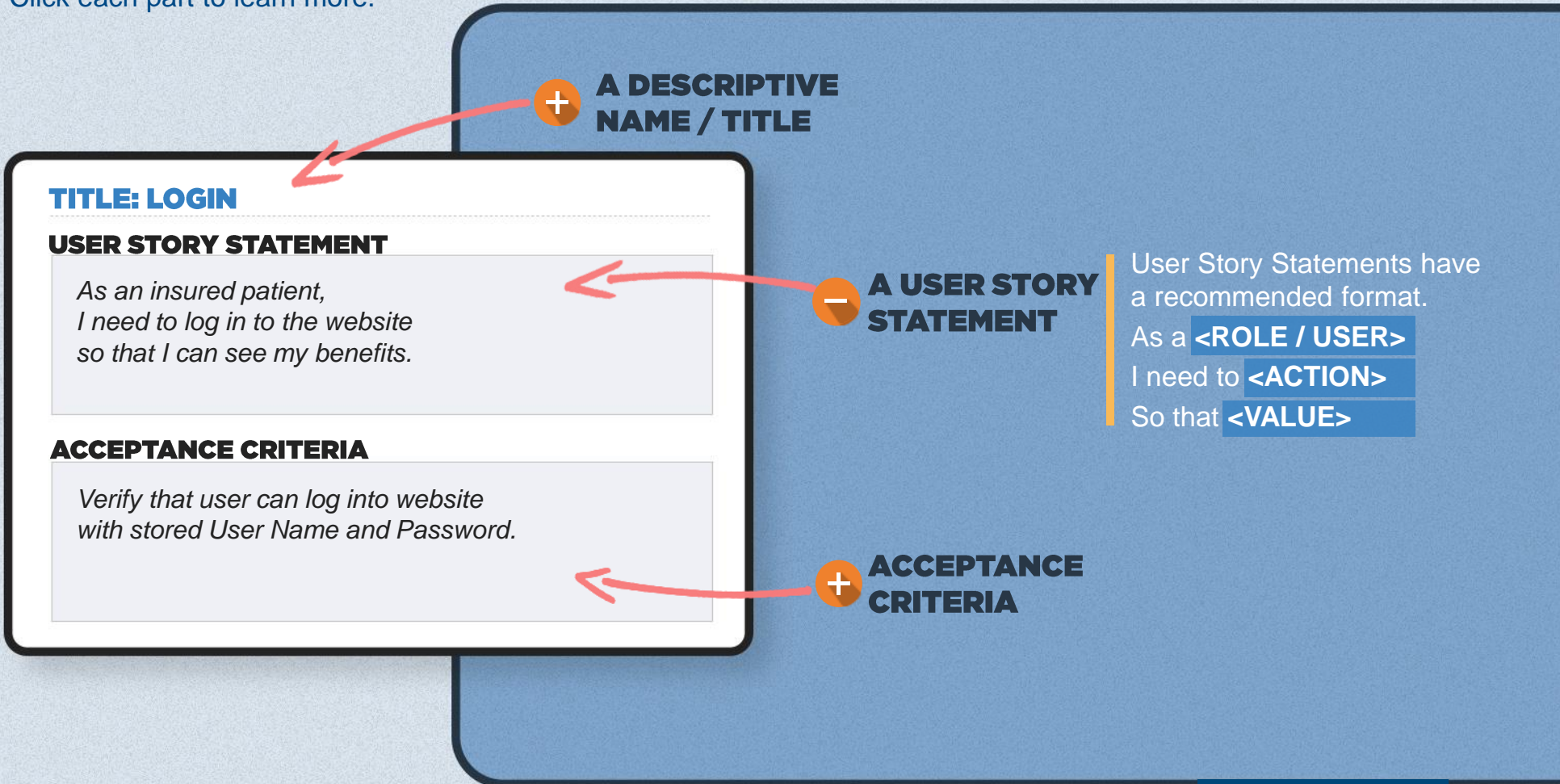
Verify that user can log into website with stored User Name and Password.

+ ACCEPTANCE CRITERIA

THE CARD

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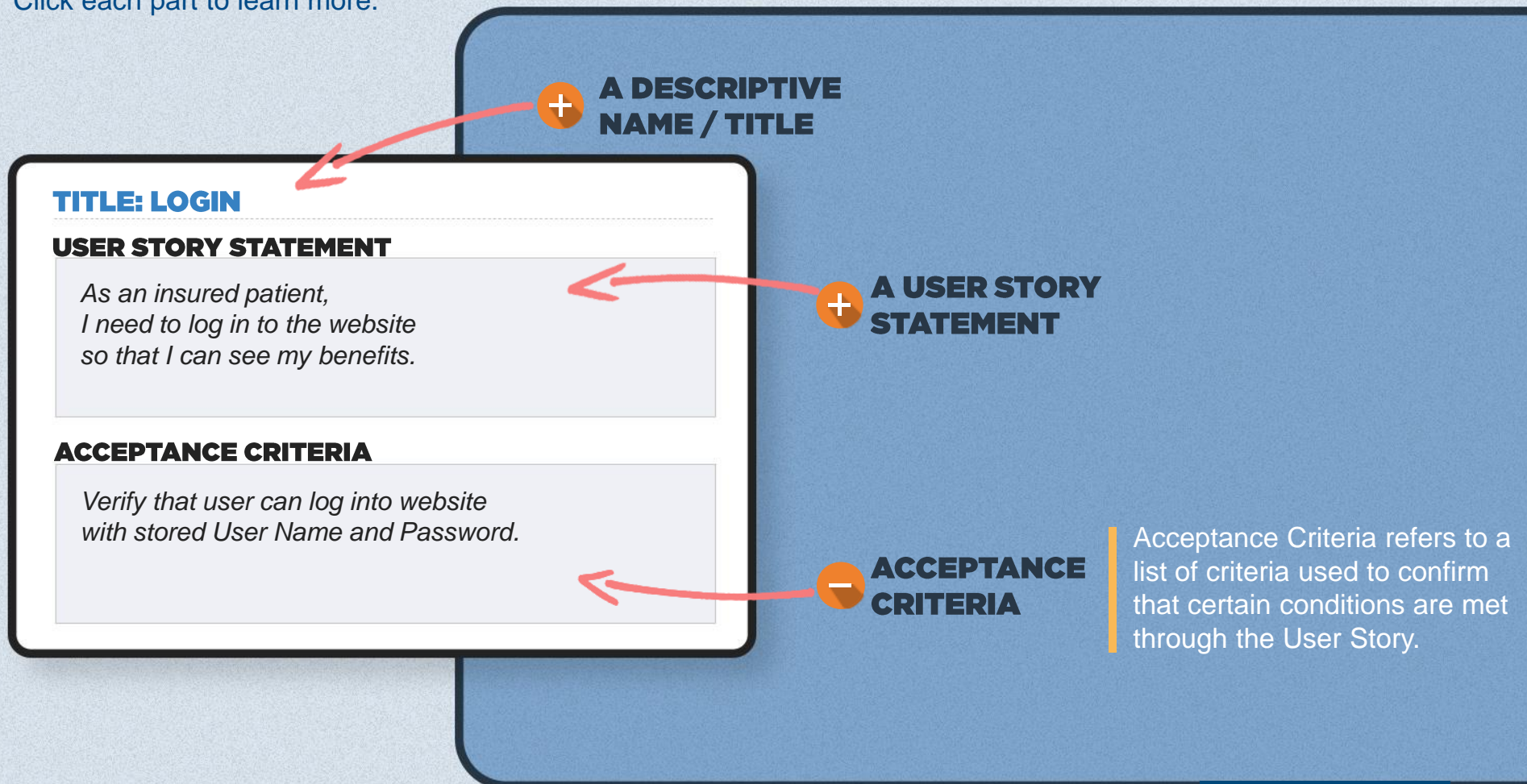
Click each part to learn more.



THE CARD

Each User Story should be demonstrable, deliver value to the end-user, and contain three parts.

Click each part to learn more.



USER STORY STATEMENT

The User Story represents the **Card** and **Conversation** part of the 3 Cs.

Inherently, a User Story statement addresses three key questions.

[Click each question to learn more.](#)

WHO?

WHAT?

WHY?



USER STORY STATEMENT

The User Story represents the **Card** and **Conversation** part of the 3 Cs.

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[Click each question to learn more.](#)

WHO?

WHAT?

WHY?



Who talks about the role or person who will receive or experience the value. Use specific roles rather than “The User” when defining the “Who” component.

This approach:

- Grounds the team in a user-centered mindset.
- Provides an understanding of the target user.
- Allows for trade-offs based on target audience for release.

USER STORY STATEMENT

The User Story represents the **Card** and **Conversation** part of the 3 Cs.

Inherently, a User Story statement addresses three key questions.

[Click each question to learn more.](#)

WHO?

WHAT?

WHY?



What defines the goal or action that the story aims to achieve.

This aspect:

- Solves a problem or takes advantage of an opportunity.
- Communicates the functionality that someone needs.
- Provides the implementation context as seen by the user.

USER STORY STATEMENT

The User Story represents the **Card** and **Conversation** part of the 3 Cs.

Inherently, a User Story statement addresses three key questions.

[Click each question to learn more.](#)

WHO?

WHAT?

WHY?



Why describes the reason the functionality is requested.

This perspective:

- Indicates the value of the functionality for the user.
- Moves us towards the product vision.
- Explains the problem to make sure the solution will address the need.

ACCEPTANCE CRITERIA

THE CONFIRMATION

Acceptance Criteria represent the **Confirmation** part of the 3 Cs and help define the “How” of the User Story.

Acceptance Criteria:

- Express the conditions that must be satisfied for the customer to accept the story
- Provide context for the team to help them know when they are “Done”

Click each question to learn more.



**WHO
WRITES?**



**HOW
MANY?**



**WHAT
TO TEST?**

ACCEPTANCE CRITERIA

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**WHO
WRITES?**



**HOW
MANY?**



**WHAT
TO TEST?**

Acceptance Criteria are:

- **Written by** the Agile Product Owner / Customer.
- **Refined by** the team during Intake and Product Backlog Refinement and Iteration Planning.

ACCEPTANCE CRITERIA

THE CONFIRMATION

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- Express the conditions that must be satisfied for the customer to accept the story
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Click each question to learn more.



**WHO
WRITES?**



**HOW
MANY?**



**WHAT
TO TEST?**

A good User Story will contain about 5–7 Acceptance Criteria. A greater number of Acceptance Criteria indicates that the User Story may be too large. This is an opportunity for the team to discuss how the User Story could be split into several smaller User Stories.

ACCEPTANCE CRITERIA

THE CONFIRMATION

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**WHO
WRITES?**



**HOW
MANY?**



**WHAT
TO TEST?**

User Acceptance Tests are a good starting point for Acceptance Criteria, but remember that you needn't cover all test cases or scenarios in the Acceptance Criteria. Focus instead on the most important ones.

THINK ABOUT IT

PART A

Create **two** User Stories. You will develop these User Stories further in the next part of this exercise.

Type your User Stories in the boxes.

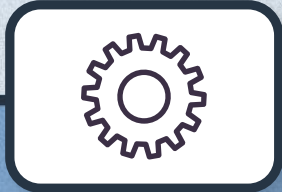
User Story 1

User Story 2

INVEST-ING IN GOOD USER STORIES

So what qualifies as a good User Story? At Cigna, we use the INVEST model to identify the characteristics of a good User Story.

[Click each letter to learn more.](#)



INDEPENDENT

The first characteristic of a good User Story is that it should be independent. This means that you should create stories you can work on without relying on other stories because dependencies add complexity to planning. Find the natural order in which to deliver the stories.



Here is an example:

“As a customer, I want to be able to pay for my prescription order by Visa / MasterCard / Amex / electronic check so that I can pay with the method of my choice.”

The team may decide that this User Story is too big since it includes several types of payments.

You can make the User Story smaller and independent by splitting it.



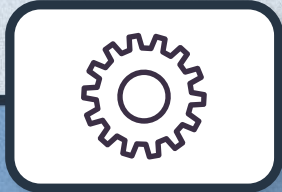
As a customer,

I want to be able to pay for my prescription order by electronic check so that I can pay with my existing bank account.

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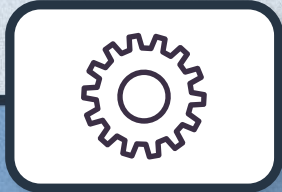


As a customer,
I want to be able to pay for my prescription order by American Express
so that I can pay with my credit card.

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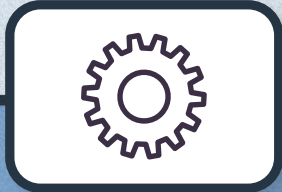


As a customer,
I want to be able to pay for my prescription order by VISA
so that I can pay with my credit card.

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You can make the User Story smaller and independent by splitting it.



As a customer,

I want to be able to pay for my prescription order by MasterCard so that I can pay with my credit card.

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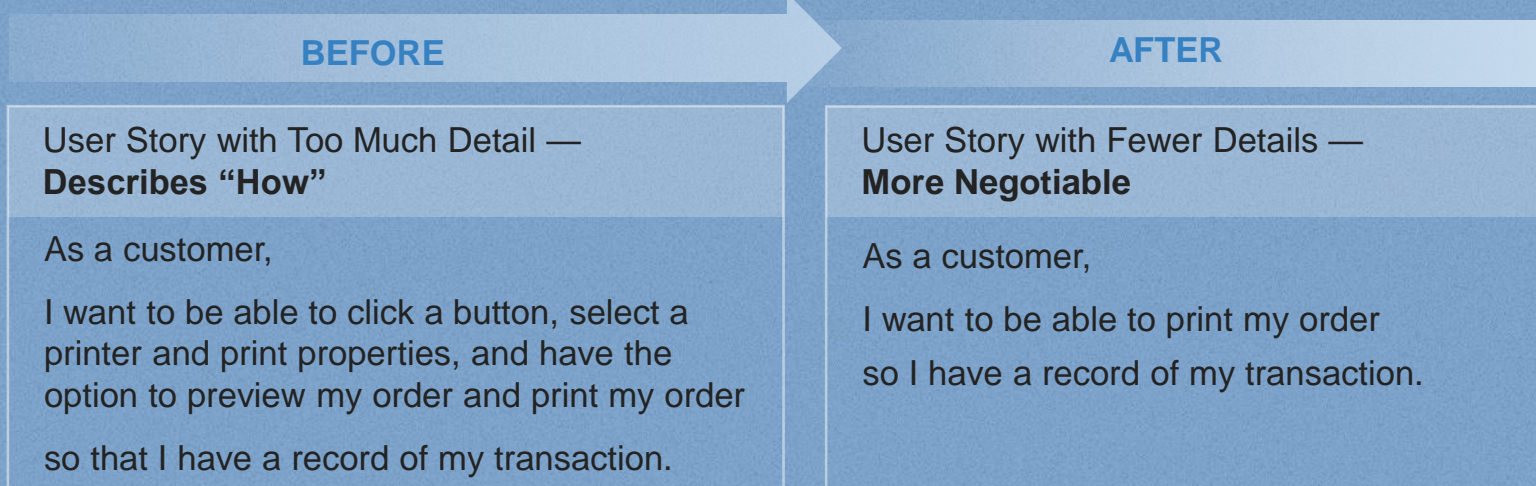
NEGOTIABLE

The second characteristic of a good User Story is that it should be negotiable. Remember that a User Story is not a contract.

Include Only Key Details

When writing User Stories, make sure they do not contain all the details. Defer driving out details until the last responsible moment. Too much detail gives the impression of false precision or completeness, or that there is no need for further conversation.

One way to avoid having too many details is to avoid describing “how” to implement any part of the User Story. Keep some flexibility so that you can adjust how much of the story has to be implemented and when.



INVEST-ING IN GOOD USER STORIES

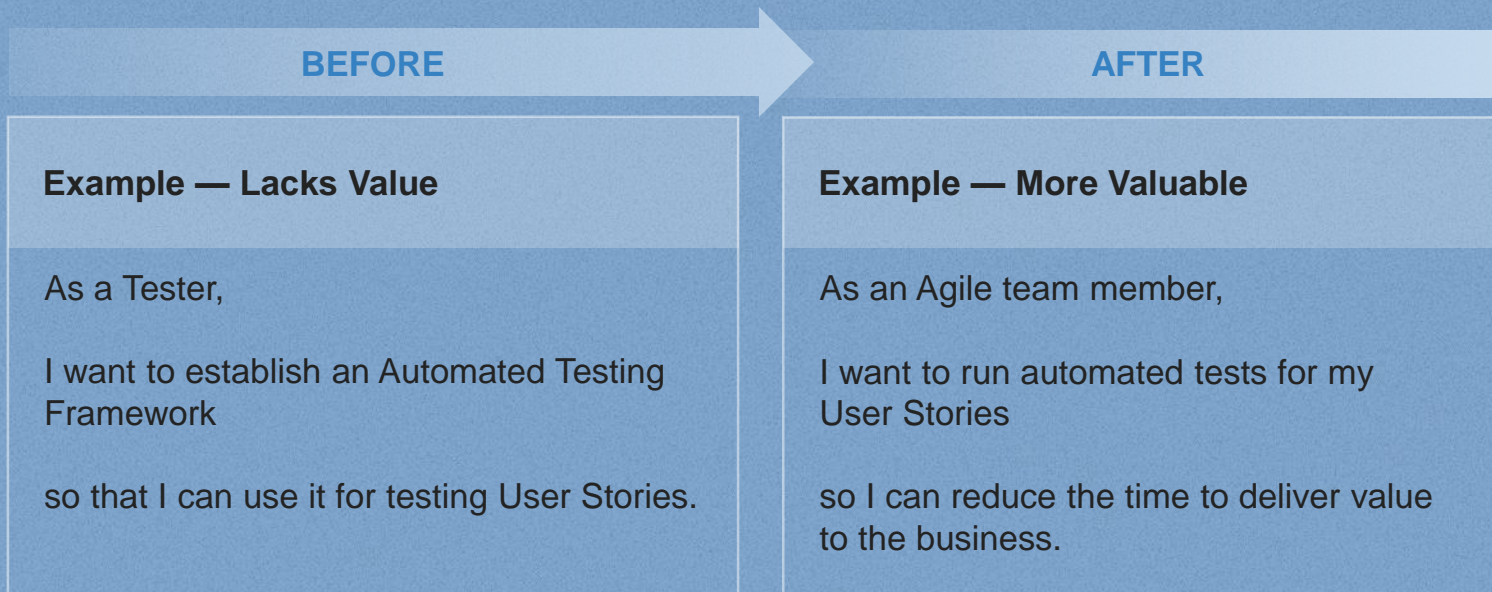
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VALUABLE

Another characteristic of a good User Story is that it should be valuable to the business / customer / end users. You may have to rewrite technical User Stories in order to state value.



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ESTIMABLE

A good User Story should also be estimable. Key factors that impact the ability to estimate are:

- Size and complexity of User Story
- Lack of domain knowledge
- Lack of technical experience
- Vague language

BEFORE

Example — Too Large

As a Provider,
I need to use the Cigna portal
so that I can care for patients.

AFTER

Example — Specific Action: Submit Treatment Plan

As a Provider,
I need to access the Cigna portal
so that I can submit my treatment plan for Cigna
insured patients.

Example — Specific Action: Submit Invoices

As a Provider,
I need to submit invoices through the Cigna portal
so that I can get paid for services provided to Cigna
insured patients.

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SIZED APPROPRIATELY (SMALL)

Large User Stories are hard to estimate and plan.

When writing User Stories, remember:

- User Stories should **fit into a single iteration**; ideally, each User Story should be completed within two to three days.
- Complex User Stories are usually too big — they should be **split up into smaller, simpler stories**.
- Spikes can be created for a **negotiated time box** if research is needed. At Cigna, SAFe® normalizes points across the teams.

A User Story can be big if you don't plan on working on it for a while, but as the time to begin working on it approaches, the story needs to be sized appropriately.



Example of a large User Story:

As a customer,

I want to be able to pay for my prescription order by Visa / MasterCard / Amex / electronic check so that I can pay with the method of my choice.

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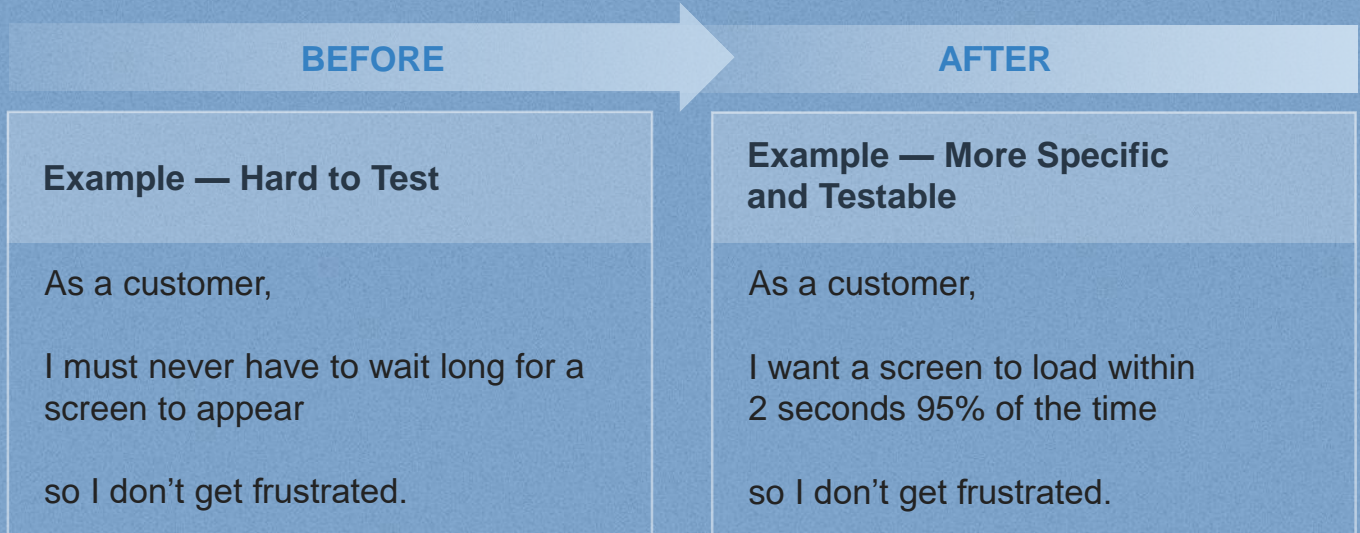


TESTABLE

A good User Story should be testable.

In order to guarantee this testability, the team should:

- Know how to test the story in order to build the correct solution.
- Know what tests will be required to meet the customer’s expectations.
- Automate early.



THINK ABOUT IT PART B

Review the **two** User Stories you created in Part A of this exercise. Evaluate your User Stories using the INVEST model.

Q1 What did you find?

Q2 How do you plan to use the techniques you have learned in your work?





ADDITIONAL RESOURCES

Click the links below to learn more.

- [Cigna Agile Playbook: User Story](#)
- [Scaled Agile Framework](#)