



Example Mapping

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BA Con
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User Stories | Convention

- Rachel Davies is credited with inventing:

As a [type of user]

**I want [some particular feature]
so that [some benefit is received]**

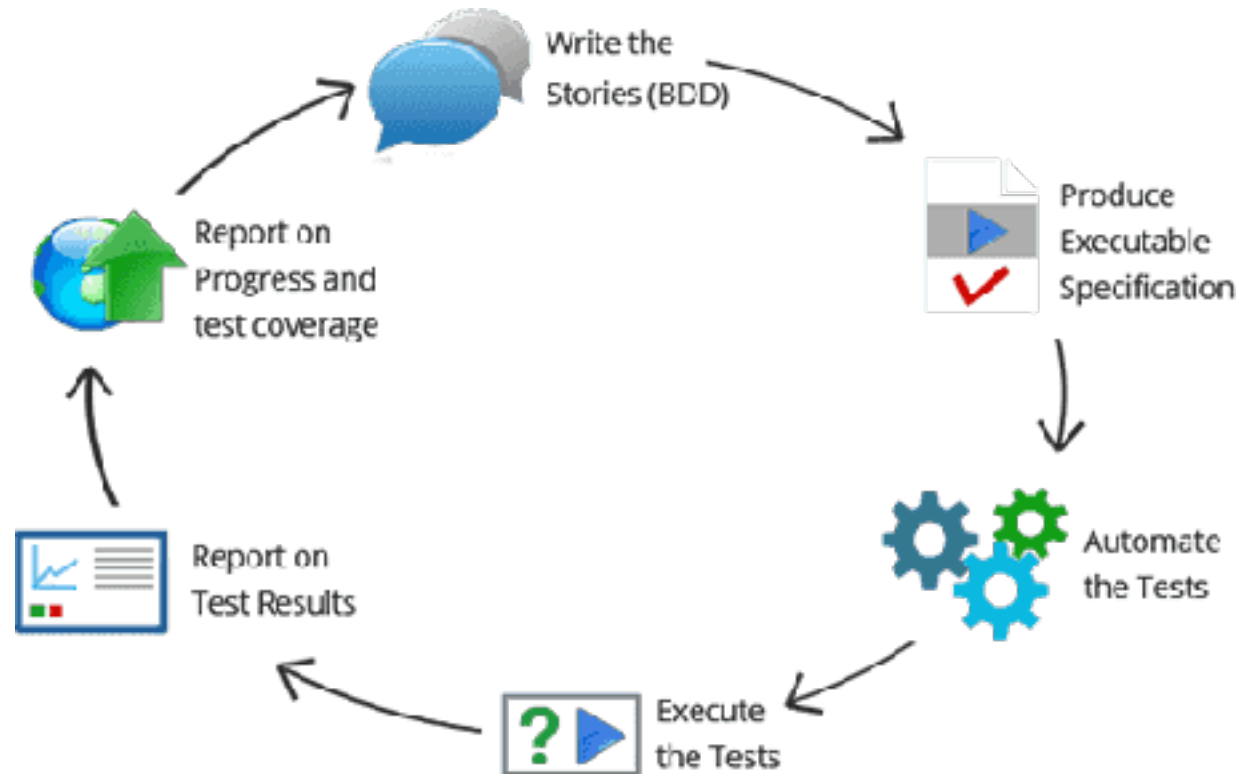
- Example:

As a bank customer

I want to view my current account balance
so that I know my recent deposit went through.

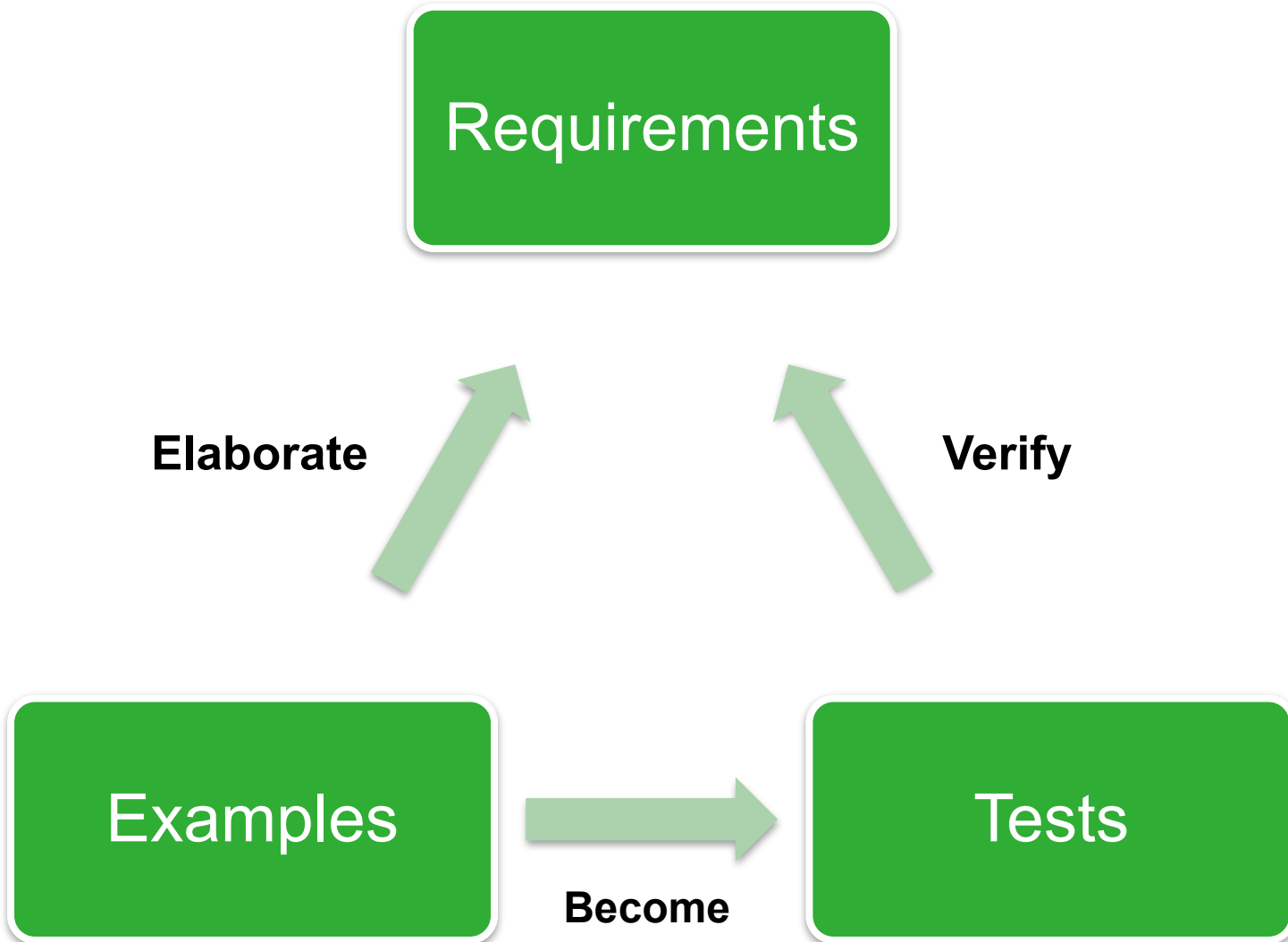
- Sometimes features that describe technology updates or UI changes don't really work with the model.

Behavior Driven Development



- **BDD promotes requirements by example, collaboration, lower cost in resolving defects, and automation in the form of business value.**

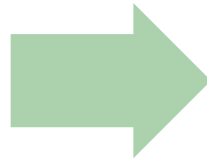
Gherkin is a business readable, Domain Specific Language created specifically for behavior descriptions (BDD/ATDD).



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User Story

- **As a** [type of user]
- **I want** [some particular feature]
- **so that** [some benefit is received]



Gherkin Scenario

- **Given** some initial context
- **When** an event occurs
- **Then** ensure some outcome(s)

Encourages Collaboration

- BDD requires people to work together to create the requirements / tests. All roles balance each other.





Rules vs Examples: Password Activity

Group Activity | Passwords

- Form teams of 2-4

As a member of information security

I want to force users to create strong passwords

In order to prevent passwords from being guessed

- In your team, invent **THREE** rules for what makes a strong password. Write them on **BLUE** cards.
- Keep your rules secret from other teams
- Sample rules: “It must have # in the password” or “It must not have your name in it”

Group Activity | Passwords

- Create THREE examples that illustrate your rules
- Write each example on a **GREEN** card.
- Examples:

**“Secure#Password”
is valid**

**“ThomasPW”
is invalid**

Group Activity | Passwords

- Pass your **EXAMPLES** to another team.
- Attempt to guess the other team's rules.
- The guessing team may create new examples and ask the **RULES** team to confirm the examples meet the requirements, without showing the **RULES**.
- **How many examples did it take to guess the rules correctly?**



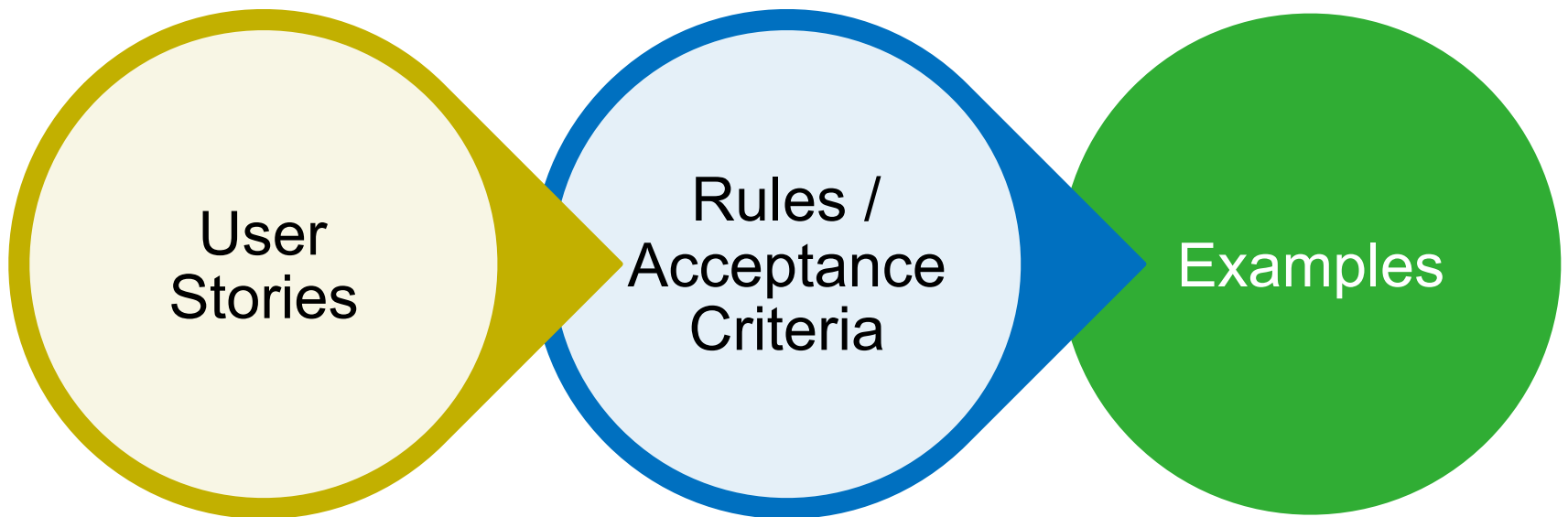
Group Activity | Passwords

Why do we need both **RULES** and **EXAMPLES**?



Group Activity | Passwords

Use the **EXAMPLES** to illustrate the **RULES** of **USER STORIES**.





Example Mapping

From a User Story to Specifications

- Before development starts, have a conversation to **Clarify** and **Confirm**
- The Three C's
 - **Card**
 - **Conversation**
 - **Confirmation**



Card

- User stories are written on cards.
- The card does not contain all the information in the requirement.
- The card has just enough content to identify the requirement.
- The card is a **token** that represents the requirement.

As a customer, I want to be able to search for flights between two cities to see which ones have the best price and route.
Estimate: 1.0 points
Priority: 2 - High

Example Story Card

Conversation

- The conversation is an **exchange of ideas** and opinions.
- This conversation takes place **over time**: during estimation and planning before implementation.
- The conversation is **verbal** and often supported by documentation. The best supplements are examples – specifically executable examples.



Confirmation

- An acceptance test.
- For complex stories, confirmation using examples (and automation) is preferred.
- The confirmation provided by the **executable specification** steers the approach of card and conversation.



Other Common Refinement Activities

- Three Amigos
- Specification Workshop
- Discovery Workshop



- Whichever method is used, these activities must be done regularly!

Workshop Background Materials:

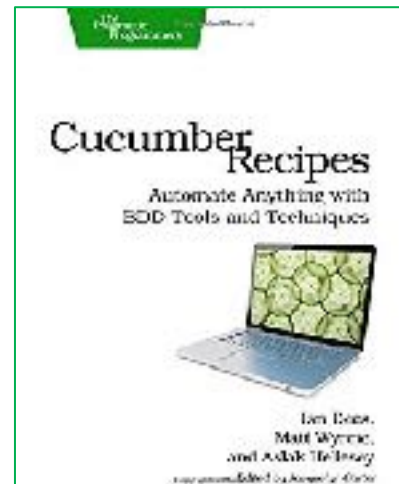
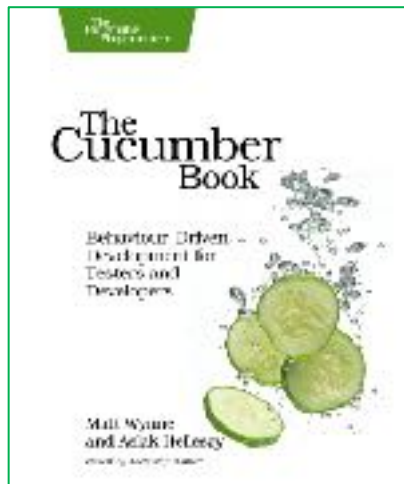
<http://www.velocitypartners.net/blog/2014/02/11/the-3-amigos-in-agile-teams/>

<https://gojko.net/2008/11/12/specification-workshops-an-agile-way-to-get-better-requirements/>

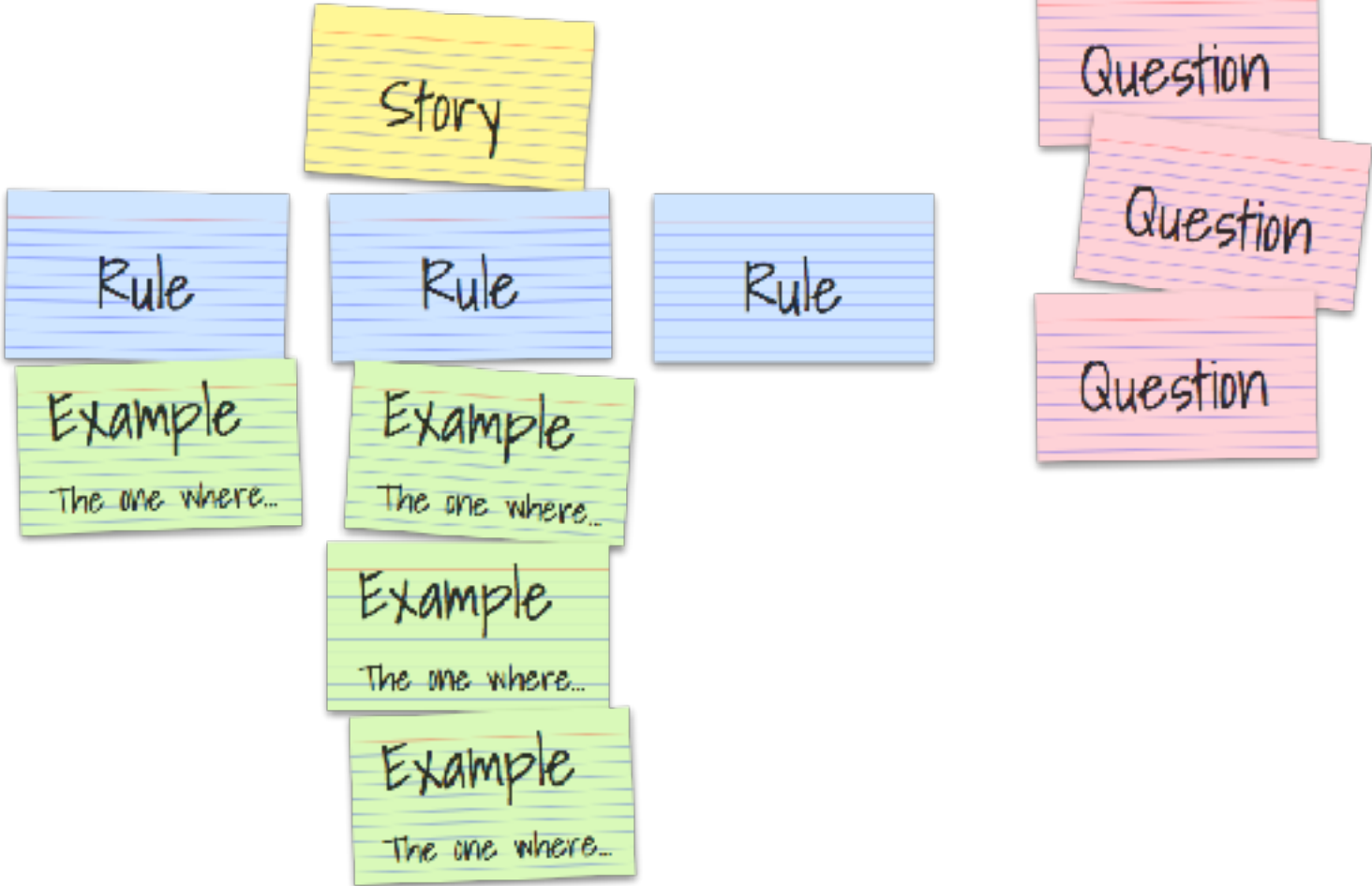
<https://dannorth.net/2010/08/30/introducing-deliberate-discovery/>

Example Mapping by Matt Wynne of Cucumber Ltd.

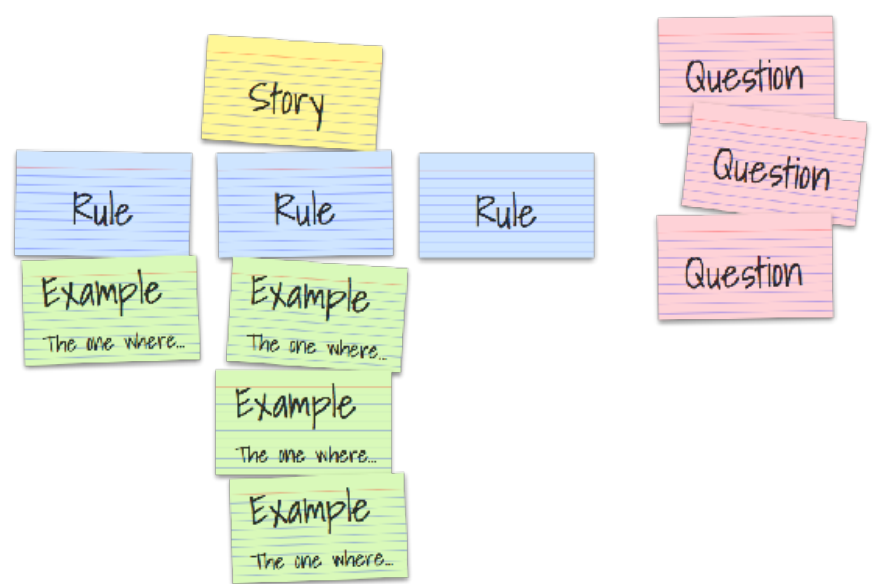
- Specification by Example help us refine requirements.
- **Rules** that summarize examples or express constraints about the story.
- **Questions** about scenarios concerning the outcomes or dependencies of the story that no one in the workshop can answer.
- **New User Stories** either sliced or deferred as out of scope.



The Example Map

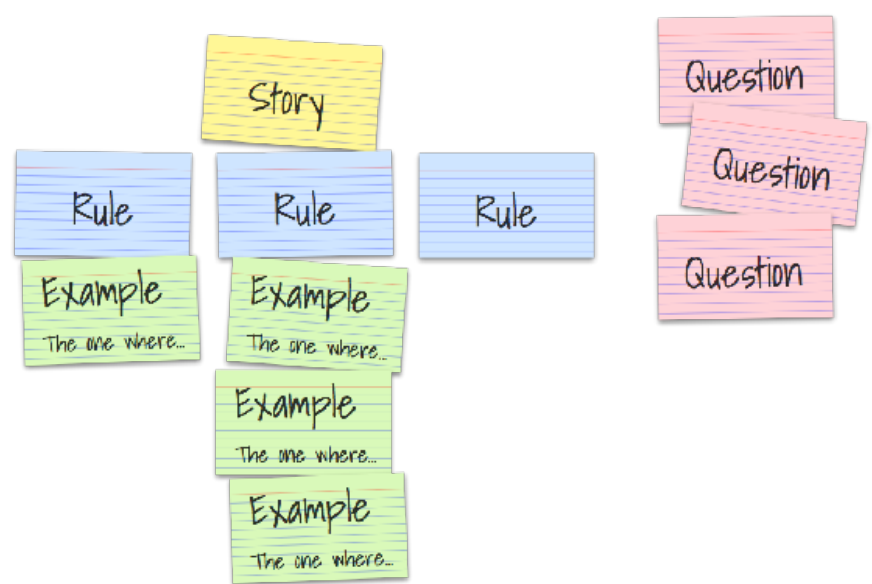


Process



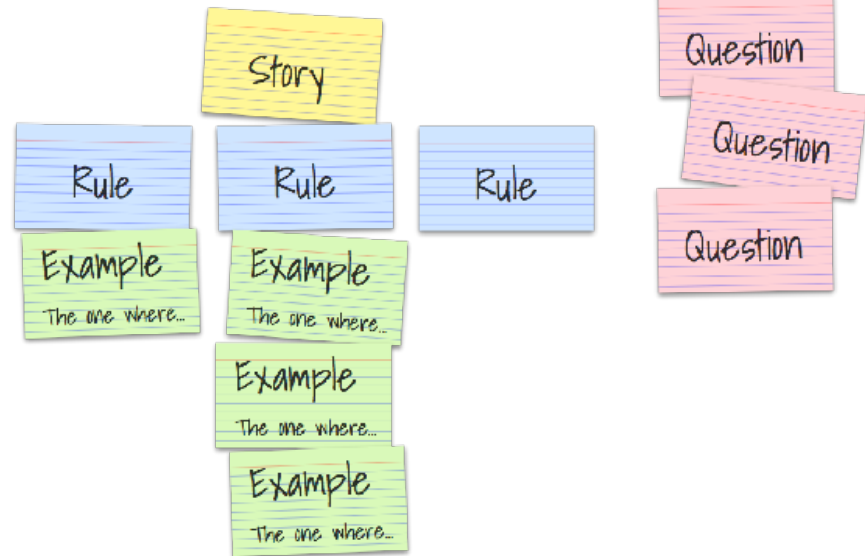
- The single **USER STORY** is written on **YELLOW** card and placed at the top of the map.
- The acceptance criteria as a **RULE** is written on a **BLUE** card placed below the User Story.
- Create one or more **EXAMPLES** written on **GREEN** cards placed below each rule.
- Any **QUESTION** that no one in the workshop can answer is written on a **RED** card.
- Continue the session until a **Time-box** is met or everyone believes the story is elaborated sufficiently.

Feedback



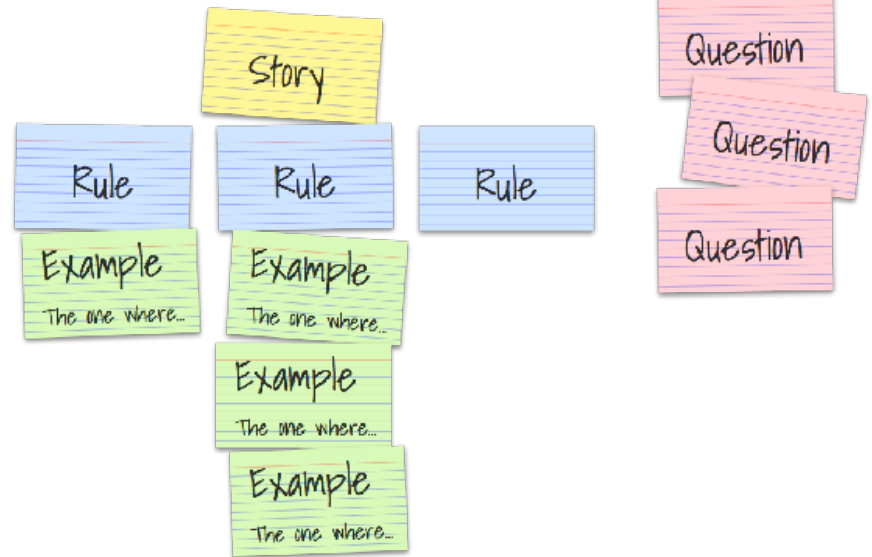
- The Example Map represents the teams understanding of the story:
 - A map with many **RED** cards mean development work is not ready to begin. Seek out answers outside the workshop.
 - A map with many **BLUE** cards means the User Story is perhaps too large. Try to slice the User Story into two or more.
 - A single rule with too many **GREEN** cards might be too dense. Try to slice the Rule into two or more.

Time-Box



- An Example Mapping session should take **30 minutes** max.
- If the time-box is not met, perhaps:
 - The attendees must practice more
 - The **USER STORY** has too many **RULES**
 - The **USER STORY** has too many **QUESTIONS**
- All Example Map attendees must agree the story is ready for development.

Benefits



- Creates a shared understanding among all roles on the team.
- Example Mapping promotes requirements written as user behavior.
- Each rule determines the application's core behavior.
- Large or unclear stories are stopped from entering active development.

A Word of Caution

- One person writing Gherkin scenarios based on the examples during the session while others sit idly by is not advised.



- If the team uses Gherkin standards, then individuals can quickly write the examples and split the work amongst the team.

An *Example Example* Mapping

Schedule a Workshop

Room must be available

Workshop within normal working hours

At least 75% of all participants available

What if one or more Trainers are unavailable?

Is catering required?

A workshop with 4 people or fewer can be held in the atrium

Core business hours between 9am and 3pm EST

Workshop scheduled on day when colleagues on-site

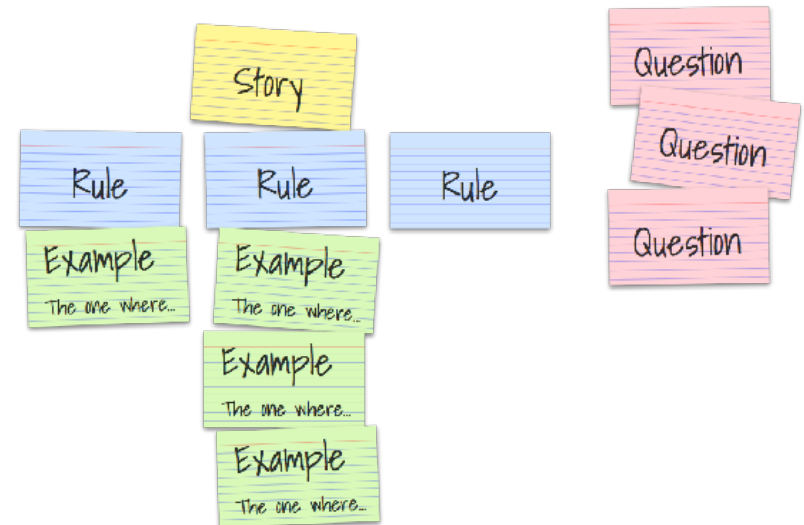
Does the meeting room require a projector?

A workshop with 5 people or more must be reserved in meeting room

Scheduled during timeframe when colleagues don't have meeting conflicts

Example Mapping Group Activity

- Group Activity (time box: 30 minutes)
 - In your group, conduct an Example Mapping session for one of the User Stories available.
 - We'll review each groups work together.
 - Divide the EXAMPLES from your session amongst your team members. For each Example, write the Gherkin specification.



Questions?

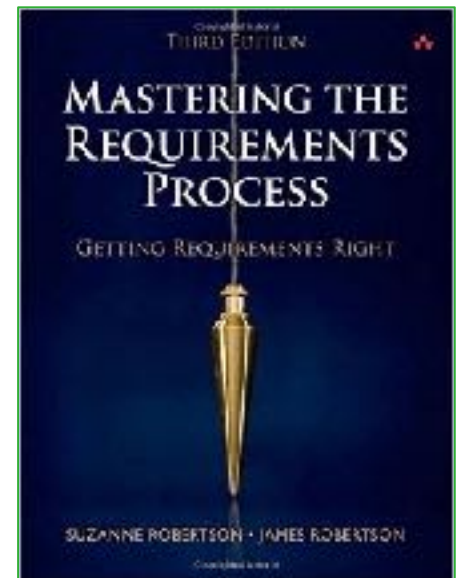
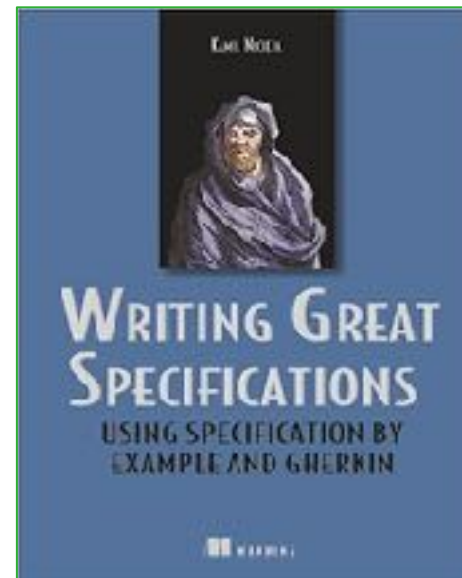
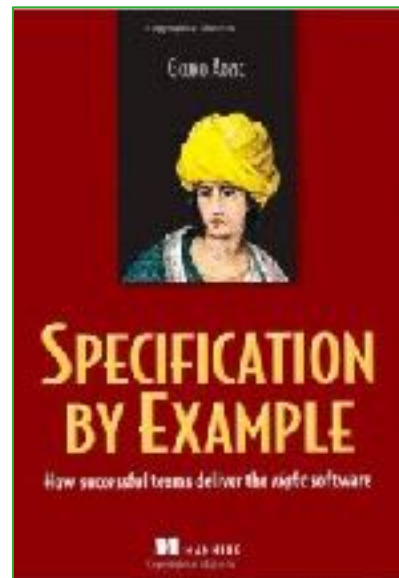
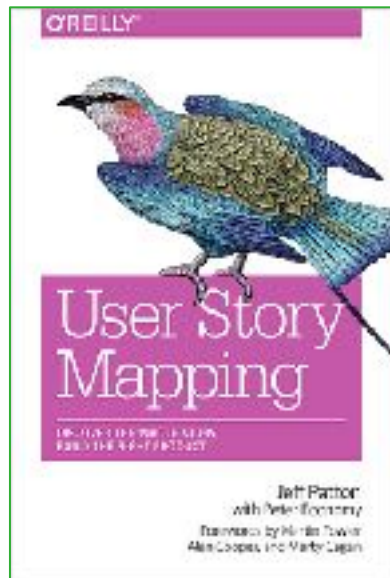
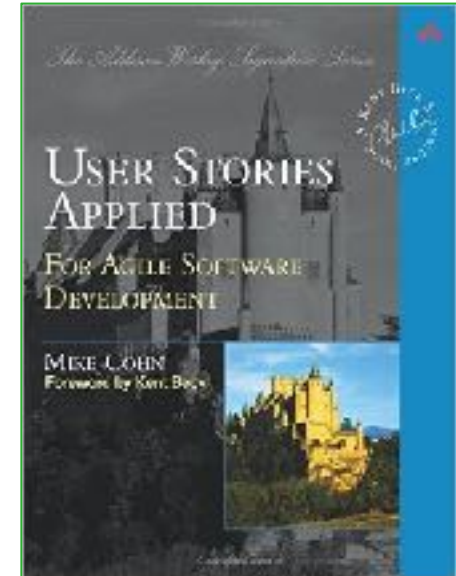
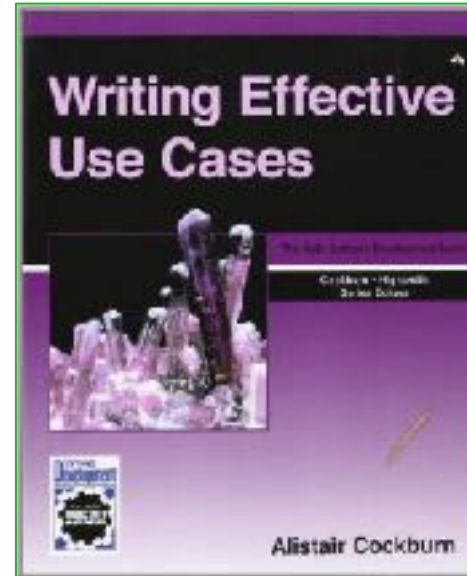
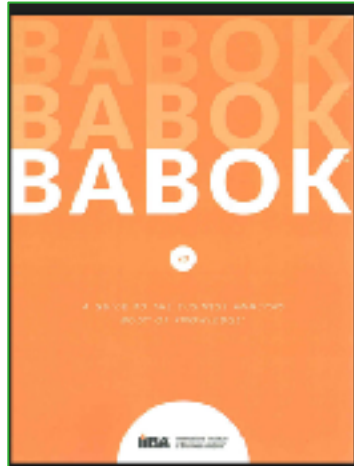




Resources

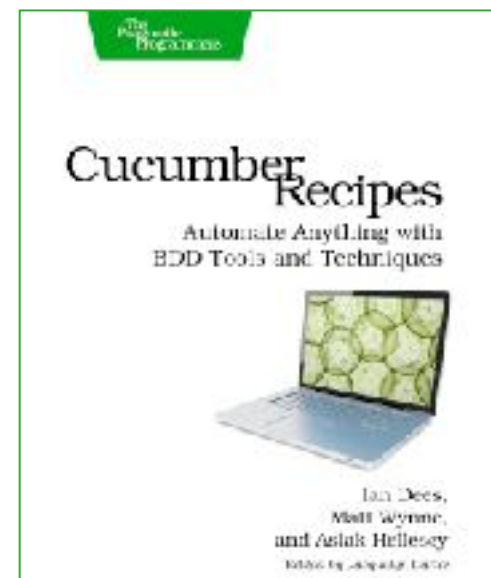
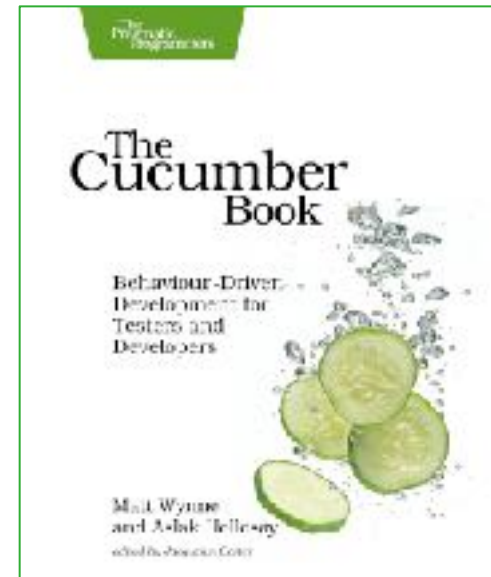
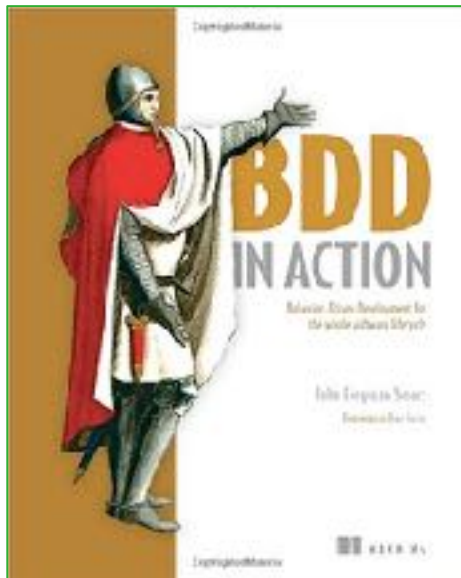
Resources

The Requirements



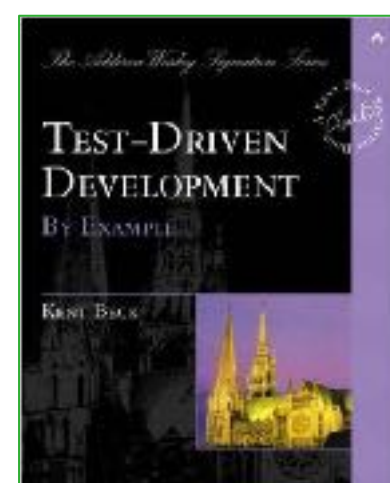
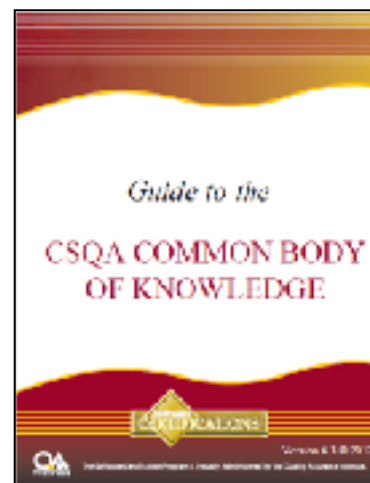
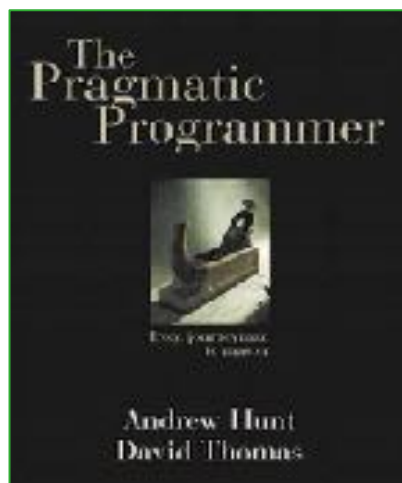
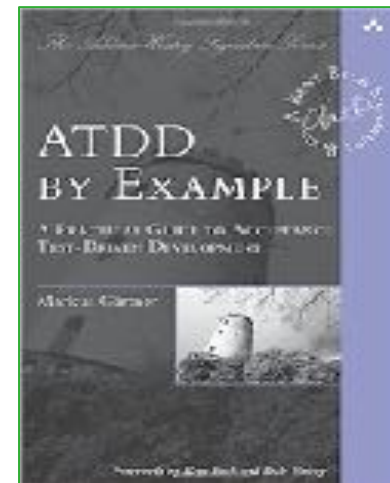
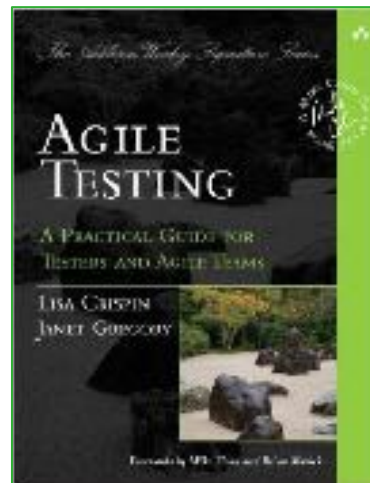
Resources

The Automation



Resources

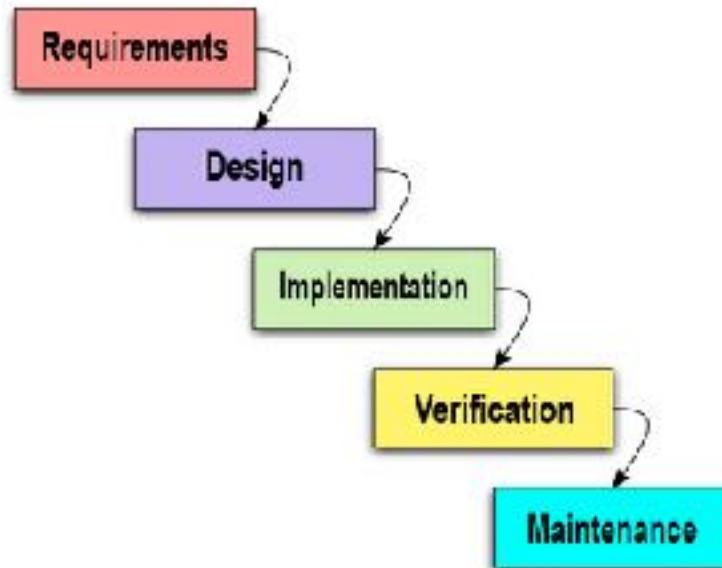
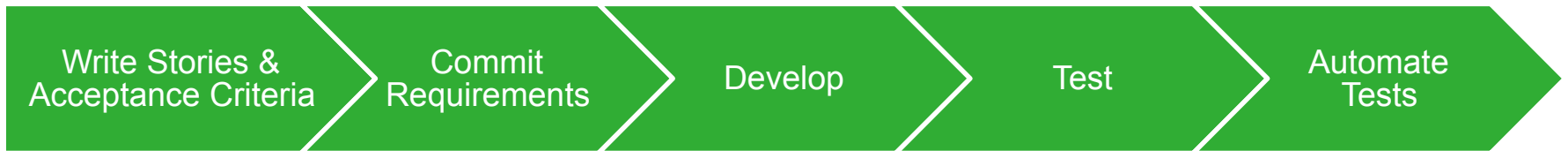
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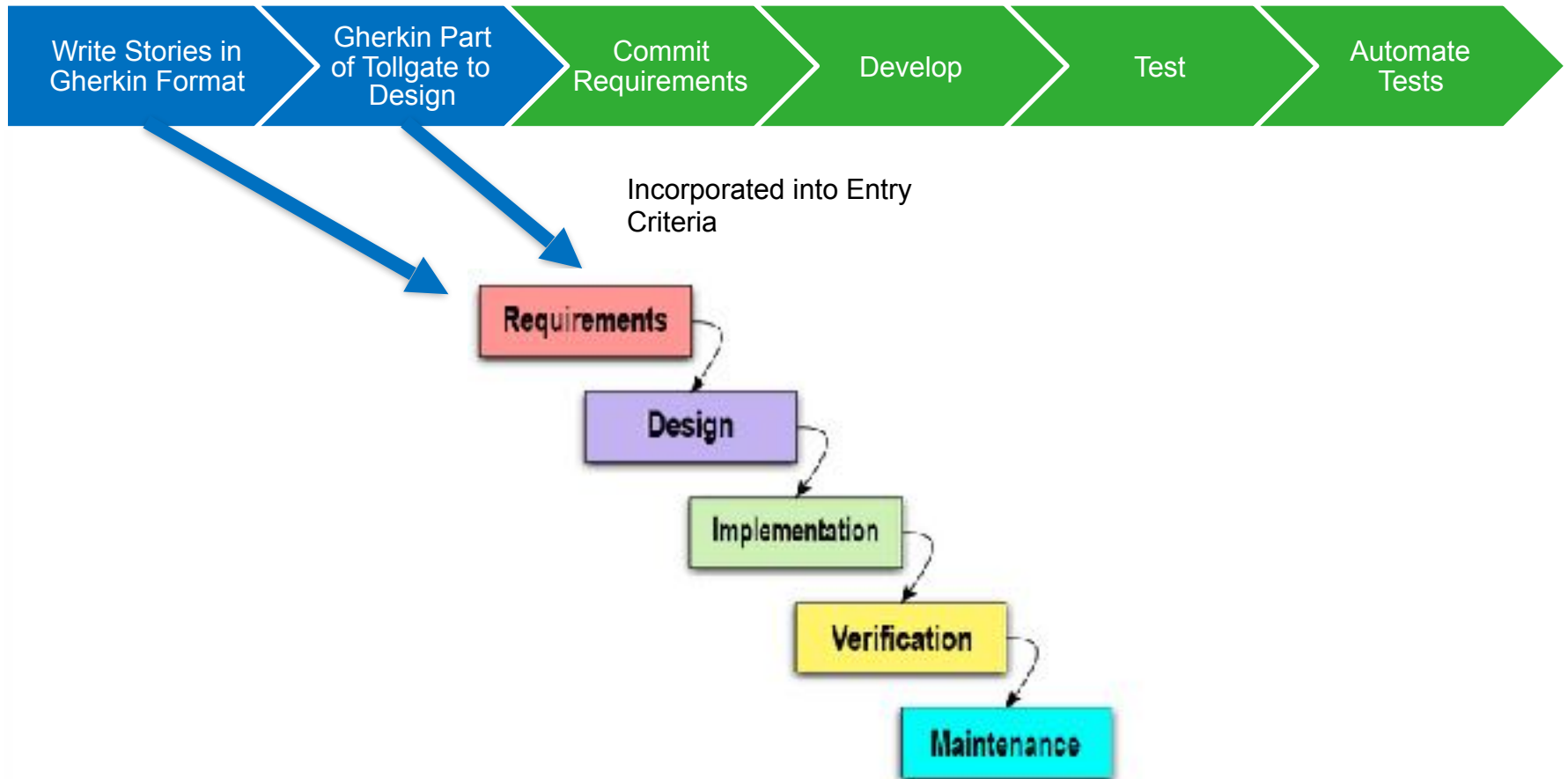


SDLC Integration “Waterfall”

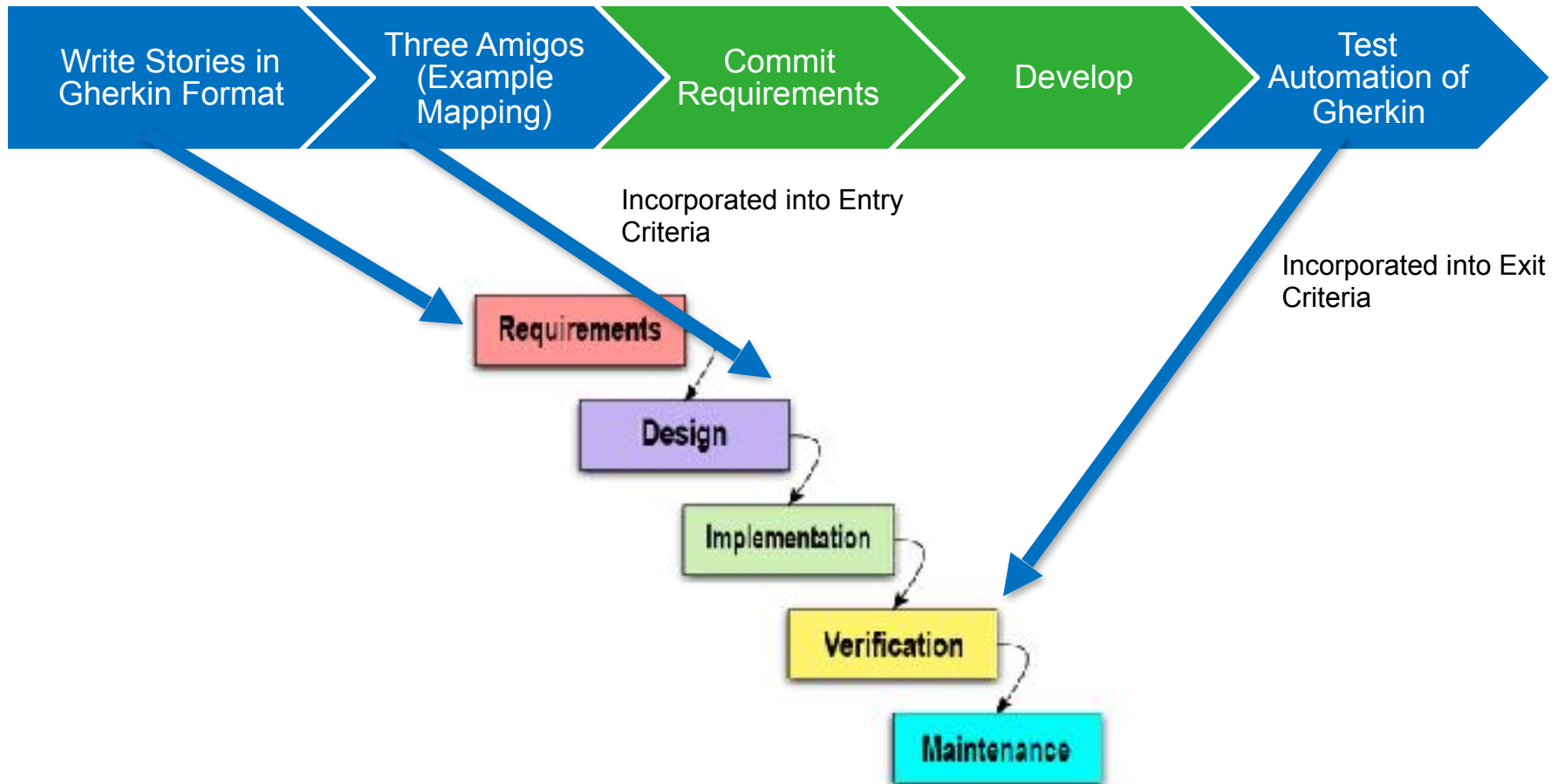
SDLC Integration | Waterfall



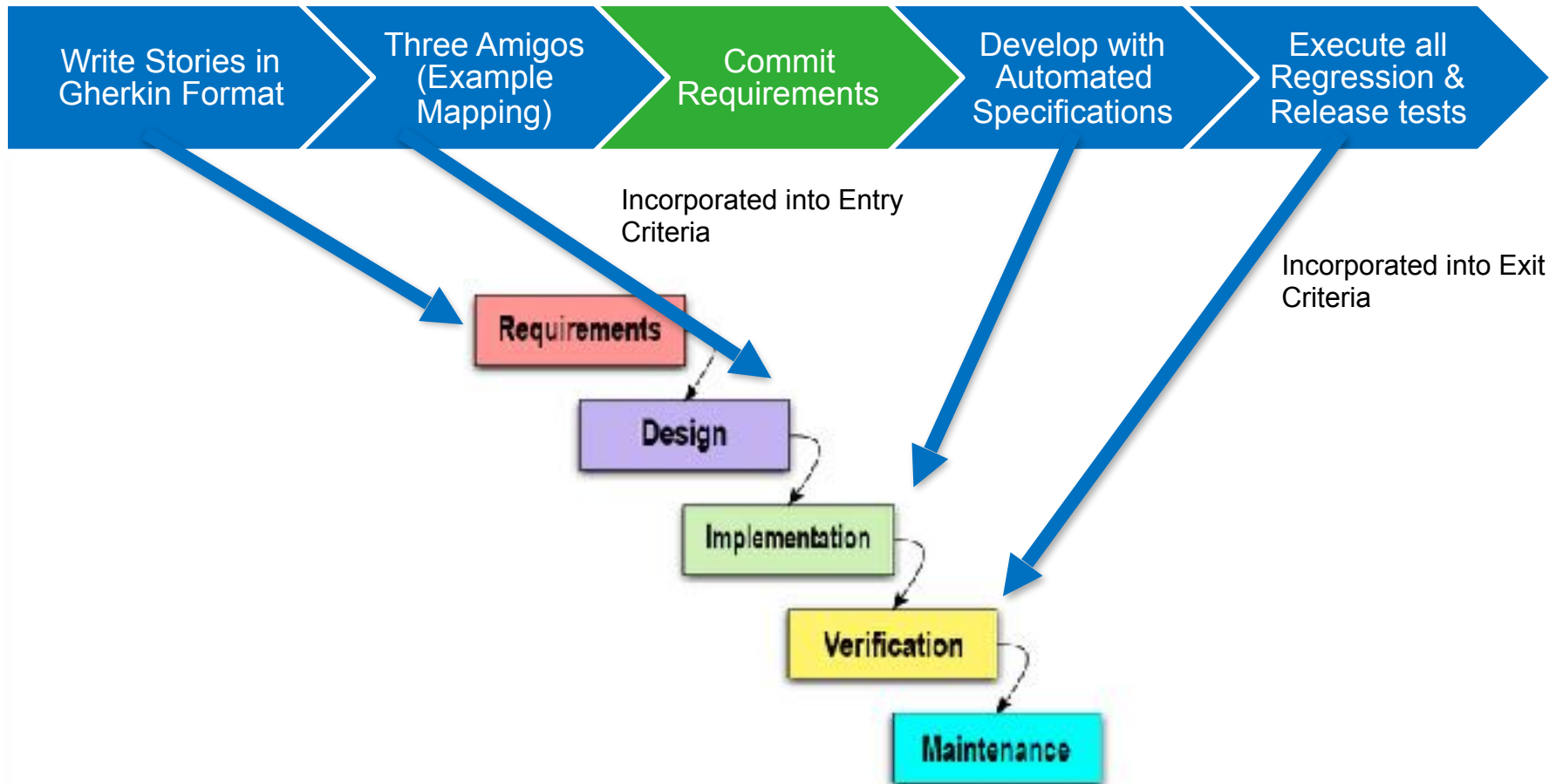
SDLC Integration | Analyst Writes Gherkin



SDLC Integration | Three Amigos Introduced



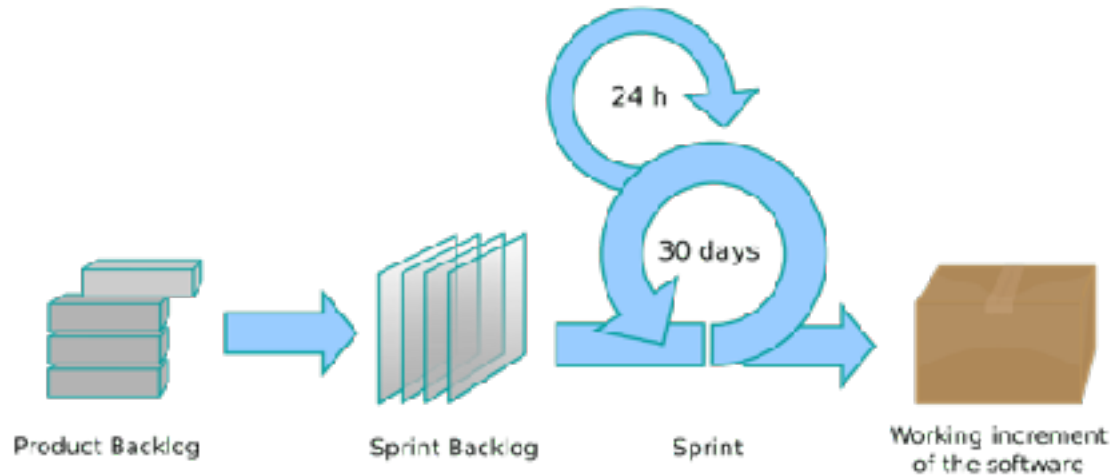
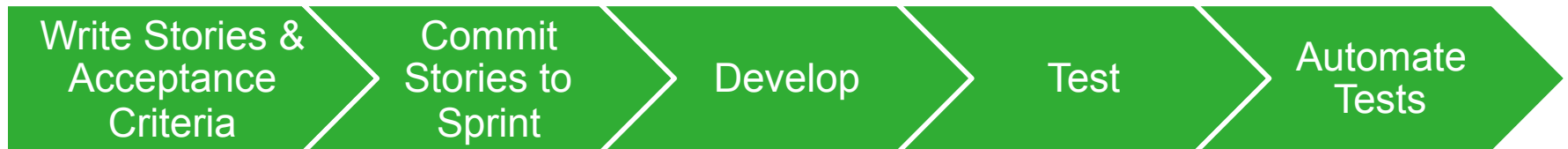
SDLC Integration | Full BDD



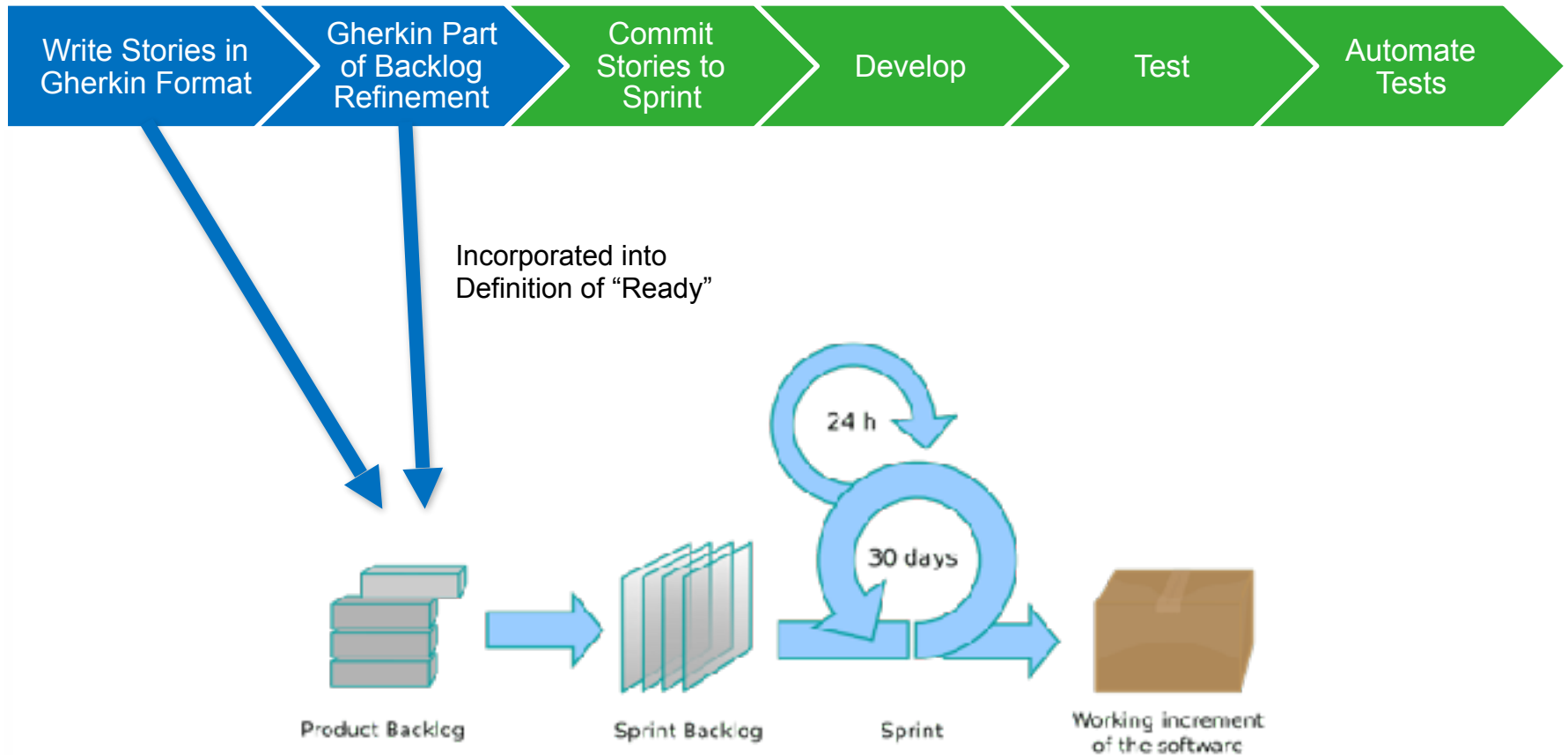


SDLC Integration “Scrum”

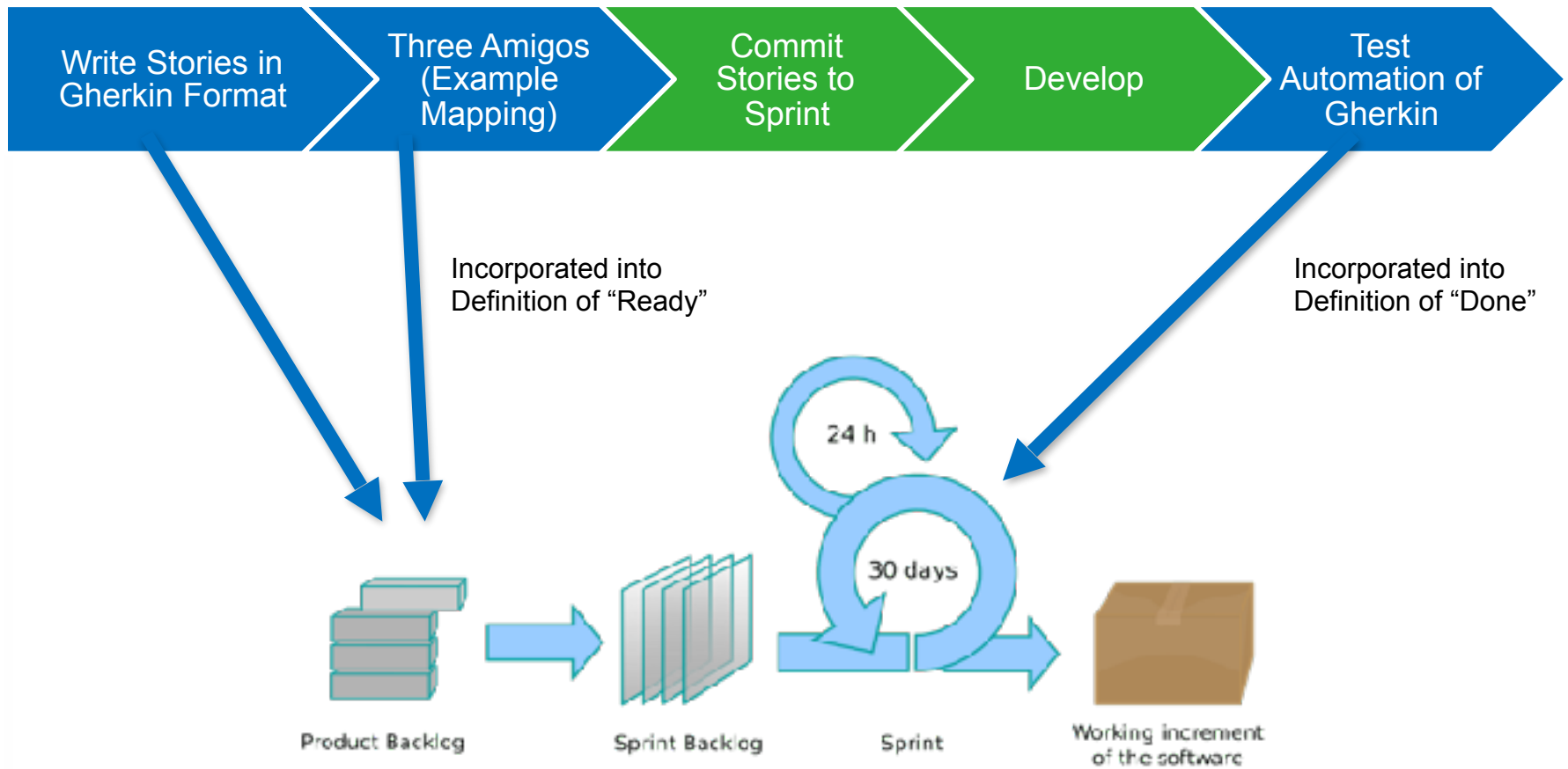
SDLC Integration | Standard “Sprint”



SDLC Integration | Analyst Writes Gherkin



SDLC Integration | Three Amigos Introduced



SDLC Integration | Full BDD

