Agile Requirement Gathering

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What is Agile

AGILE IS...

- A group of development methodologies that are based on similar principles:
  - Alignment with customer needs and company goals
  - Frequent and fast delivery of high quality working product
  - Team work, self-organization and accountability
  - Frequent inspection and adaptation

- **Culture and organizational way of working**

AGILE IS NOT...

- Undisciplined way of working
- Process
- Set of things
- A set of tools

Agile Umbrella
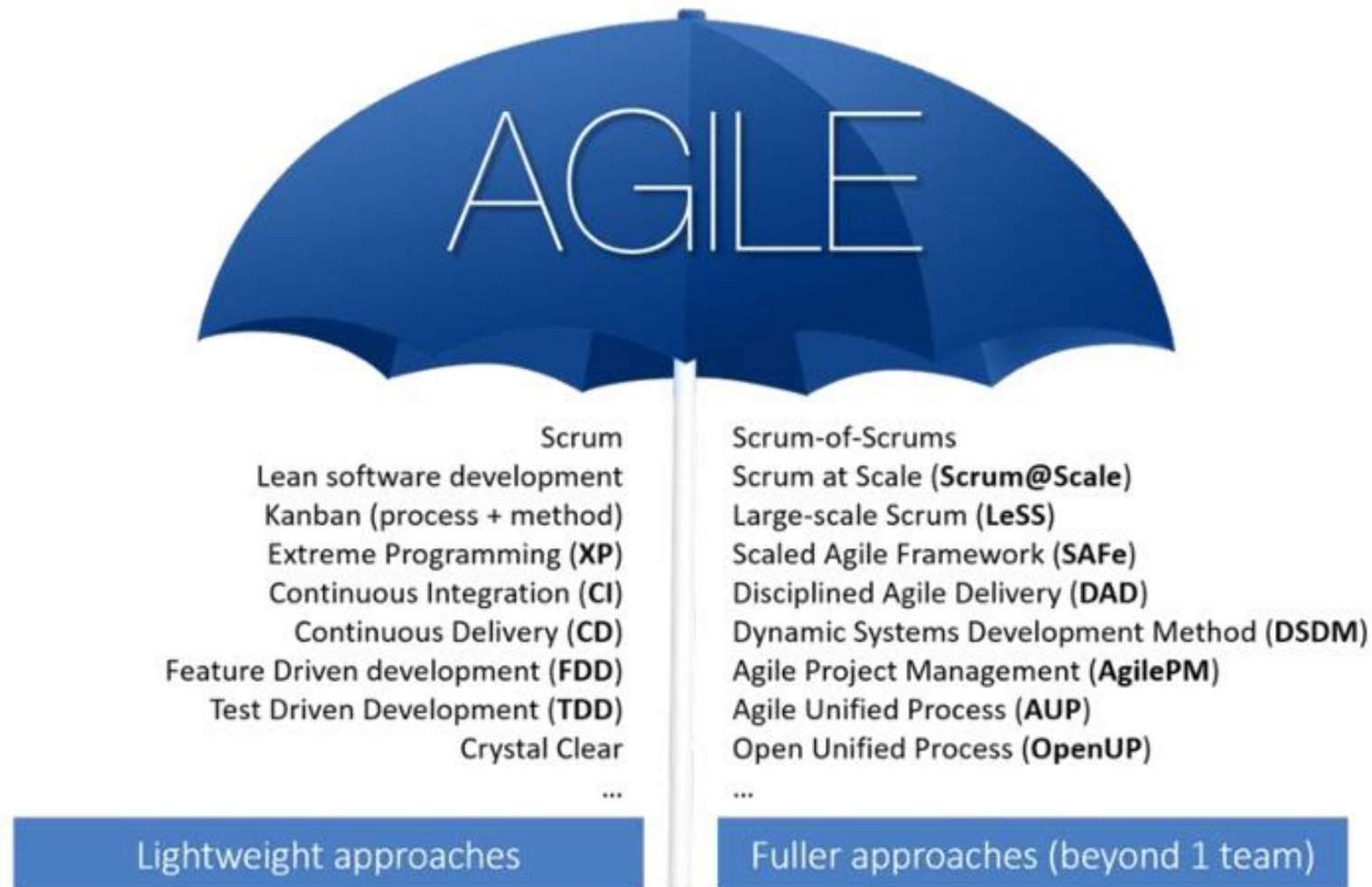
12 Agile Principles

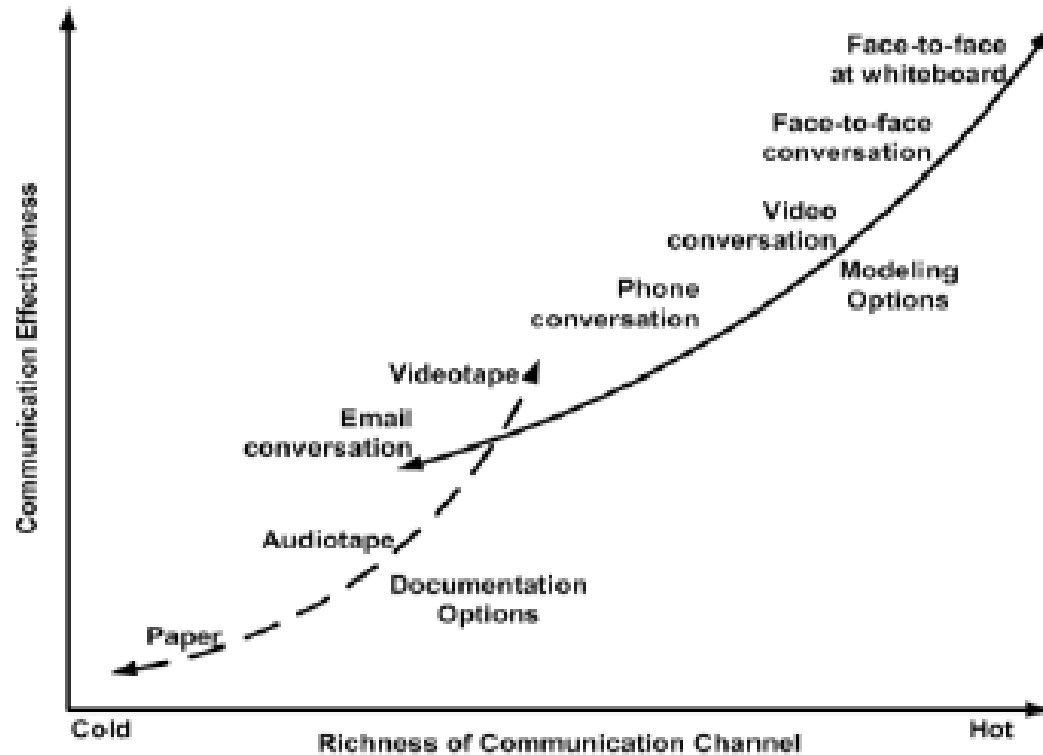|			
Satisfy the customer	Welcome Change	Deliver frequently	Collaborate daily
Support and trust motivated individuals & teams	Enable face-to-face conversation	Deliver working software	Promote sustainable pace
Promote technical excellence & good design	Maximize simplicity	Grow self-organizing teams	Reflect and adjust regularly

Communication

Copyright 2002-2005 Scott W. Ambler
Original Diagram Copyright 2002 Alistair Cockburn
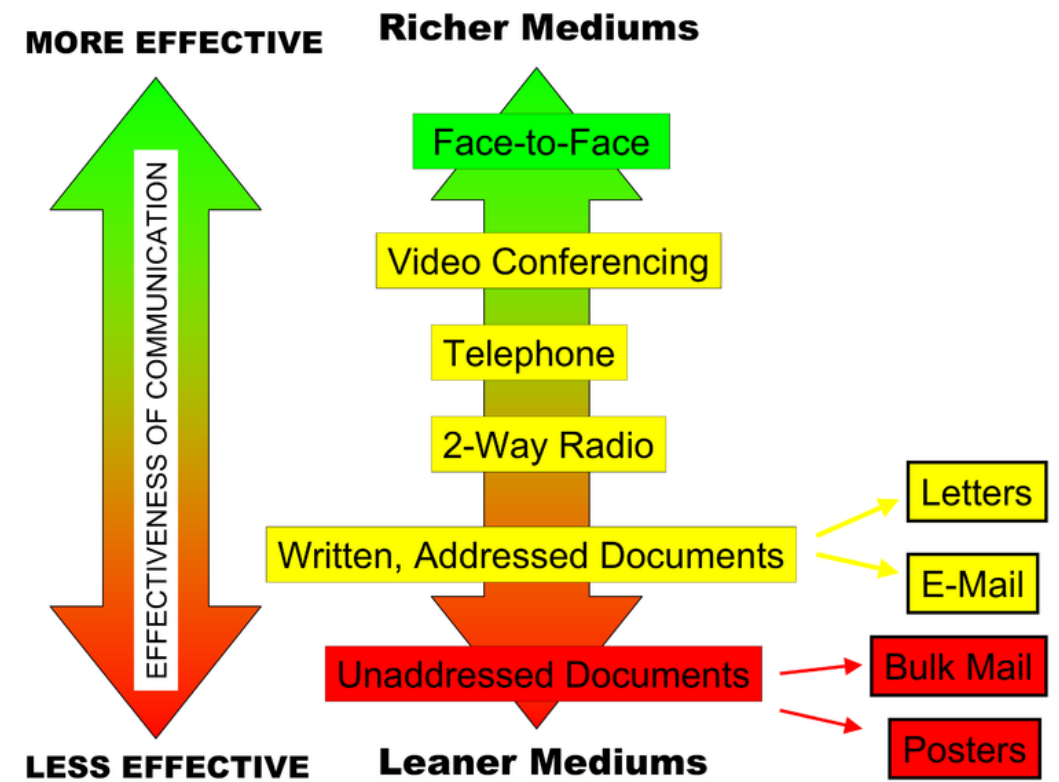
Agile Requirement

Conversion

- Conversation as a primary form of communication
- Face to face discussion between development team and customers, business owners, Vs
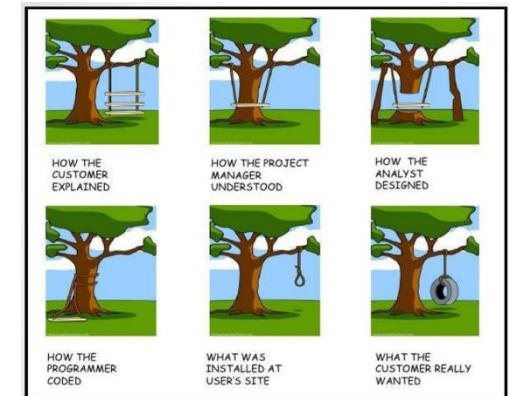 Hand-off Requirement document

Adaptive

- Discover user need Vs Collect User Needs

The Mars Climate Orbiter (MCO)

In one of the all time great engineering mistakes, NASA's partner, Lockheed Martin, used English Standard units, not the metric units used by NASA. The probe eventually hit the Martian atmosphere at the wrong angle and burned up.

HOW THE CUSTOMER EXPLAINED

HOW THE PROJECT MANAGER UNDERSTOOD

HOW THE ANALYST DESIGNED

HOW THE PROGRAMMER CODED

WHAT WAS INSTALLED AT USER'S SITE

WHAT THE CUSTOMER REALLY WANTED
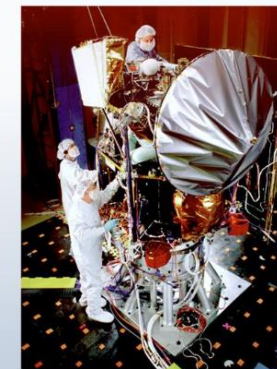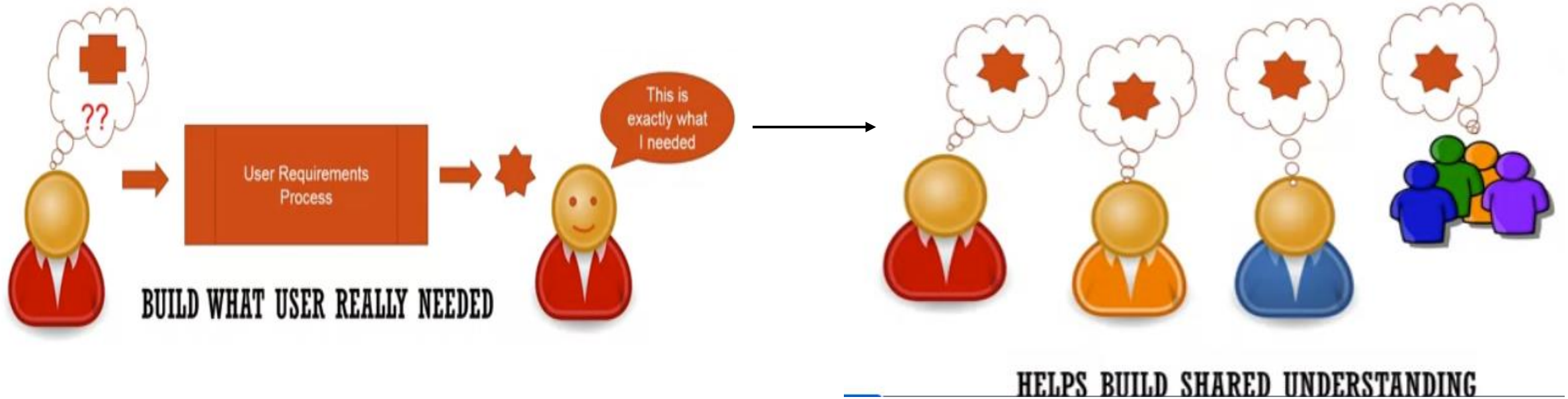
User Requirement

Agile Requirement

CARD

CONVERSATION

CONFIRMATION

Agile Requirement

User Story

A user story is an **end goal** not a **feature** written from the user or customer perspective. It is requirement for any functionality or feature which is written down in one or two lines.
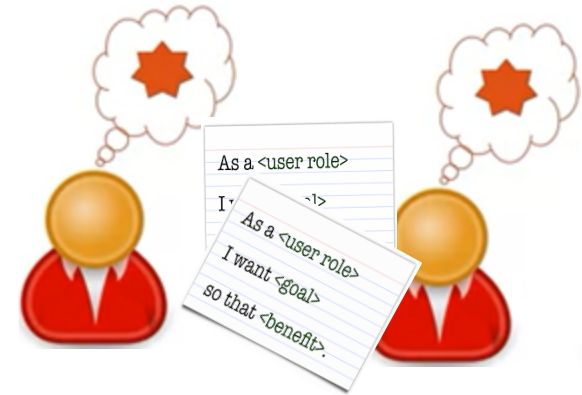
As a \<user role\>

I want \<goal\>

so that \<benefit\>.

User Story

Example of user story:

- Structure
- Acceptance Criteria

Task:

- Write a user story for a user who wants to search to find matching hotel option in a hotel web page.

User Story

As a <role>
I want <goal>
so that <benefit>

Acceptance criteria:
(Conditions of Satisfaction)
…
…

As an Account Manager
I want a sales report of my account to be sent to my inbox daily
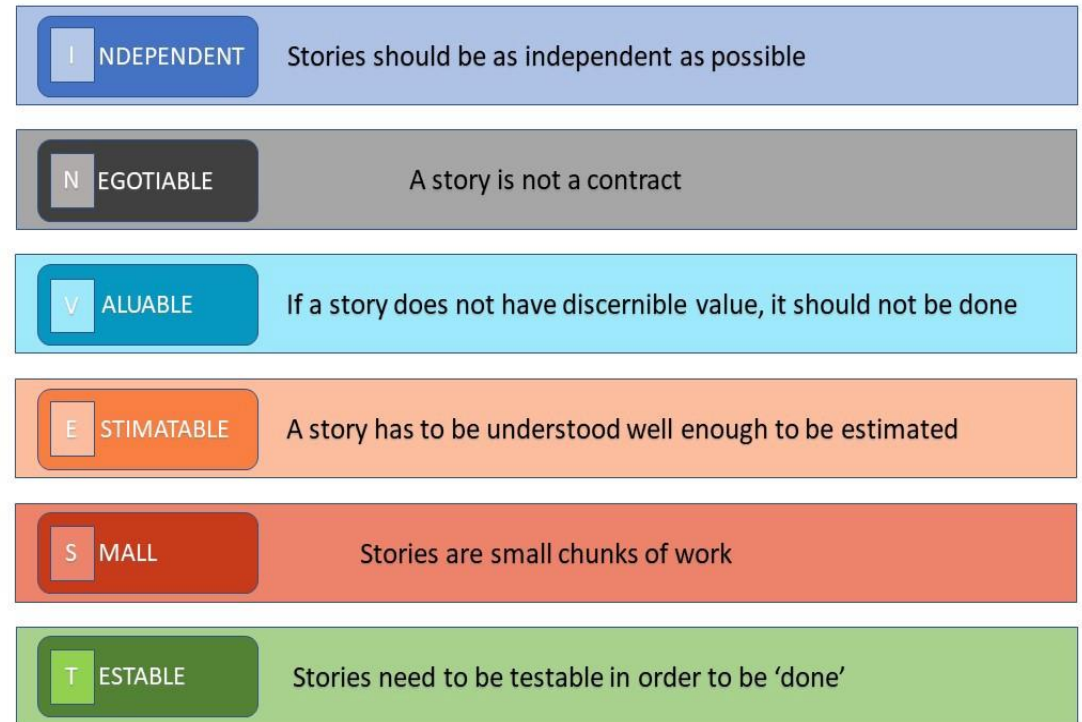**So that** I can monitor the sales progress of my customer portfolio

Acceptance criteria:
1. The report is sent daily to my inbox
2. The report contains the following sales details: …
3. The report is in csv format.

User Story

A good user story must follow the **INVEST** principle:

- **Independent**: Each user story should stand on its own, independent from other stories.

- **Negotiable**: Stories are not contracts, rather opportunities for negotiation and change.

- **Valuable**: Every story should add value for users and stakeholders.

- **Estimable**: Every story's time and budget costs should be calculable, based on domain and technical knowledge.

- **Small**: User stories should be small enough to estimate and implement simply.

- **Testable**: Make sure you can test the user story through criteria the story itself explains.

Proprietary

I NDEPENDENT	Stories should be as independent as possible
N EGOTIABLE	A story is not a contract
V ALUABLE	If a story does not have discernible value, it should not be done
E STIMATABLE	A story has to be understood well enough to be estimated
S MALL	Stories are small chunks of work
T ESTABLE	Stories need to be testable in order to be 'done'

Agile Requirement

CONVERSATION
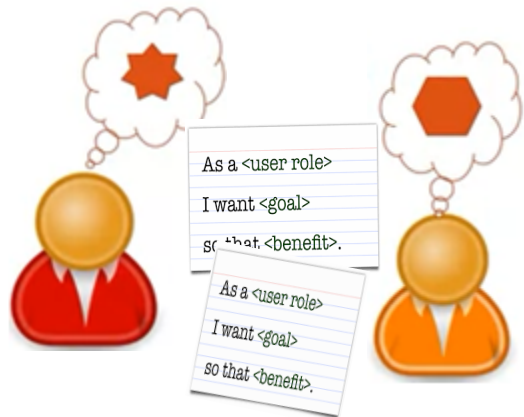
Agile Requirement

CONFIRMATION

Acceptance criteria (AC)

- Acceptance criteria (AC) are sets of accepted conditions or business rules which the functionality or feature should satisfy and meet in order to be accepted by product owner or stakeholder.
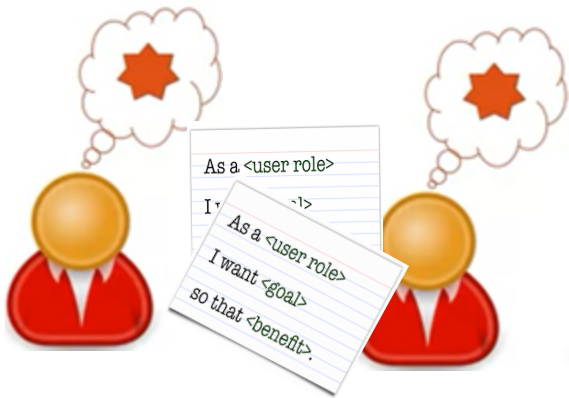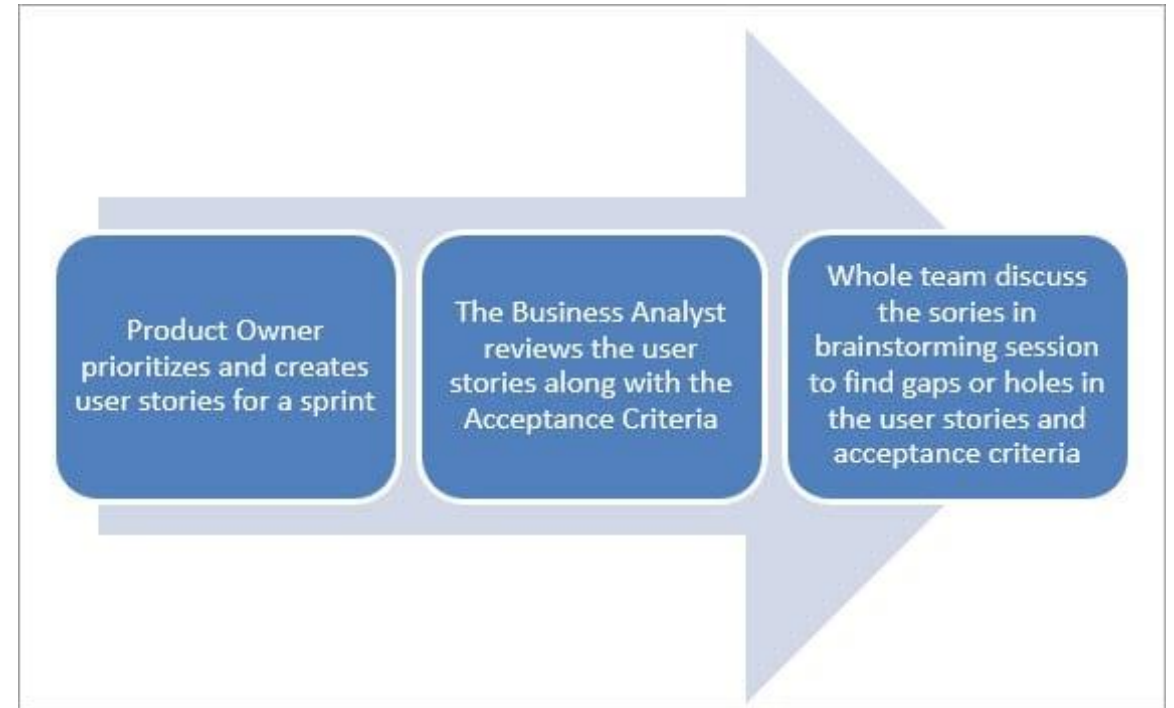
Acceptance criteria (AC)

The acceptance criteria template includes:

- **Scenario** – the name for the behavior that will be described

- **Given** – the beginning state of the scenario

- **When** – specific action that the user makes

- **Then** – the outcome of the action in "When"

- **And** – used to continue any of three previous statements

THE GIVEN/WHEN/THEN TEMPLATE

Scenario	The name for the behavior that will be described
Given (a precondition)	The beginning state of the scenario
When (something happens)	The specific action that the user makes
Then (this the result)	The outcome of the action in "When"
And	Used to continue any of three previous statements

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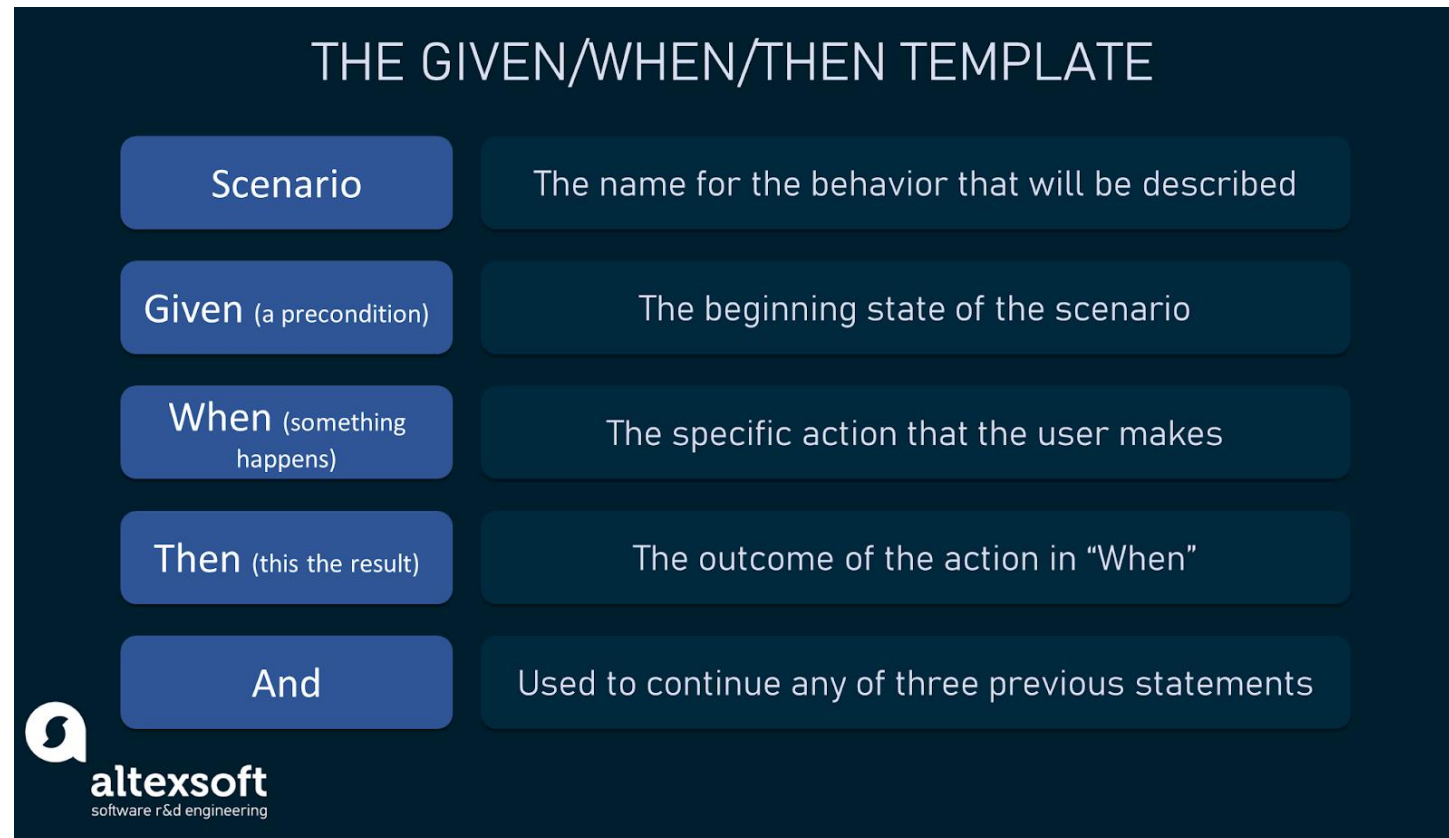
Acceptance criteria (AC) Examples

THE GIVEN/WHEN/THEN ACCEPTANCE CRITERIA: EXAMPLE 2

User story: As a user, I want to be able to request the cash from my account at an ATM so that I will be able to receive the money from my account quickly and in different places.

Scenario 1	Requesting the cash from a creditworthy account
Given	The account is creditworthy
And	The card is valid
And	The dispenser contains cash
When	The customer requests the cash
Then	Ensure the account is debited
And	Ensure cash is dispensed
And	Ensure the card is returned

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THE GIVEN/WHEN/THEN ACCEPTANCE CRITERIA: EXAMPLE 2

User story: As a user, I want to be able to request the cash from my account at an ATM so that I will be able to receive the money from my account quickly and in different places.

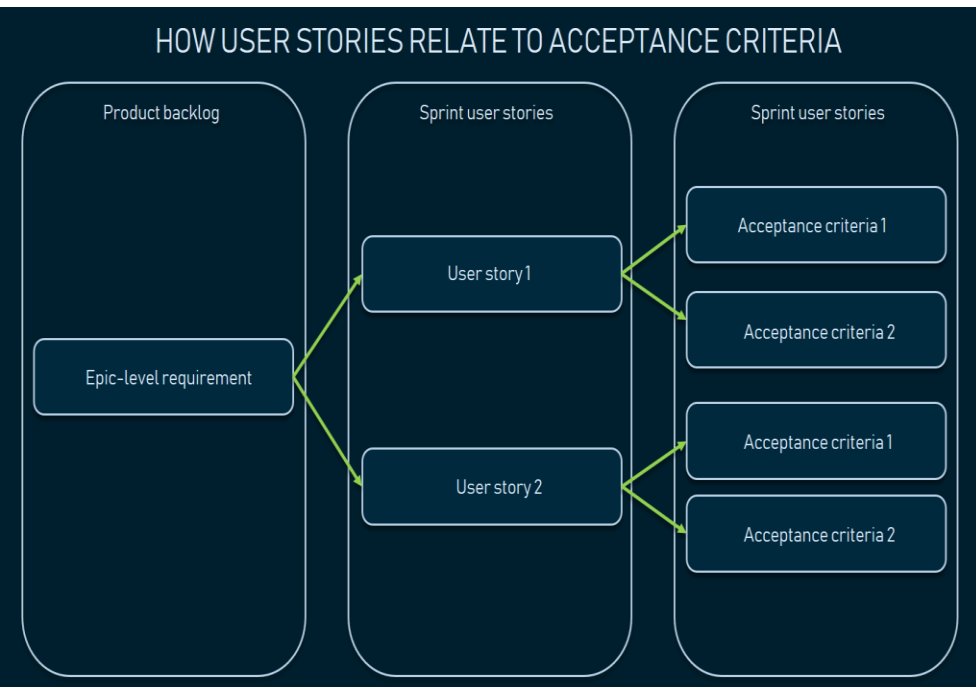| Scenario 2	Requesting the cash from an overdrawn account
Given	The account is overdrawn
And	The card is valid
When	The customer requests the cash
Then	Ensure the rejection message is displayed
And	Ensure cash isn't dispensed

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User Story and Acceptance Criteria

HOW USER STORIES RELATE TO ACCEPTANCE CRITERIA

Product backlog — Sprint user stories — Sprint user stories

Epic-level requirement → User story 1 → Acceptance criteria 1, Acceptance criteria 2

Epic-level requirement → User story 2 → Acceptance criteria 1, Acceptance criteria 2

User Story for Creating a New Account

User Story: As a **new fintech app user**, I want to **create a new bank account** using the fintech mobile app, so that I can **automate my financial transactions.**

Acceptance Criteria:
- The user can open the app.
- The user is prompted a list of list of personal information questions.
- The user can submit further requirements for validation, such as government-issued IDs.
- The user receives a confirmation via email or SMS of their application.
- User can start using the app's banking features and start transacting.

Task: Acceptance Criteria

Task:

1. Write a user story for a user who wants to search to find matching hotel option in a hotel web page

2. Acceptance Criteria

Result:

User story: *As a user, I want to use a search field to type a city, name, or street, so that I could find matching hotel options.*

Basic search interface acceptance criteria
- The search field is placed on the top bar
- Search starts once the user clicks "Search"
- The field contains a placeholder with a grey-colored text: "Where are you going?"
- The placeholder disappears once the user starts typing
- Search is performed if a user types in a city, hotel name, street, or all combined
- Search is in English, French, German, and Ukrainian
- The user can't type more than 200 symbols

Task: User Story and Acceptance Criteria

- Create a user story that provides clear guidance for the development team to define and prioritize product backlog items for the "Add to Wishlist" feature in an e-commerce app.
- Add the acceptance criteria
  - **Tips**: Add Item to Wishlist, View Wishlist, Remove Item from Wishlist, Wishlist Persistence, Notification for Out-of-Stock Items, Duplicate Prevention

User Story

As an *online shopper*, I want to *add items to my wishlist* so that I can save them for *future purchases*

Acceptance Criteria

1.Add Item to Wishlist:
- When the user clicks the "Add to Wishlist" button on a product page, the item is added to their wishlist.
- A confirmation message appears on the screen, stating, "Item added to your wishlist."
- The "Add to Wishlist" button changes to "Remove from Wishlist" for the item after being added.

Task: User Story and Acceptance Criteria

Acceptance Criteria

2. **View Wishlist**:
- The user can access their wishlist from the main menu or their account page.
- The wishlist displays a list of all saved items with product images, names, prices, and availability status.

3. **Remove Item from Wishlist**:
- When the user clicks "Remove from Wishlist" on an item in their wishlist, the item is removed.
- A confirmation message appears, stating, "Item removed from your wishlist."
- The "Remove from Wishlist" button reverts to "Add to Wishlist" for the removed item.

4. **Wishlist Persistence**:
- Items added to the wishlist remain saved to the user's account even after logging out and logging back in.
- Items in the wishlist are synchronized across devices when the user logs in with the same account.

Task: User Story and Acceptance Criteria

Acceptance Criteria

4. Notification for Out-of-Stock Items:
- If an item in the wishlist goes out of stock, a notification is displayed next to the item, stating, "Currently out of stock."
- The item remains in the wishlist, but the "Add to Cart" option is disabled for out-of-stock items.

5. Duplicate Prevention:
- If an item already exists in the wishlist, the "Add to Wishlist" button is disabled, and a message appears, stating, "This item is already in your wishlist."

Agile Development

Agile Development
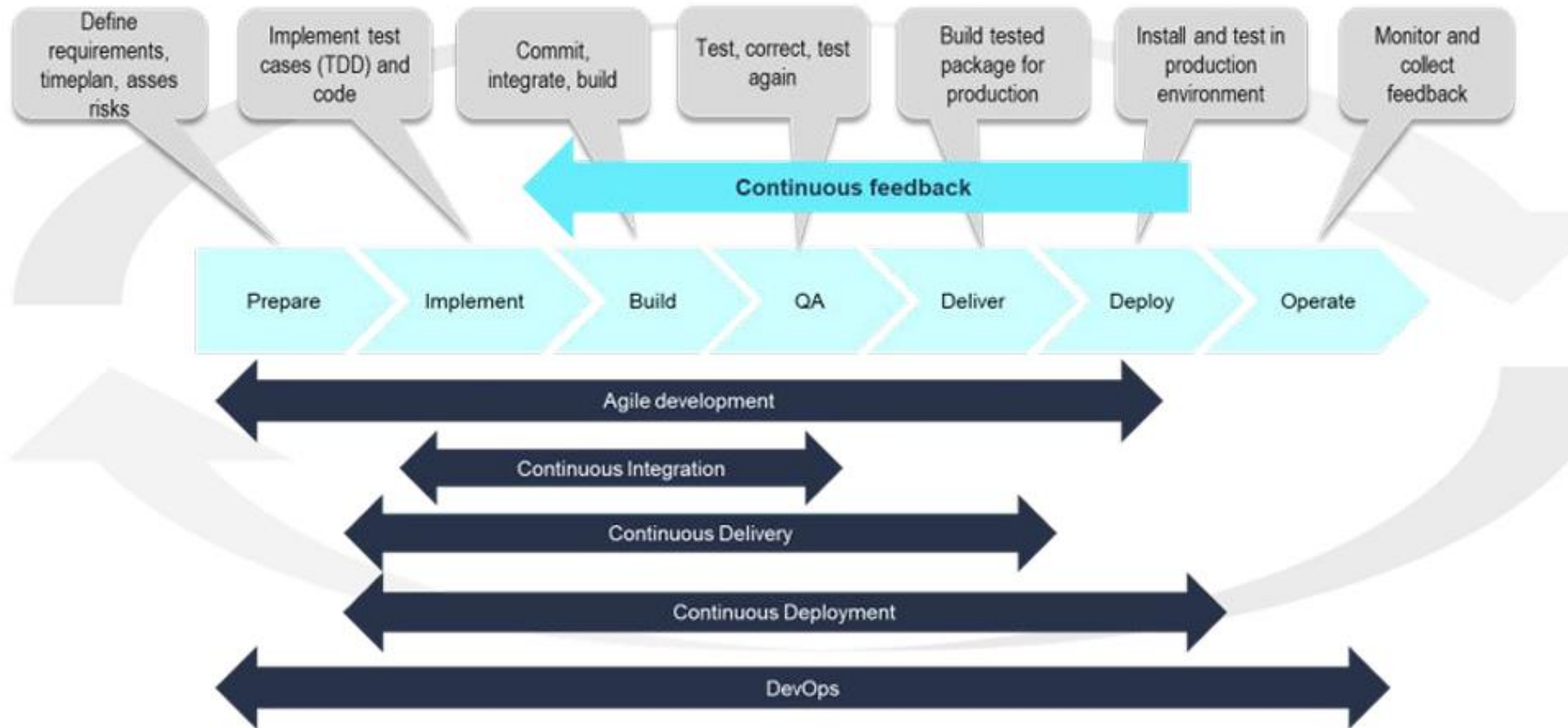
What is Scrum?

Scrum

- Scrum is one of the most famous agile methodologies characterized by cycles or stages of development called sprints.

- Scrum is a framework used by people to address complex adaptive problems

Scrum Framework © 2020 Scrum.org

Scrum Roles, Artifacts and Events

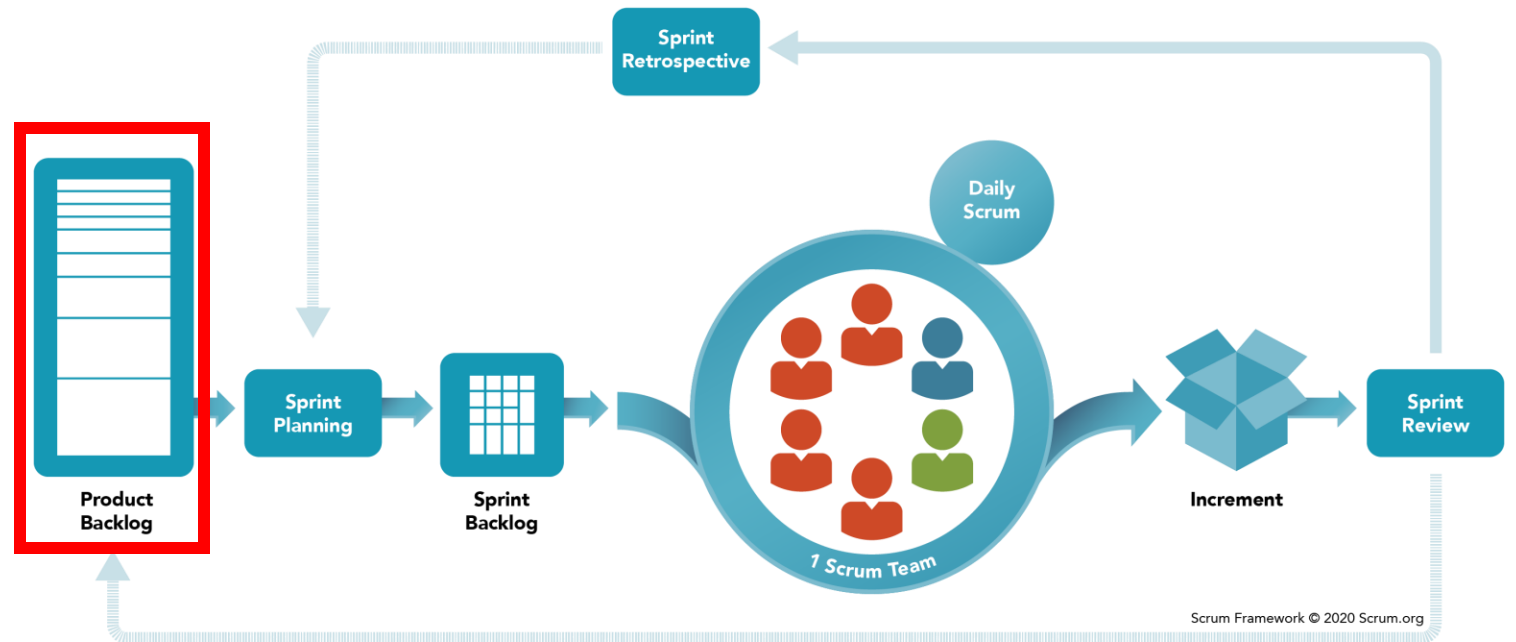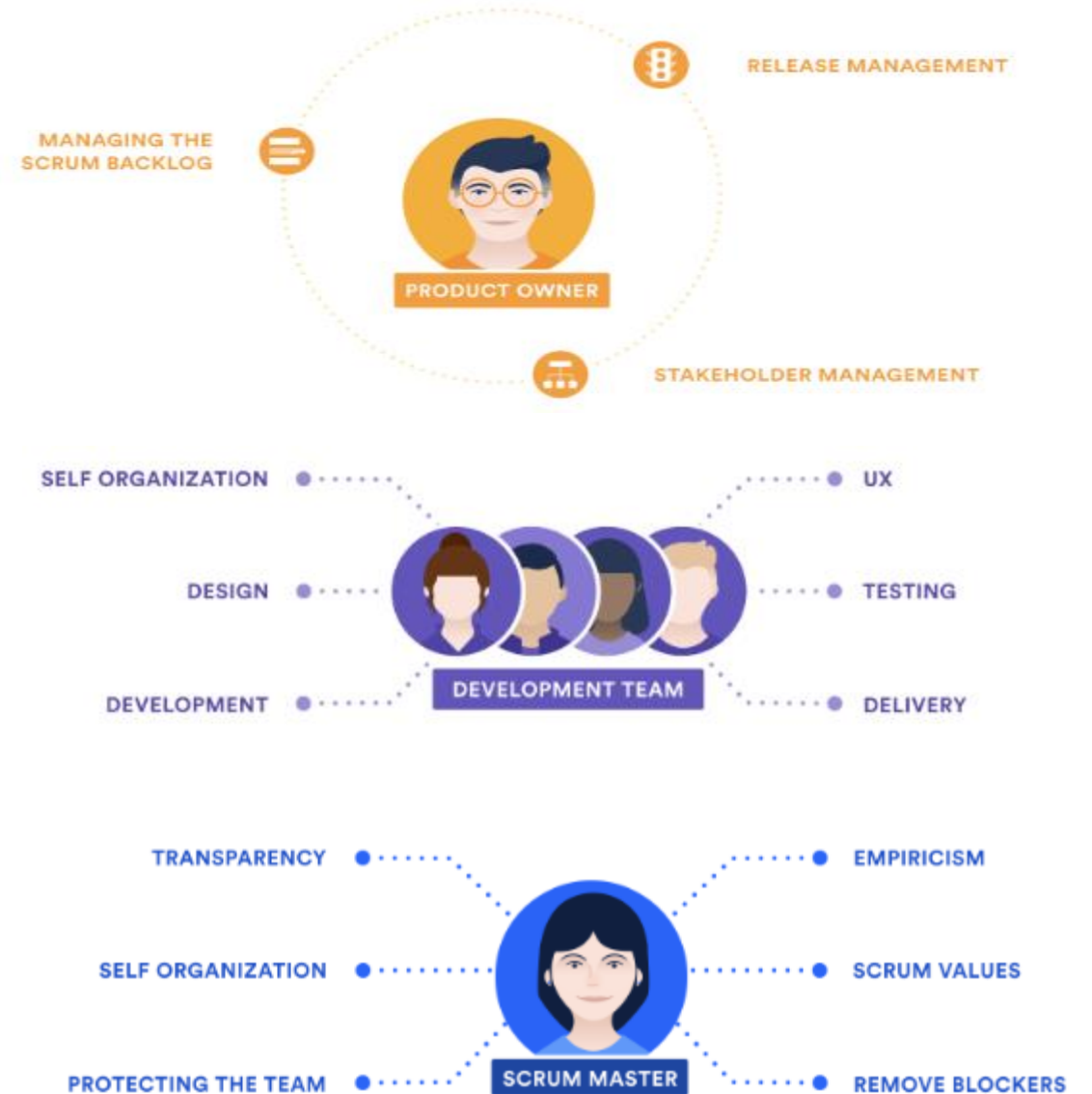| ROLES	ARTIFACTS	EVENTS
Scrum Team Consists of one Scrum Master, one Product Owner, and Developers **Product Owner** Set Priorities Manage Product Backlog **Scrum Master** Teach Scrum Manage Process Protect Team Enforce Rules Remove Blocks **Developers** Develop Product Organize Work Update Progress	**Product Backlog** List of requirements Owned by the Product Owner Ordered by business value, dependency, risk Can change without affecting the active Sprint Commitment: Product Goal **Sprint Backlog** Decomposed task list Driven by a portion of Product Backlog Planned by and for the Developers Commitment: Sprint Goal **Increment** Version of the Product Potentially shippable Working functionality Commitment: DoD	**Sprint** Time-boxed to one month or less Potentially releasable product Increment is created **Sprint Planning** Time-boxed to max 8 hours for 1 month Sprint Team select what and how will de DONE in Sprint Sprint Goal **Daily Scrum** Time boxed 15 min / same time / place every day Check progress against Sprint Goal **Sprint Review** Time-boxed max 4 hours for 1 month Sprint Informal meeting with team and stakeholders Team present what is DONE and what is not **Retrospective** Time-boxed to max 3 hour for 1 month Sprint Team inspects itself and create a plan for improvements

Scrum Roles

Product Owner	Team	Scrum Master
✓ User Stories	✓ Perform the 'Work'	✓ Facilitate Meetings
✓ Acceptance Critria	✓ Adapt to Change	✓ Coach the team
✓ Product Vision	✓ Decompose Stories	✓ Impediments
✓ Prioritization	✓ Size Stories	✓ Provide Feedback
✓ Stakeholders	✓ Shippable Features	✓ Help write stories

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PRODUCT OWNER
RELEASE MANAGEMENT
MANAGING THE SCRUM BACKLOG
STAKEHOLDER MANAGEMENT

SELF ORGANIZATION
UX
DESIGN
TESTING
DEVELOPMENT
DEVELOPMENT TEAM
DELIVERY

TRANSPARENCY
EMPIRICISM
SELF ORGANIZATION
SCRUM VALUES
PROTECTING THE TEAM
SCRUM MASTER
REMOVE BLOCKERS

Scrum Product Backlog - MVP Product Backlog for Netflix

Product Backlog Item (PBI)	Description	Priority
User Registration & Login	Enable users to securely create accounts and log in.	High
User Profiles	Allow multiple profiles within a single account, supporting personalized experiences.	High
Search & Browse Content	Provide content search and browsing by category; include recommendations.	High
Play Video Content	Support streaming of video content across devices.	High
Content Details Page	Show detailed descriptions, trailers, and related content for each title.	Medium
Watchlist	Enable users to create a personalized watchlist.	Medium
Playback Controls	Implement basic playback controls (pause, play, rewind, etc.).	Medium
Basic Recommendations	Offer content recommendations based on user viewing history.	Medium
Content Licensing & DRM	Ensure DRM protections are in place for licensed content.	High

Sprint Backlog - Netflix

Sprint Backlog Item	Description	Estimated Time
User Registration UI	Develop the front-end forms for user registration and login.	2 days
Backend Authentication	Set up secure backend authentication for login and registration.	3 days
User Profile Setup	Implement functionality for profile creation and management.	3 days
Content Search	Build the search functionality with basic filters.	4 days
Basic Video Playback	Develop video playback capabilities with essential controls.	5 days

How can you redesign scrum product backlog with consideration of sustainability ?