

Scrum is Iterative and Incremental

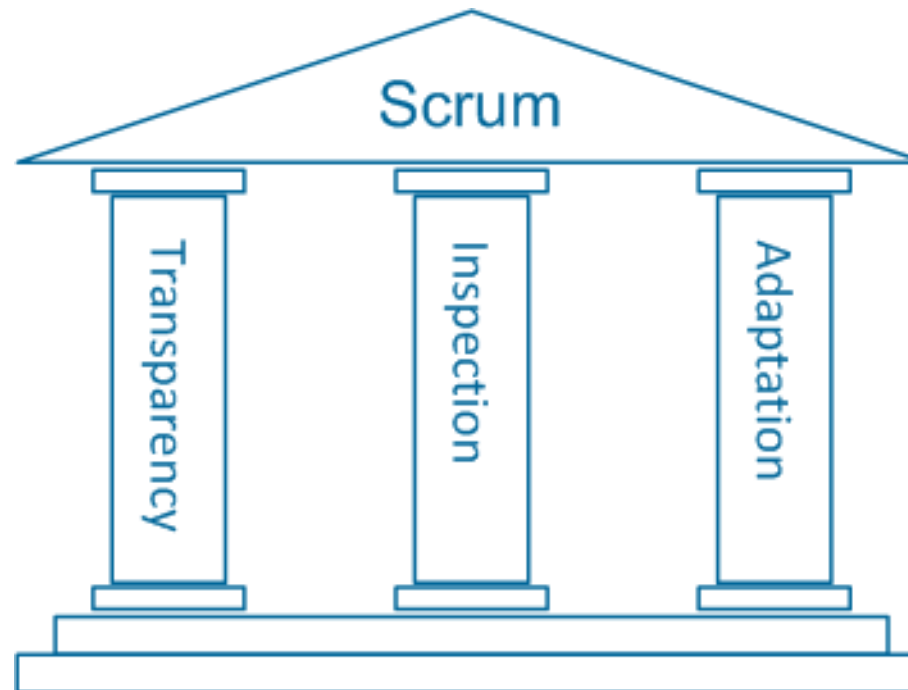
Scrum is an **iterative** and **incremental** approach to develop high quality products.

Scrum is:

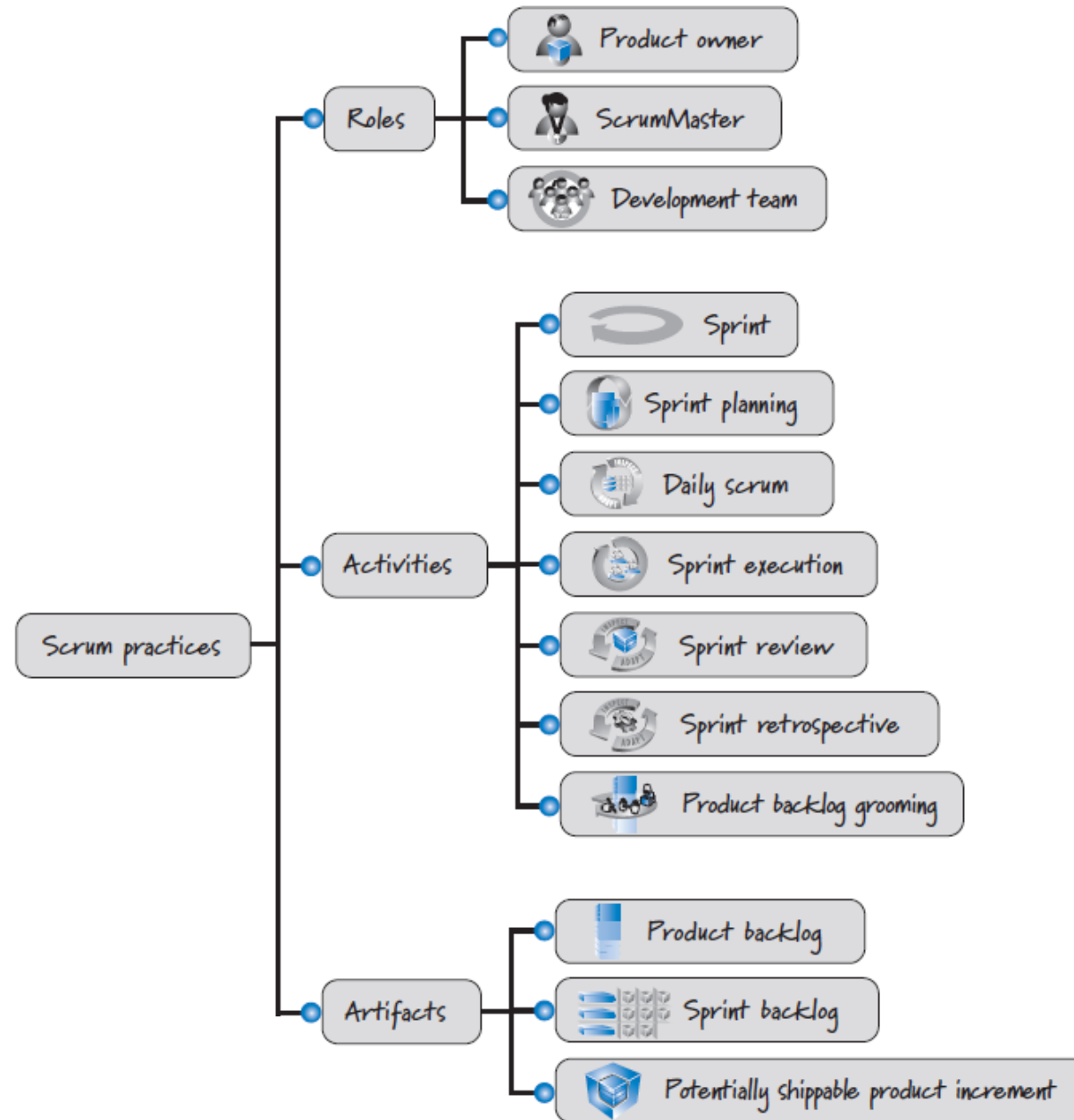
- Lightweight
- Simple to understand
- Difficult to master

The three pillars of Scrum are:

- transparency
- inspection, and
- adaptation



Scrum Practices



The Product Owner



Voice of the customer

Owns value

Gathers feedback

Makes decisions

181 details

The Scrum Master



**SCRUM
MASTER**

Scrum Master helps the Scrum team to follow the process.

Helps Product Owner to understand & create the Product.

188 details

Development Team

The Development Team

Responsible for delivering a potentially shippable increment of working software.

- Self-organized
- Cross functional
- Developer as title
- Defines practices
- 4 to 9 persons



192 details

Sprint Planning Meeting





Daily Scrum or Stand up

3 important questions

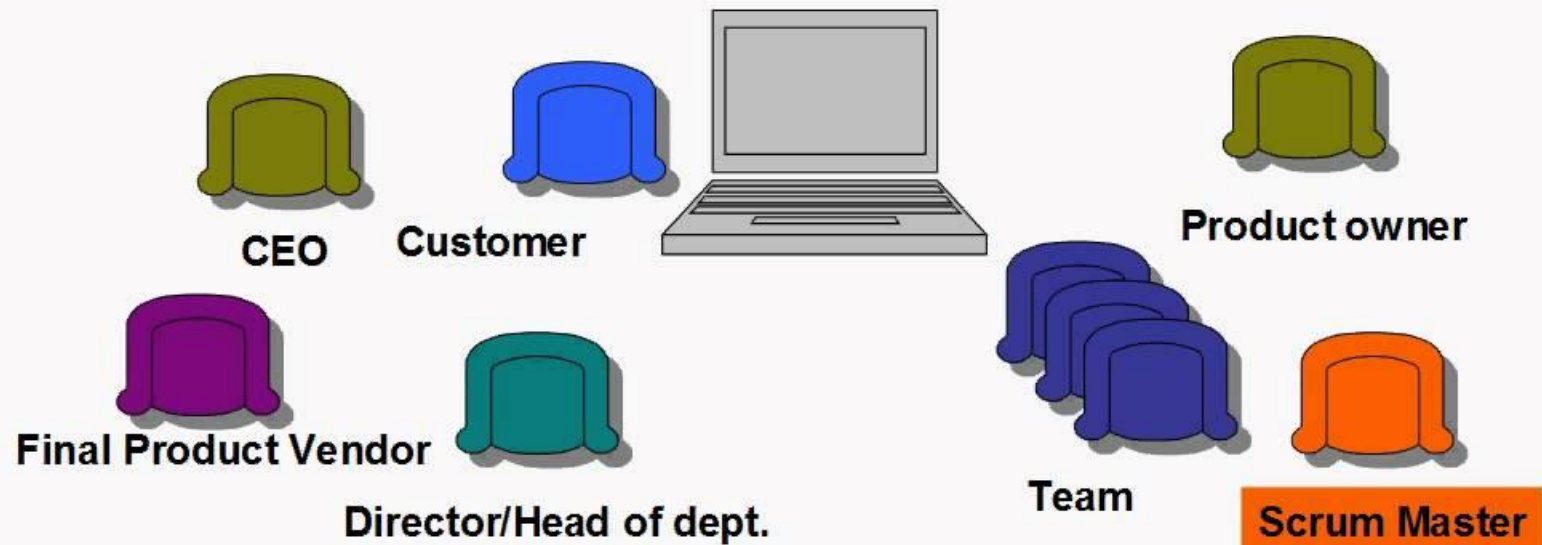
What work did you complete yesterday? **1**

What have you planned for today? **2**

Are you facing any problems or issues? **3**

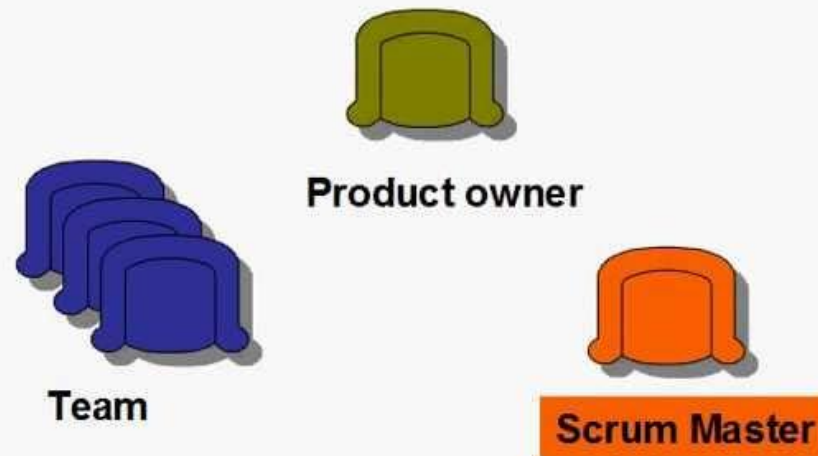
Sprint Review

- Demo of the sprint's functionality
- Stakeholders present
- Product owner and Stakeholders discuss backlog
- Stakeholders ask questions

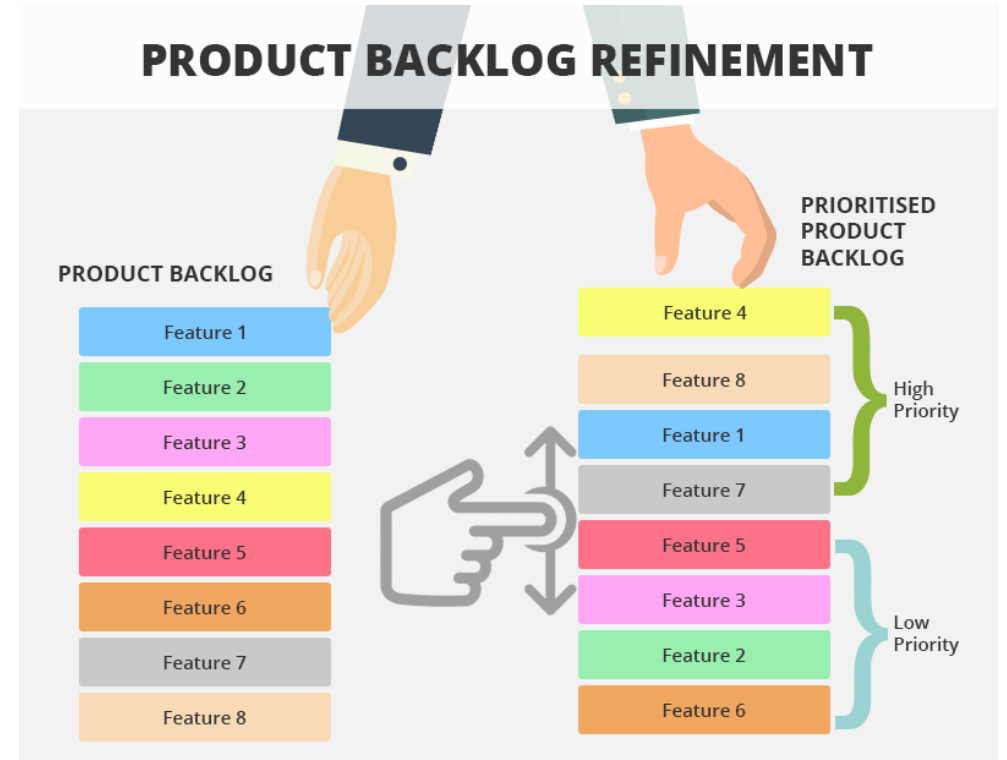
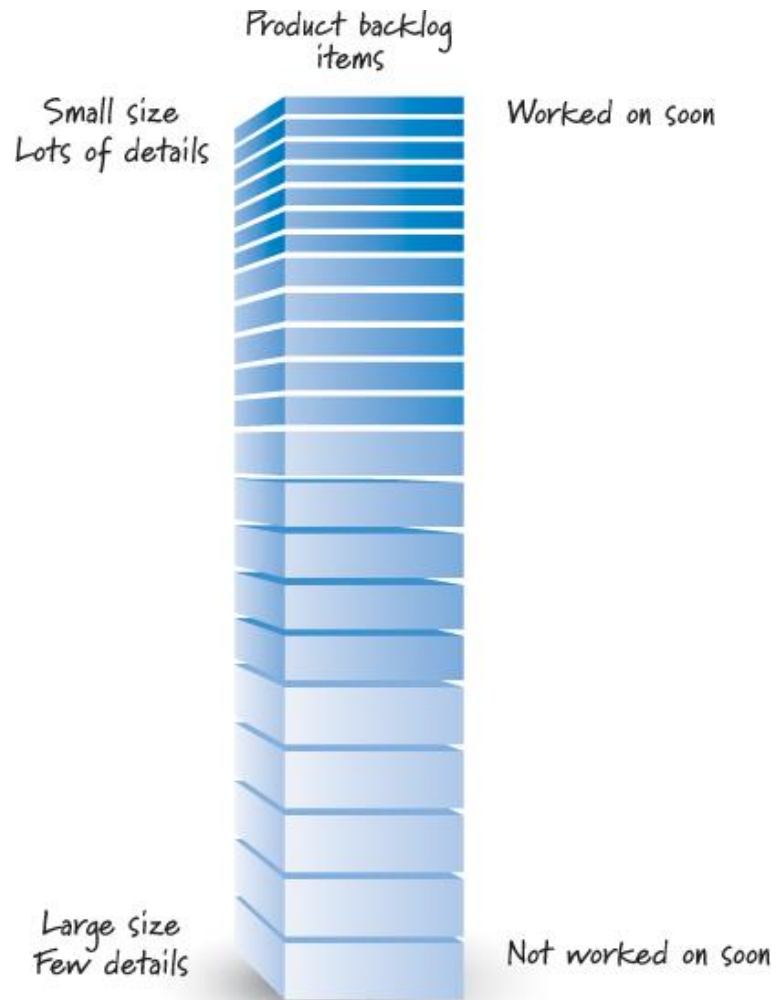


Sprint Retrospective

- What went well this sprint?
- What could we improve next sprint?
- Dev Environment, working practices, communication



Product Backlog



User Stories

The Three C's of a User Story

Card

- The story itself
- A promise to have a conversation at the appropriate time

Conversation

- The requirements themselves communicated from the Product Owner to the Delivery Team via a conversation
- Write down what is agreed upon

Confirmation

- The Acceptance Criteria for the story
- How the Delivery Team will know they have completed the story

Independent

Negotiable

Valuable

Estimable

Small (Sized appropriately)

Testable

Three Cs: User Story is pointer to the requirement



1. Card

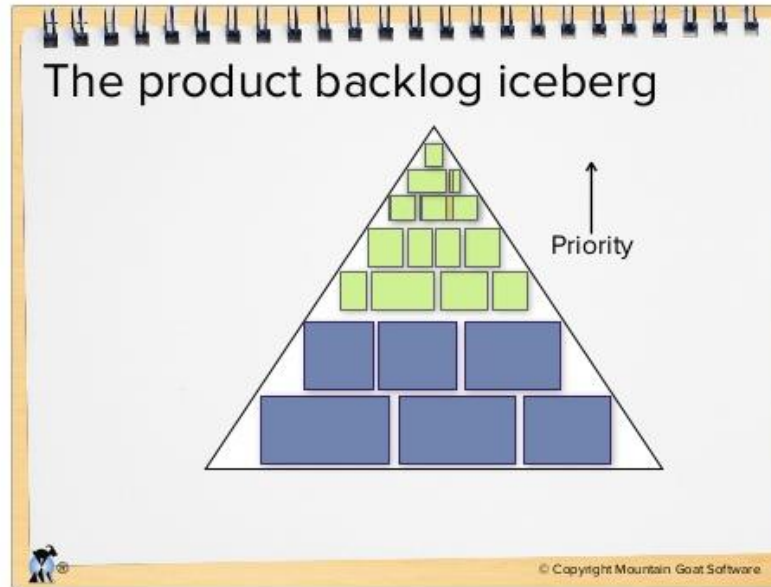
Stories are traditionally written on note cards

2. Conversation

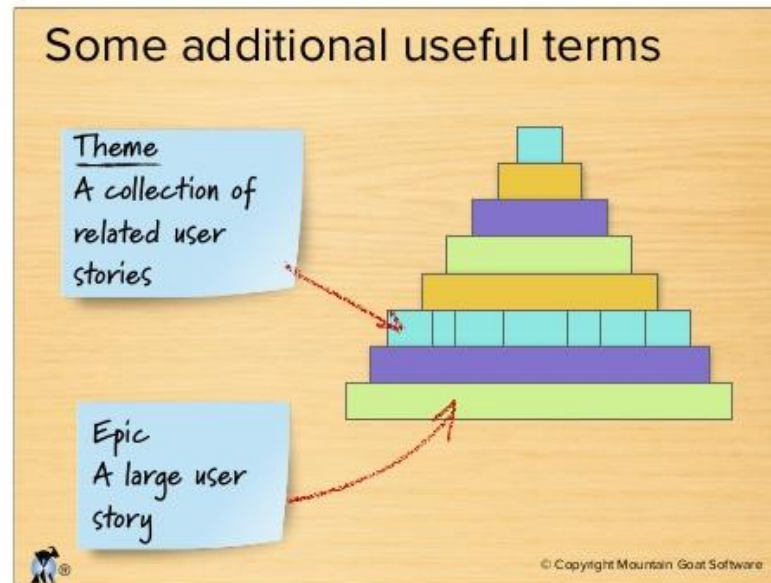
Details behind the story come out during conversations with Product Owner

3. Confirmation

Acceptance tests confirm that story was done correctly



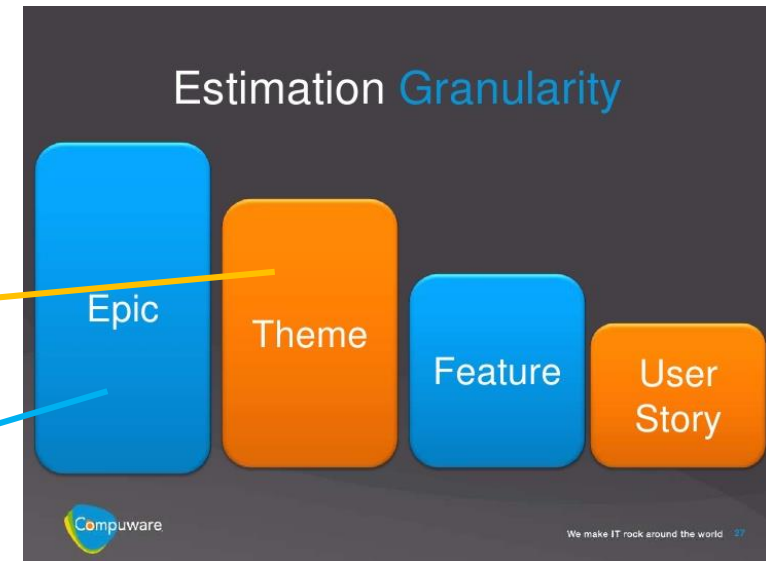
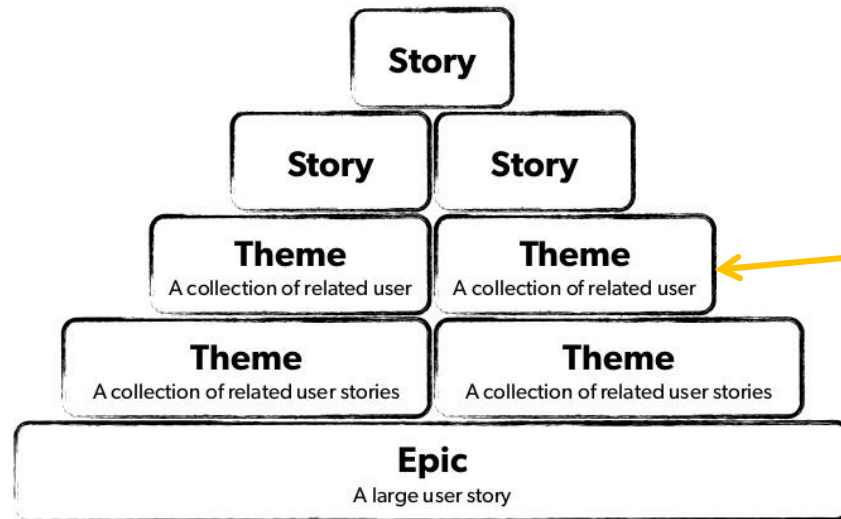
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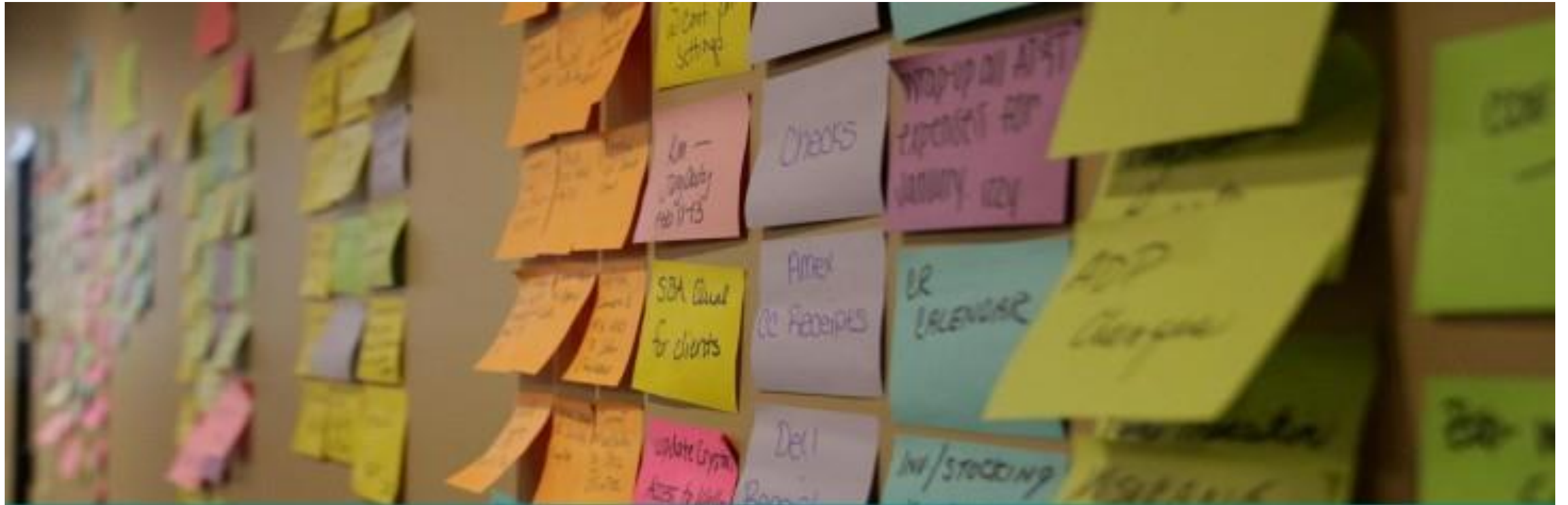


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Epics, Themes, User-Stories

TYPES OF USER STORIES

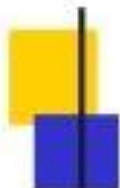




User Story Workshop



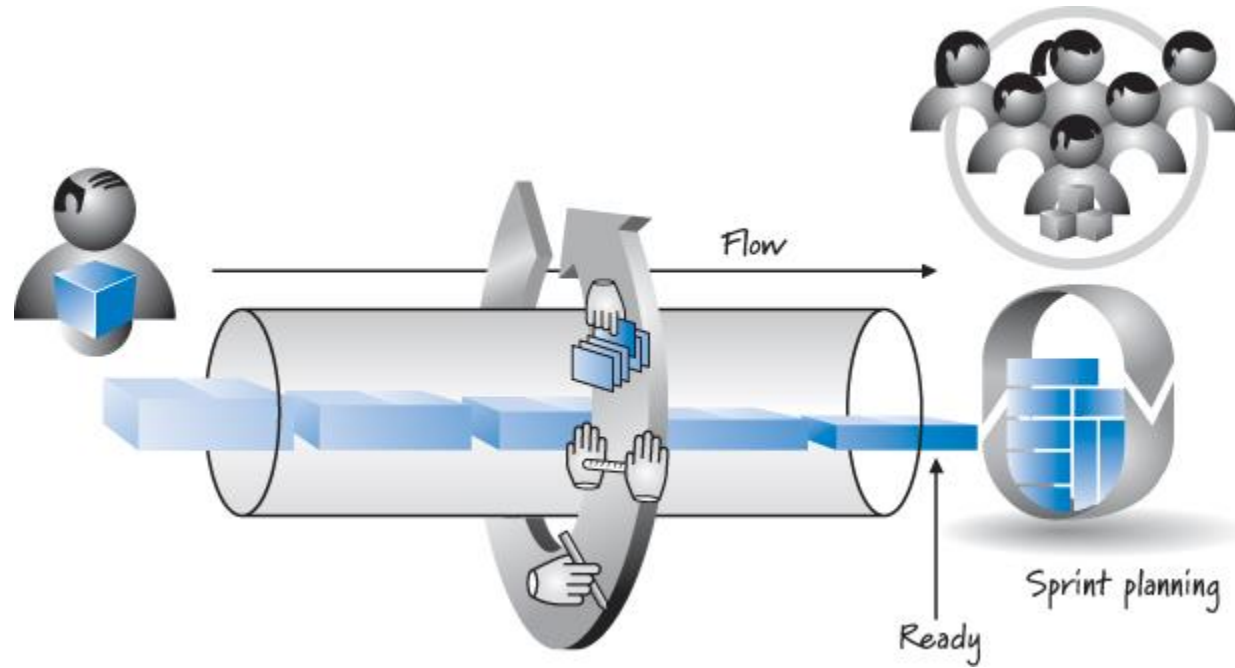




User Story Mapping 範例



Sprint Flow Management



Different Prioritization Methods

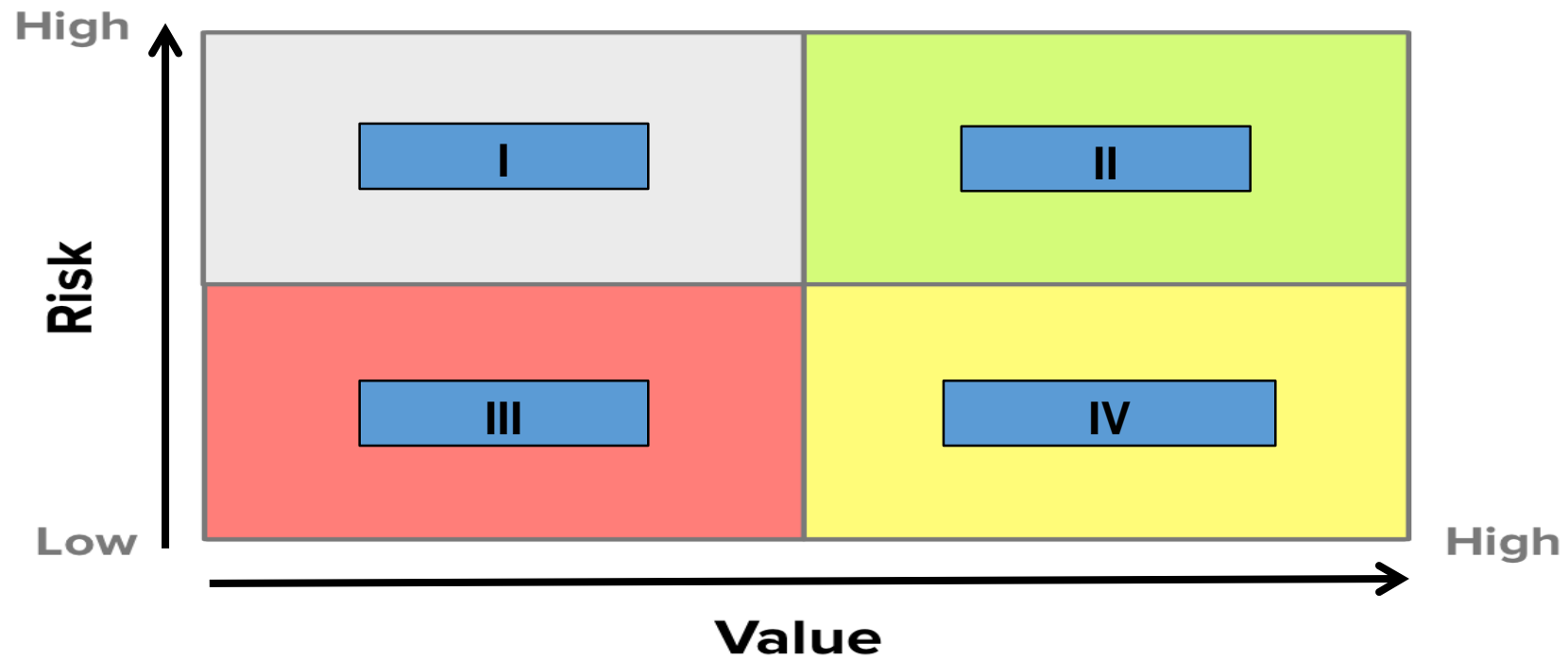
1. MoSCoW prioritization
2. Value based prioritization
3. Kano model of prioritization
4. Karl Wiegers relative weighting prioritization



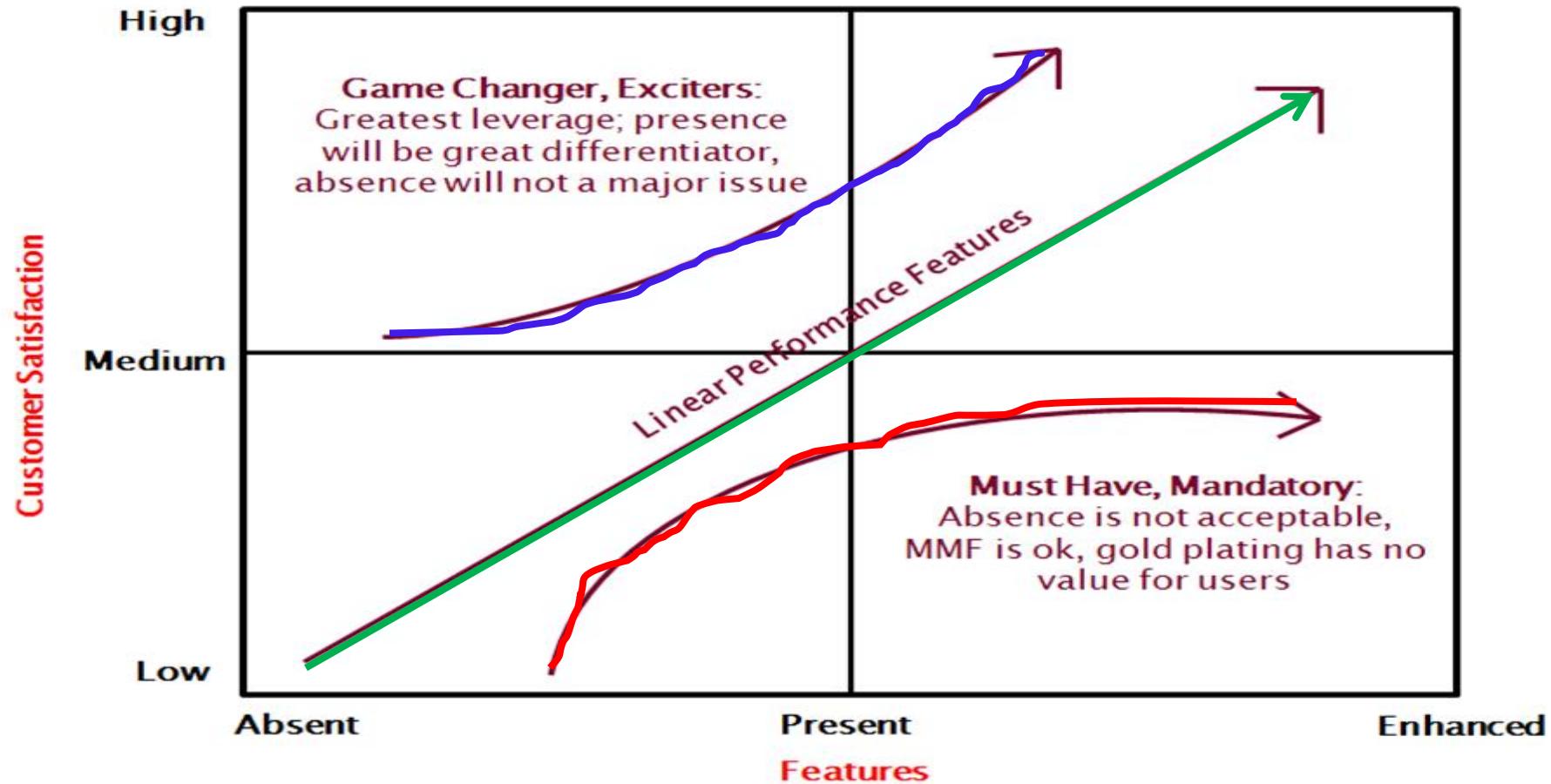
1. MoSCoW Prioritization



2. Value Based Prioritization



3. Kano Model of Prioritization



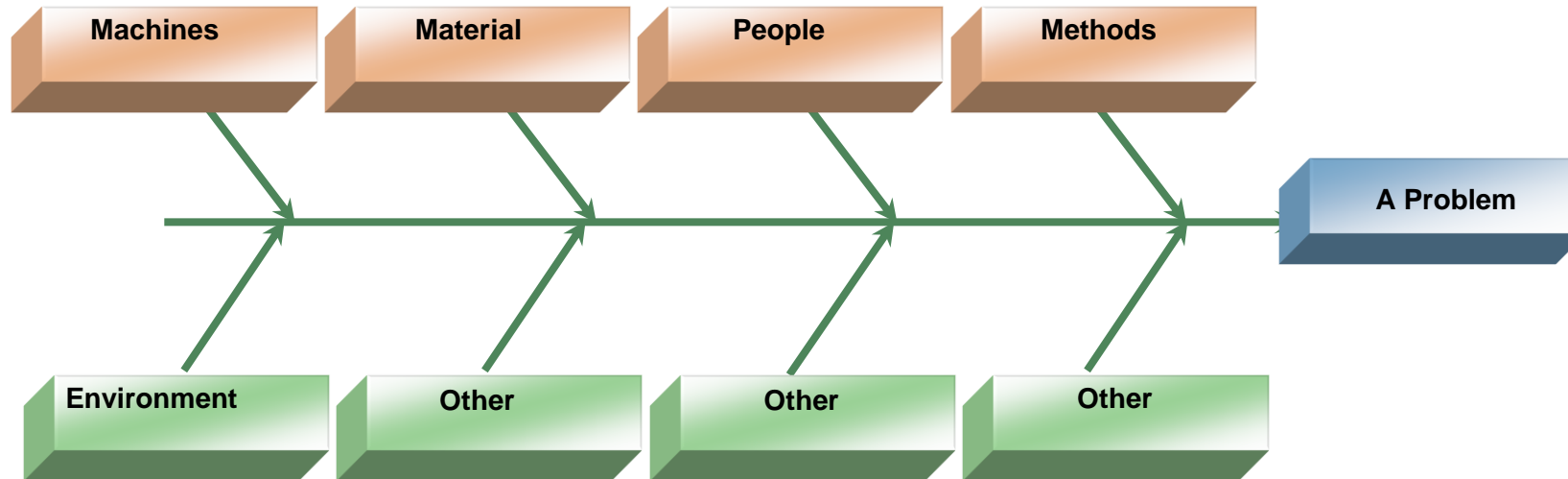
4. Karl Weigers Relative Weighting Prioritization

A	B	C	D	E	F	G	H
Feature	Total Value	% Total Value	Total Effort	% Total Effort	Total Return on Investment (TROI) = <div>$\frac{\% \text{ Total Value}}{\% \text{ Total Effort}}$</div>	% TROI	Rank Order
F1	190	10.61%	3	21.43%	0.50	8.66%	5
F2	111	6.20%	1	7.14%	0.87	15.18%	3
F3	390	21.78%	3	21.43%	1.02	17.78%	2
F4	690	38.53%	2	14.29%	2.70	47.17%	1
F5	410	22.89%	5	35.71%	0.64	11.21%	4
Total	1,791	100.00%	14	100.00%	5.72	100.00%	

Planning Poker

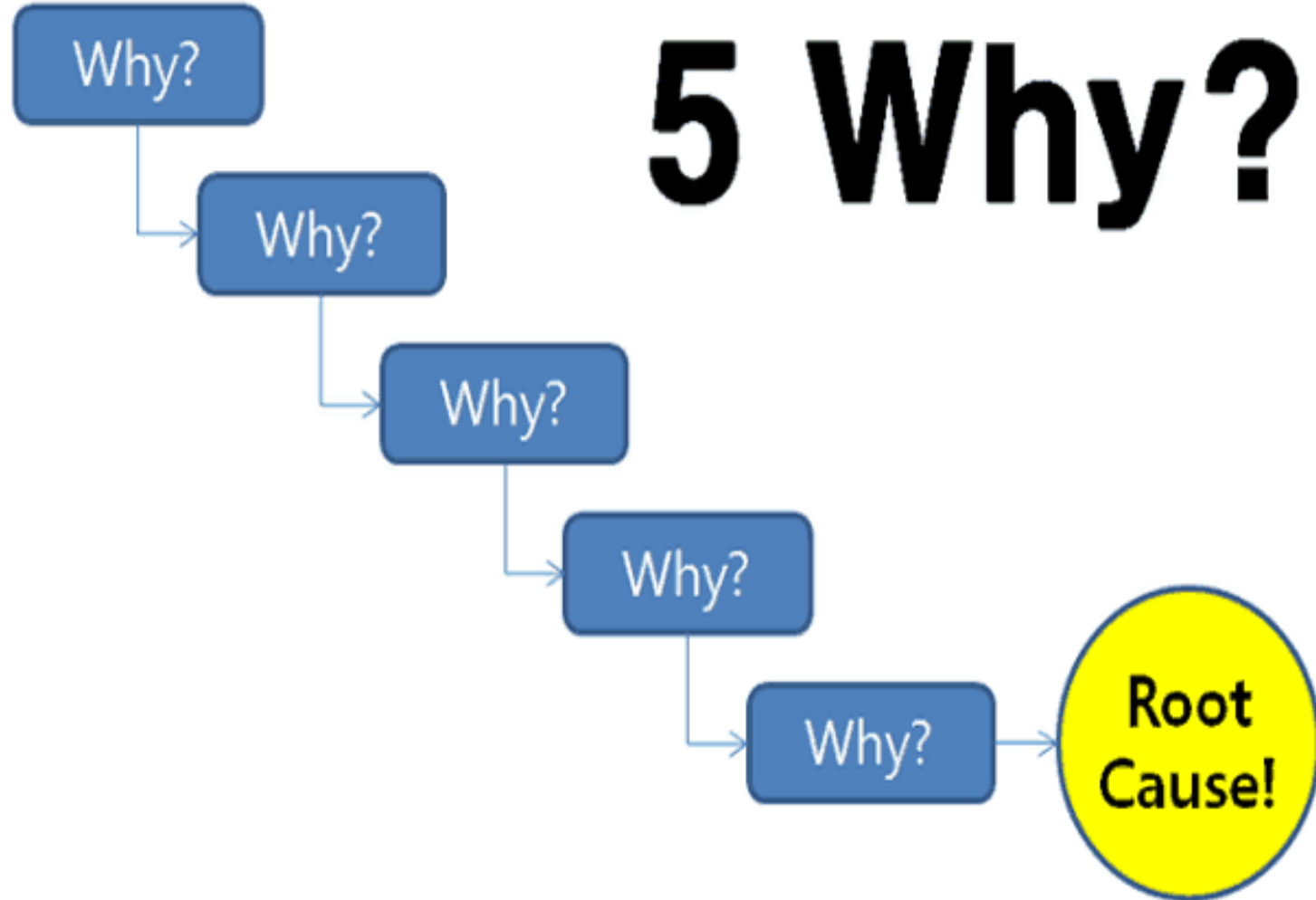


❑ Cause and Effect Diagram



Ishikawa or cause-and-effect or Fishbone diagram

5 Why?



Velocity Numericals

1. In a project, all of the user stories are estimated and the sum of those estimates is 100 story points. Based on past experience, it is known that the team velocity is 9 story points per two-week iteration. How many iterations does the project need to complete the user stories?

- A. 9
- B. 11
- C. 1
- D. 90

Correct Option: B

$$\text{Iterations} = 100/9 = 11.1$$

2. Assuming one-week iterations and a team of four developers, how many iterations will it take for the team to complete a project with 27 story points if they have a velocity of 4?

- A. 4
- B. 6
- C. 7
- D. 24

Correct Option: C

Number of Iterations = $27/4 = 6.75 \sim 7$

3. The red team finished 38 story points in their last two-week iteration. The blue team has half as many developers on a different project and completed 38 story points in their last two-week iteration. What can be determined from this information?

- A. The story points of one team are not comparable to the story points of any other team
- B. Team A is twice as productive as Team B
- C. Team A should have more people in the team
- D. Team B has the management support

Correct Option: A

The story points of one team are not comparable to the story points of any other team.

Product Owner



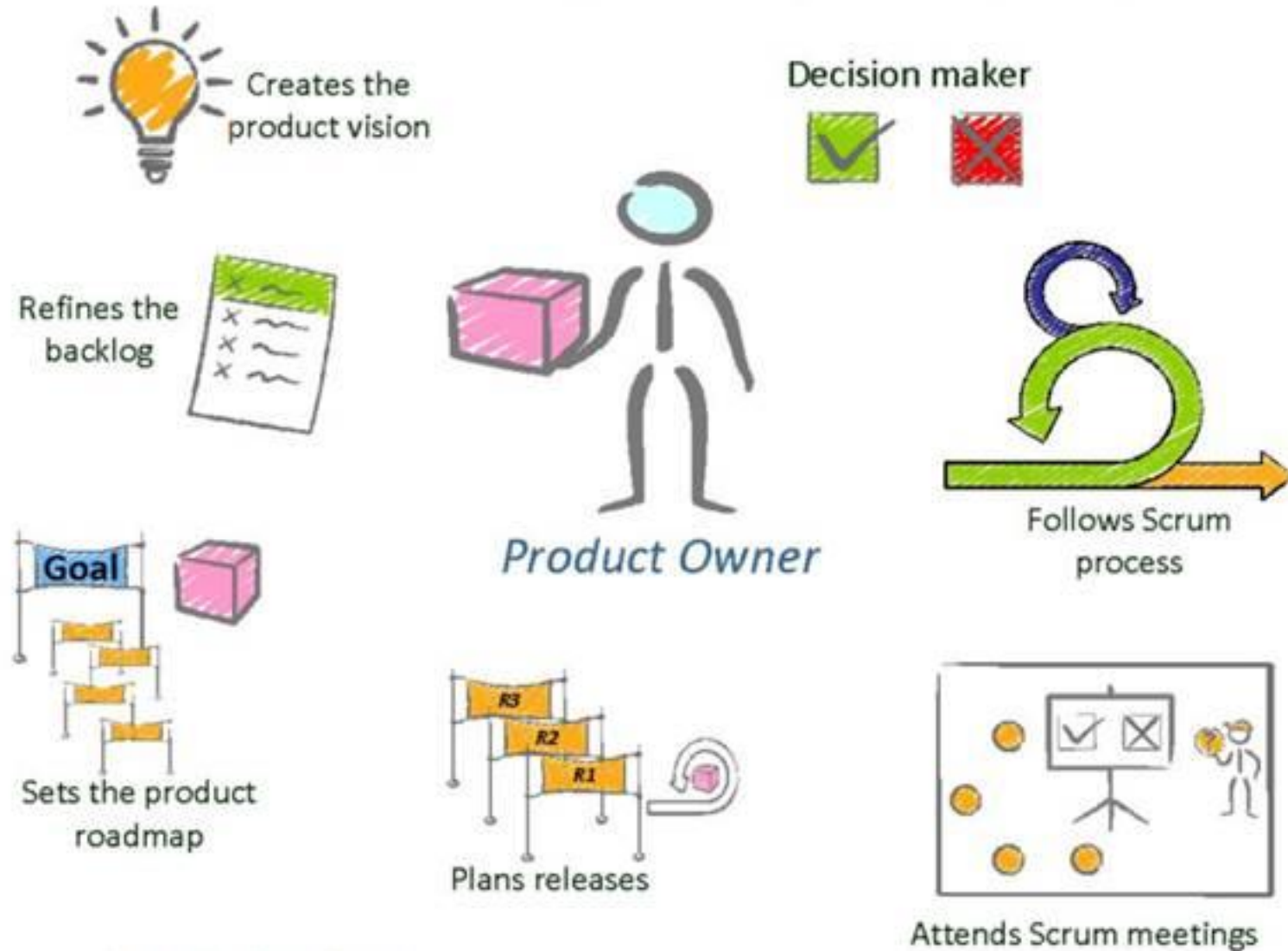
Voice of the customer

Owns value

Gathers feedback

Makes decisions

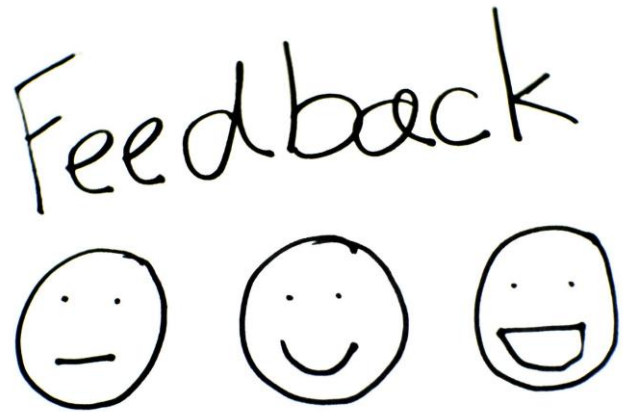
Product Owner: Sole person responsible for the product



Scrum - Product Owner



Gathers Feedback



Makes Decisions



Owns Value



Scrum Master



Owens the process

Protects team

Not the boss

Facilitator

The Scrum Master



**SCRUM
MASTER**

Scrum Master helps the Scrum team to follow the process.

Helps Product Owner to understand & create the Product.

TRADITIONAL LEADERS



Sees leadership as a rank to obtain.

Uses power & control to drive performance.

Measures success through output.

Speaks.

Believes its about them.

SERVANT LEADERS

Sees leadership as an opportunity to serve others.

Shares power & control to drive engagement.

Measures success through growth & development.

Listens.

Understands its not about them.



The Development Team

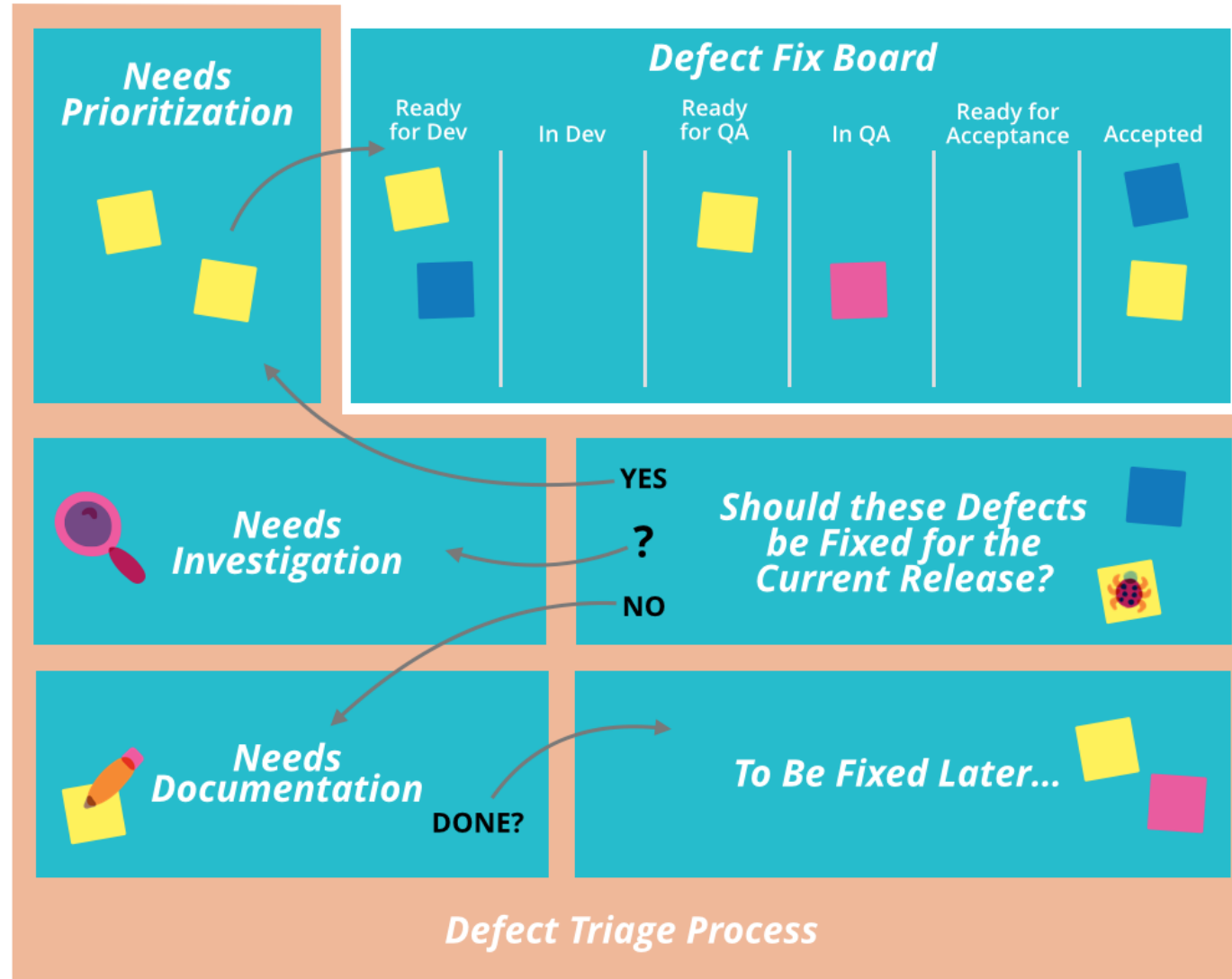
The Development Team

Responsible for delivering a potentially shippable increment of working software.

- Self-organized
- Cross functional
- Developer as title
- Defines practices
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Transparent Communication





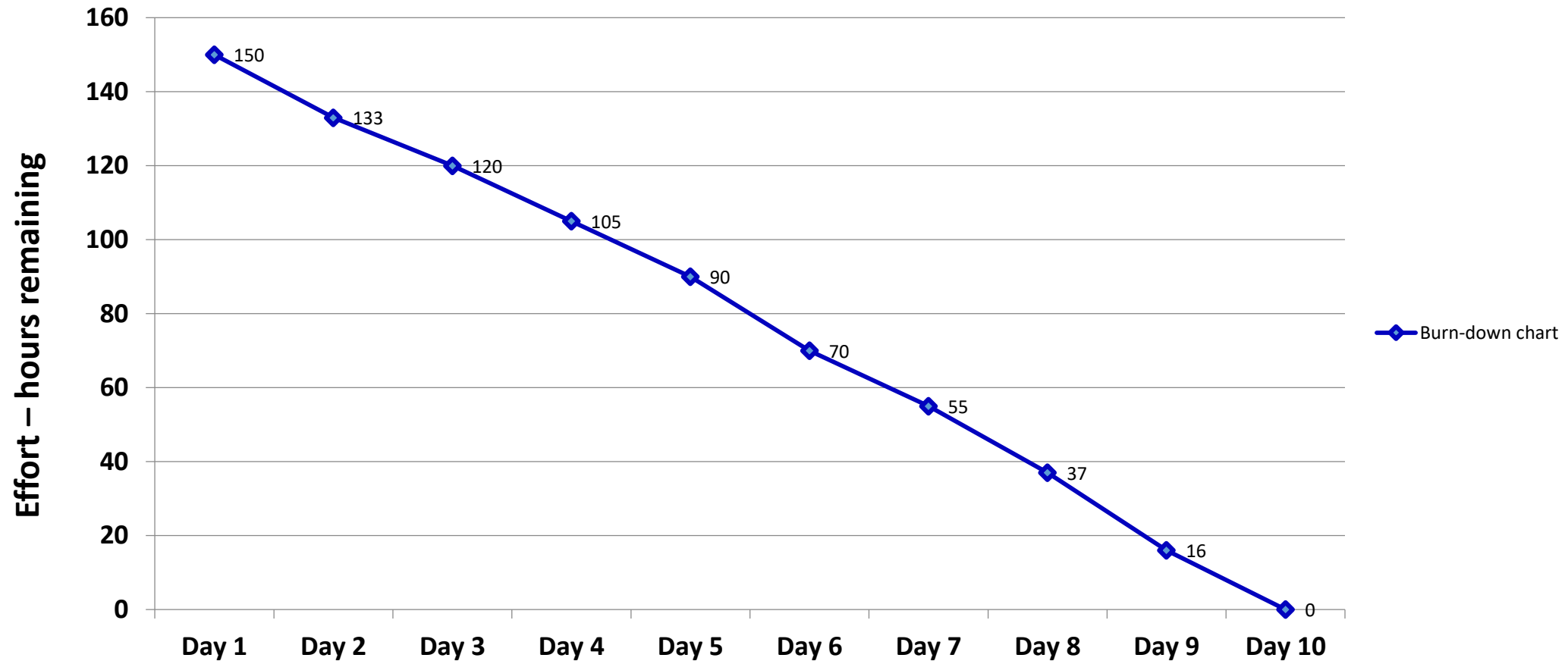
Sustainable Pace

**Great job! Another
successful
iteration.**

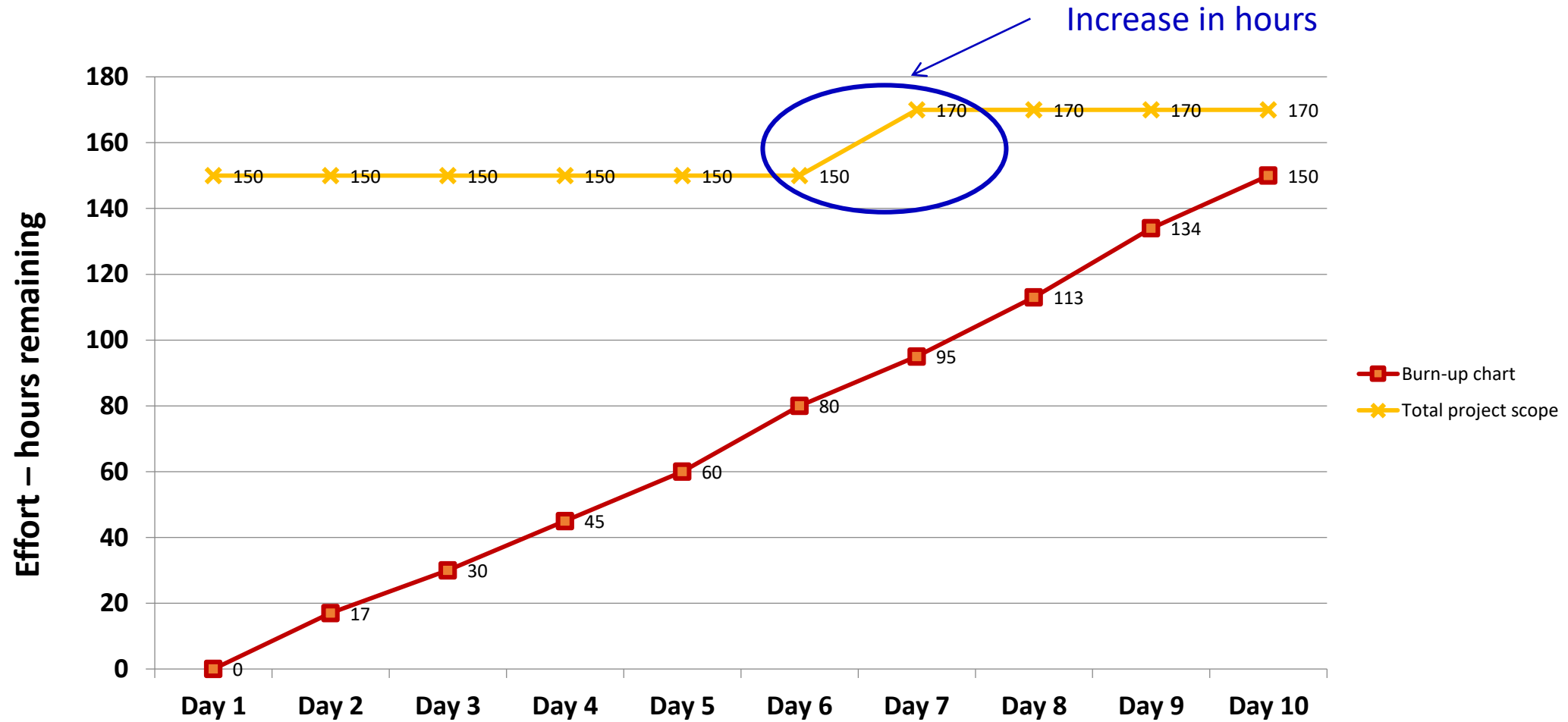




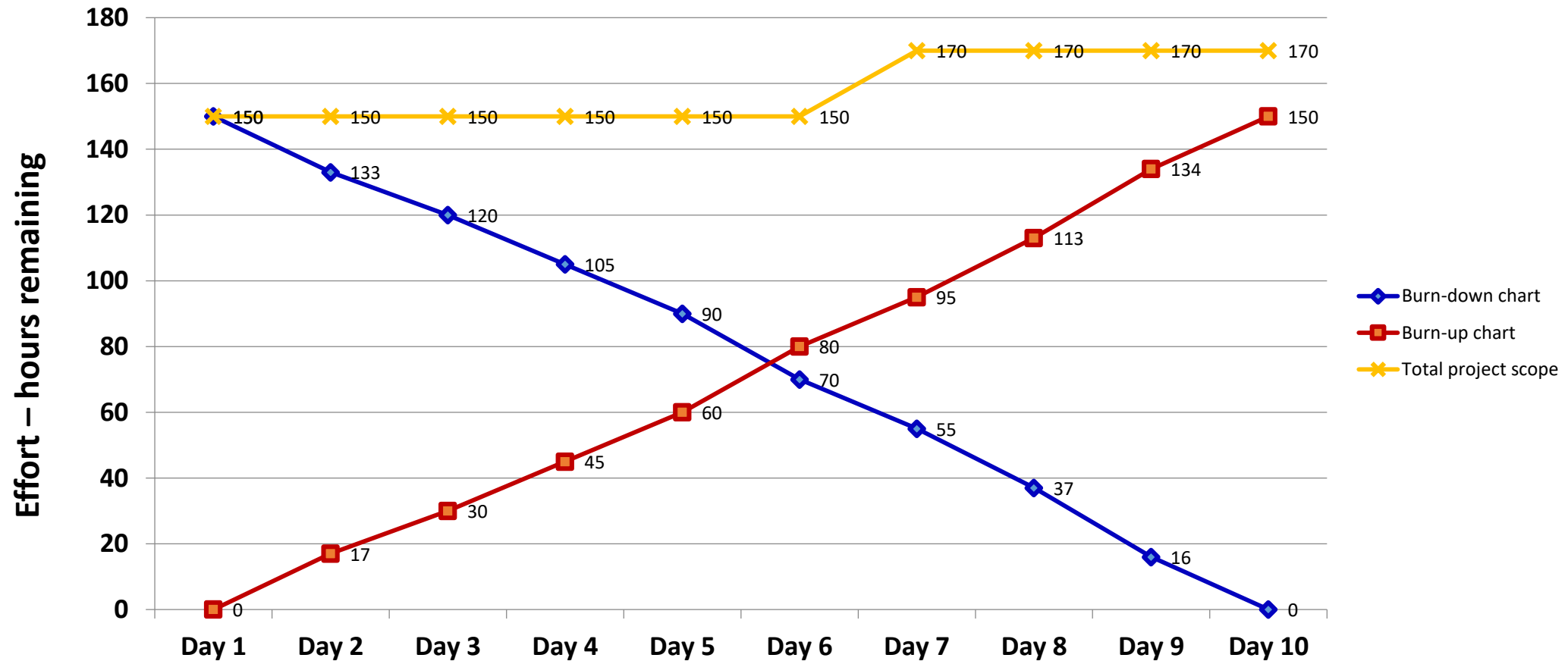
Sprint Burn-down Chart



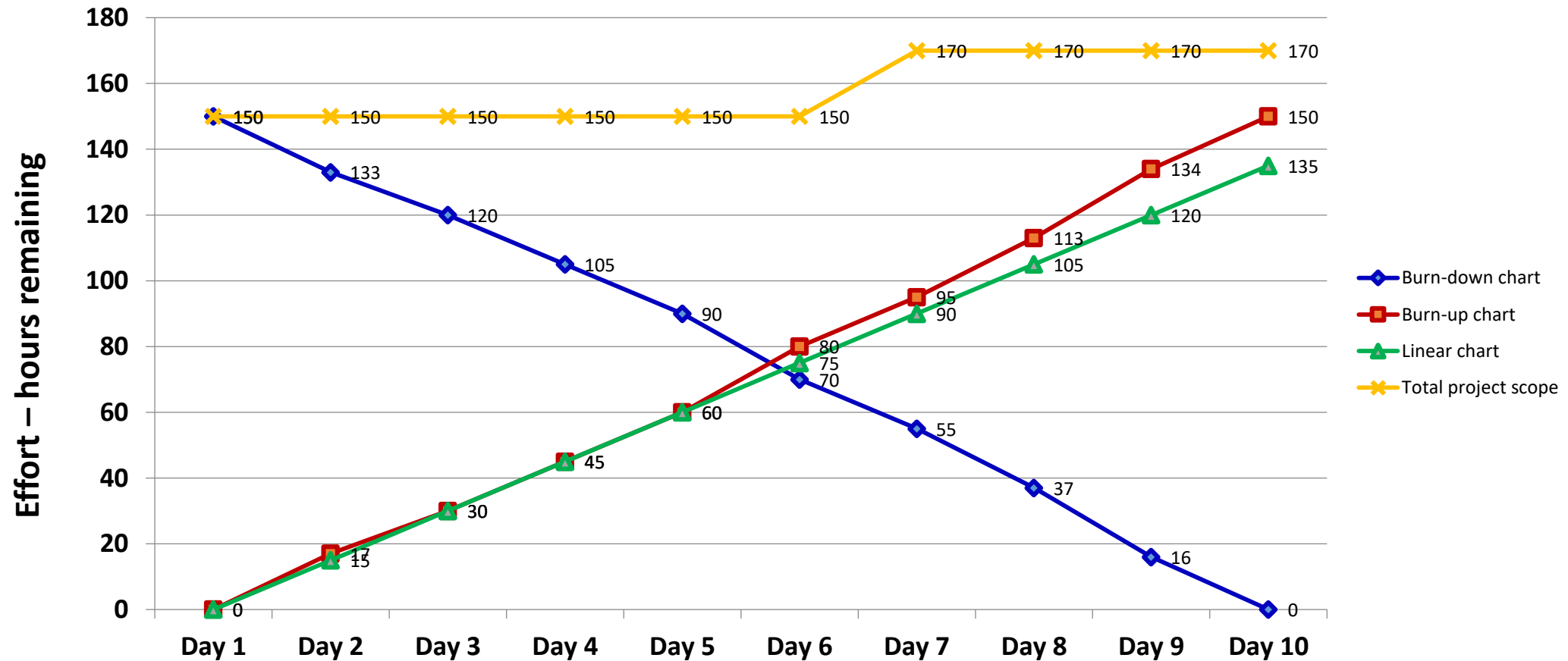
Sprint Burnup Chart



Combined Burn-down/Burn-up Chart



Combined Burn-down/Burn-up Chart



Agile Workspace













Practice Questions



Question

Which statement best describes a Product Owner's responsibility?

- A. Optimizing the value of the work the Development Team does.
- B. Directing the Development Team.
- C. Managing the project and ensuring that the work meets the commitments to the stakeholders.
- D. Keeping stakeholders at bay.

Answer – A

The Product Owner is responsible for maximizing the value of the product and the work of the Development Team.

Question.

Which of the following is a characteristic of a good scrum team?

- A. Self organizing
- B. Do not ask too many questions.
- C. All team members follow the Scrum Master's direction.
- D. Each team member can perform all tasks.

Answer: A

Question

Who has the final say on the order of the Product Backlog?

- A. The Stakeholders
- B. The Development Team
- C. The Scrum Master
- D. The Product Owner

Answer – D

The Product Owner is the sole person responsible for managing the Product Backlog.

Question

The CEO asks the Development Team to add a "very important" item to a Sprint that is in progress. What should the Development Team do?

- A. Add the item to the current Sprint without any adjustments.
- B. Add the item to the current Sprint and drop an item of equal size.
- C. Add the item to the next Sprint.
- D. Inform the Product Owner so he/she can work with the CEO.

Answer – D

The items selected for a Sprint have been selected as most valuable with the Product Owner. The items serve the Sprint's goal. No changes should be made that endanger the Sprint Goal. No one external to the Scrum Team can force changes on the Development Team (Sprint Backlog) and the Product Owner (Product Backlog).

Question

Who should know the most about the progress toward a business objective or a release, and be able to explain the alternatives most clearly?

- A. The Product Owner
- B. The Development Team
- C. The Scrum Master
- D. The Project Manager

Answer – A

The Product Owner is the sole person responsible for managing the Product Backlog, which includes that the Product Backlog is visible, transparent, and clear to all, and shows what the Scrum Team will work on next.

Question.

Who ensures that needs are documented in user stories or other concise formats?

- A. Project Manager
- B. Product Owner
- C. Business Analyst
- D. Scrum Master

Answer: B

Question.

When is a Sprint considered complete?

- A. When committed items have met the definition of done.
- B. When the Scrum Master says so.
- C. When the tasks on the project plan are completed.
- D. When the time-box expires.

Answer: D

Question.

Who is responsible for maintaining the Product Backlog?

- A. Scrum Development Team
- B. Scrum Master
- C. Product Owner
- D. Project Manager

Answer: C

Question.

Who determines which user stories the Scrum Development Team will commit to complete within the sprint?

- A. Project Manager
- B. Scrum Development Team
- C. Scrum Master
- D. Product Owner

Answer: B

Question.

When can the Product Owner make changes to the Product Backlog?

- A. During the Sprint Retrospective
- B. During the Sprint Review
- C. During Sprint Planning
- D. There are no constraints on when changes can be made

Answer: D

Question

The maximum length of the Sprint Review (its time-box) is:

- A. 2 hours.
- B. 4 hours for a monthly Sprint. For shorter Sprints it is usually shorter.
- C. 1 day.
- D. 4 hours and longer as needed.

Answer – B

Sprint Review is a four-hour time-boxed meeting for one-month Sprints. For shorter Sprints, the event is usually shorter.

Question

Which statement best describes the Sprint Review?

- A. It is a mechanism to control the Development Team's activities during a Sprint.
- B. It is when the Scrum Team and stakeholders inspect the outcome of a Sprint and figure out what to do next.
- C. It is a demo at the end of the Sprint for everyone in the organization to check on the work done.

Answer – B

Every event in Scrum, besides the Sprint which is a container for the other events, is an opportunity to Inspect AND Adapt.

Question.

What does Scrum suggest a team do if it does not believe it will be able to deliver any functionality or value by the end of the sprint?

- A. Submit a change request to extend the sprint.
- B. Work with the Product Owner to determine what valuable functionality can be focused on by the end of the sprint.
- C. Escalate to the stakeholders
- D. Terminate the sprint

Answer: B

Question.

When does the team evaluate how well they have performed and determine what changes can be made to further improve?

- A. Sprint Review
- B. Sprint Retrospective
- C. Sprint Planning
- D. Daily Scrum

Answer: B

Question

The Development Team should have all the skills needed to:

- A. Complete the project as estimated when the date and cost are committed to the Product Owner.
- B. Do all of the development work, except for specialized testing that requires additional tools and environments.
- C. Turn the Product Backlog items it selects into an increment of potentially releasable product functionality.

Answer – C

The Development Team consists of professionals who do the work of delivering a potentially releasable Increment of "Done" product at the end of each Sprint. Development Teams are cross-functional, with all of the skills as a team necessary to create a product Increment.

Question.

What is the Scrum Master's responsibility during a Sprint Retrospective?

- A. To facilitate the team's discussion and identification of improvements.
- B. To participate in the team's discussion and identification of improvements.
- C. Provide answers to any questions raised by the team.
- D. To facilitate the review of each team member's performance.

Answer: A

Question.

Who protects the team from unreasonable changes that can impact the Scrum Development Team's ability to meet the sprint goal?

- A. Project Manager
- B. Product Owner
- C. Business Analyst
- D. Scrum Master

Answer: D

Question.

What does the Product Owner do during a sprint?

- A. Clarifies requirements and answers questions.
- B. Nothing
- C. Assigns tasks to team members.
- D. Manages the Scrum Master.

Answer: A

Question.

What is the primary output from sprint planning?

- A. Gantt Chart
- B. User stories and estimates
- C. Requirement document
- D. Sprint objective and sprint backlog list

Answer: D

Question

Who is responsible for managing the progress of work during a Sprint?

- A. The Development Team
- B. The Scrum Master
- C. The Product Owner
- D. The most junior member of the Team

Answer – A

The Development Team uses the Daily Scrum to inspect progress toward the Sprint Goal and to inspect how progress is trending toward completing the work in the Sprint Backlog.

Question.

Who has the main responsibility to remove impediments?

- A. Scrum Master
- B. Project Manager
- C. Product Owner
- D. Scrum Development Team

Answer: A

Question.

A stakeholder asks someone on the project team to add a new feature/function to the current sprint. What should the project team do?

- A. Create a change request to add the new feature/function to the current sprint.
- B. Inform the Product Owner, so he/she can work with the stakeholder and include in the Product backlog.
- C. Accept the new feature/function and drop one of equal size.
- D. Tell the stakeholder that the project scope is locked and they can not accept a new feature or function.

Answer: B

Question.

Which is the best description of the Scrum Master?

- A. Makes prioritization decisions
- B. Manages the project
- C. Ensures the product vision is maintained
- D. Scrum expert and facilitator

Answer: D

Question

What is the recommended size for a Development Team (within the Scrum Team)?

- A. Minimal 7
- B. 3 to 9
- C. 7 plus or minus 2
- D. 9

Answer – B

Optimal Development Team size is small enough to remain nimble and large enough to complete significant work. Fewer than three Development Team members decreases interaction and results in smaller productivity gains. More than nine members simply requires too much coordination.

Question.

According to the Scrum framework, what do good Scrum Development teams continually do?

- A. Gather feedback to make adjustments.
- B. Perform self-assessments.
- C. Provide status reports to the Scrum Master.
- D. Change resources on the team.

Answer: A